

# INSTRUCTIONS HANDBOOK

TIME DISTRIBUTION,  
SYNCHRONIZATION & TIMESTAMPING SYSTEMS



GORGY  TIMING

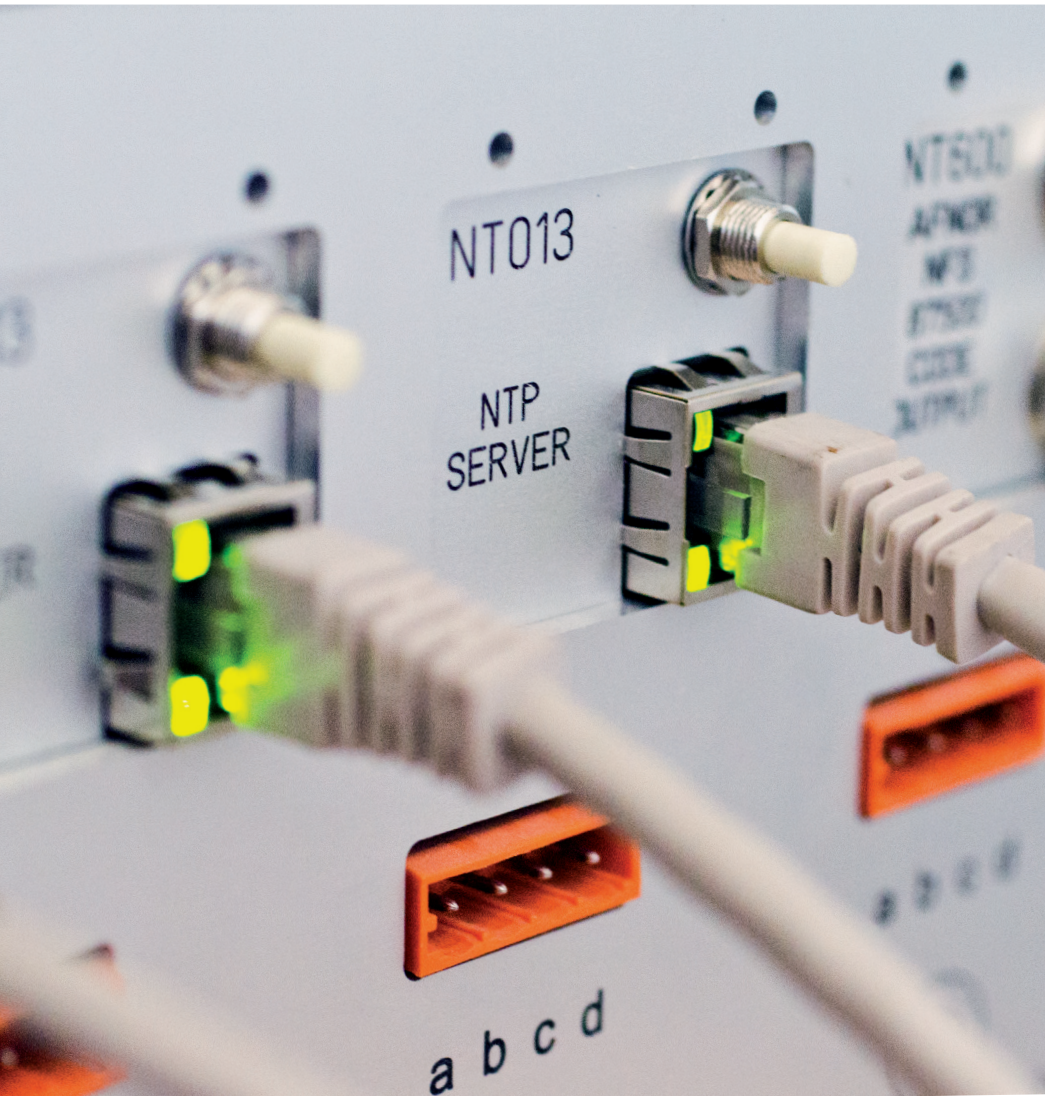
LA MARQUE DU TEMPS

[www.gorgy-timing.com](http://www.gorgy-timing.com)

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**Full control of time becomes unavoidable in today's digital economy with a single reference time in an administrative or industrial establishment.**

▶ **How to be sure that all quartz time bases of numerous devices in a company and its subsidiaries communicate with each other with the same time reference?**

Clocks, PC, computer servers, automated machines, recorders, programmers, cameras, badge readers, smart devices.

▶ **What might be the consequences of uncontrolled time?**

Legal dispute, labor litigation, accidents, financial costs, computer crash, erroneous transactions.

▶ **What are the expected advantages of controlled time?**

Energy saving, traceability, absence of disputes and claims, cyber information security, remote programming.

**Today, time synchronization is no longer an expense, but rather an investment with easily measurable benefits.**

**Today, the time synchronization on Ethernet networks is the most economical to implement.**

## 1. METHODS OF TIME TRANSMISSION

Master clocks and time servers enable the synchronization of clocks and IT network.

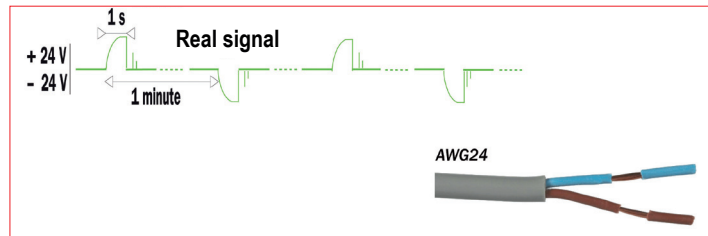
The use of standardised time codes and protocols offers a high level of transparency.

### 1.1. PULSE TRANSMISSION

▶ No longer to be used in design of new installations.

This method of electronic time transmission is the oldest (1897).

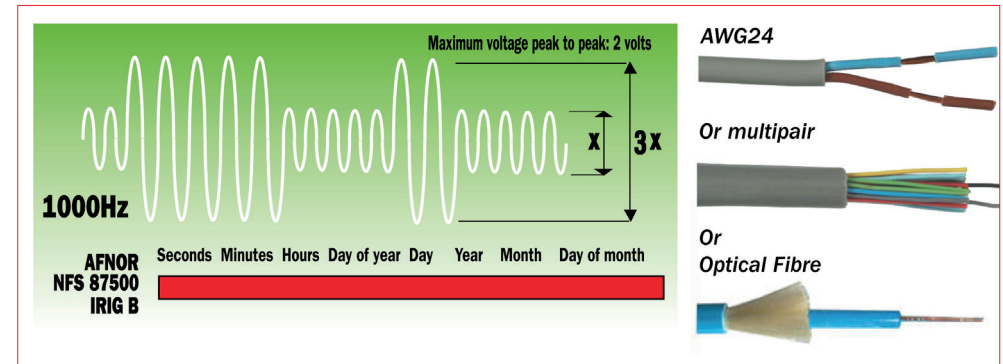
Gorgy Timing specifies this method only for the synchronization of a few clocks or for replacements in existing installations.



### 1.2. AFNOR NFS 87500 ENCRYPTED TRANSMISSION

This code, standardized in terms of the time information and frequency, enables the customer to choose the clocks best adapted to his use from several suppliers, with complete transparency. This amplitude-modulated code can distribute the time to more than 200 clocks with a distance up to 20km, via a simple telephone line.

This code has the advantage that it does not interfere with surrounding lines and is not susceptible to industrial interference.



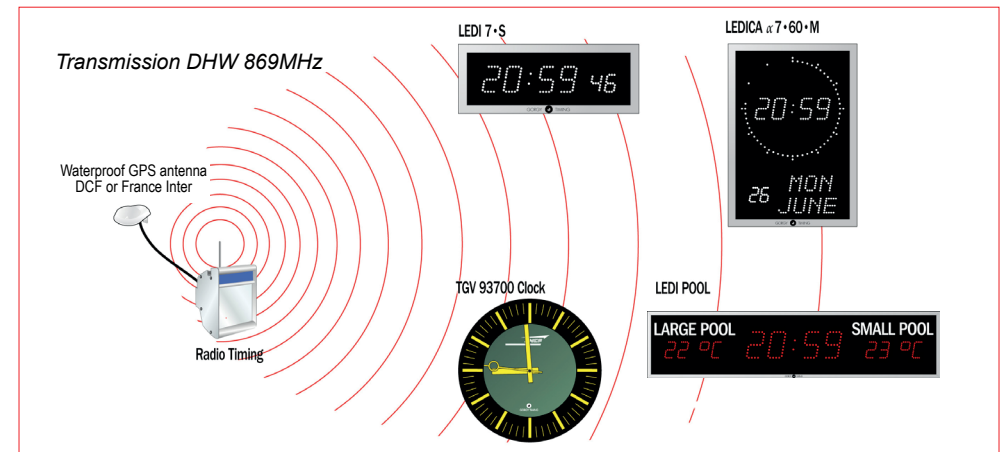
### 1.3. WIRELESS DHW 869MHz TRANSMISSION

▶ No longer to be used in design of new installations.

In 2013, Gorgy Timing ceased using its DHW 869MHz transmission method in favour of Wi-Fi/NTP.

This unidirectional time information presents the following drawbacks:

- ▶ Financial estimate difficult when project planning.
- ▶ Clock synchronization only.
- ▶ Limited coverage with a range of 250 m (over 250m repeaters are required).
- ▶ For remote buildings an additional master clock needed.
- ▶ System unique to each French manufacturer, therefore no compatibility between manufacturers.
- ▶ Emission of interference with certain equipment using high frequencies (HF).
- ▶ **Electromagnetic pollution (24h/7) from the master clock and 869Mhz repeaters.**
- ▶ Unidirectional transmission method does not enable the supervision of clocks nor the traceability of the indicated time.
- ▶ Difficulty managing different local times on the clocks.
- ▶ **Frequency not available in a large number of countries.**



### 1.4. NTP (NETWORK TIME PROTOCOL) TRANSMISSION

The RFC 5905 network time protocol transmitted on the TCP/IP networks calculates and corrects the time drift for the propagation of this information on the local or remote networks (cabled Ethernet or wireless Wi-Fi networks).

This solution uses communication networks to transmit Network Time Protocol (NTP) compliant with the RFC 5905, in unicast, multicast or broadcast mode, via a TCP/IP network. Its implementation and cabling are particularly economical and use the existing IT network in the buildings. It enables the synchronization of NTP clocks, but also all connected IT peripherals without the need for interface modules.

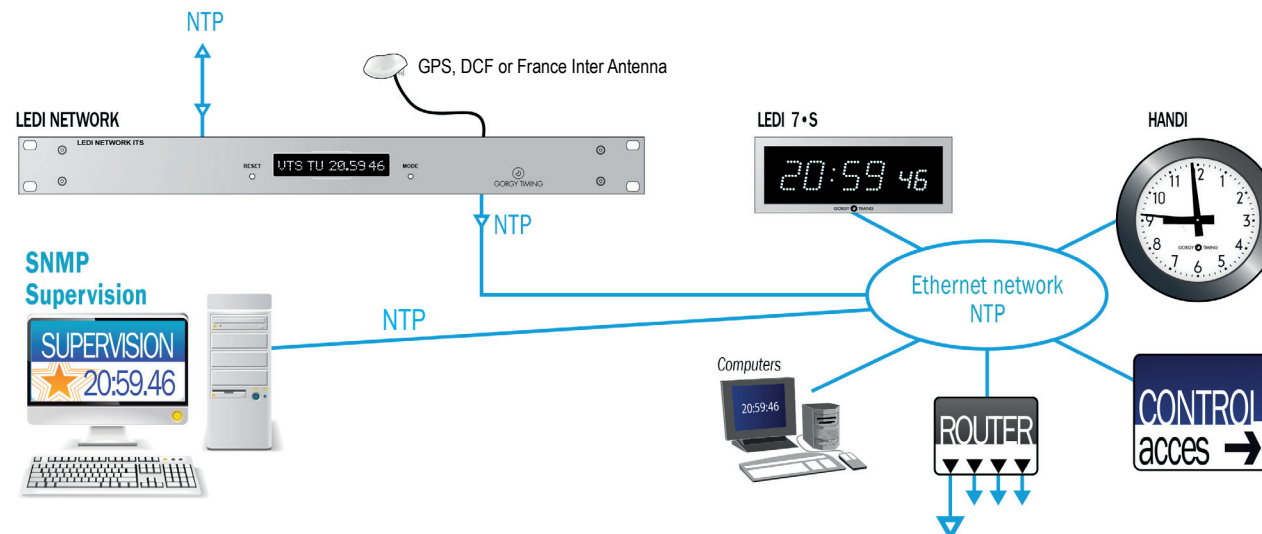
**The time server enables the time setting of the IT networks of one or more remote buildings using NTPv4 on IPv4 compatible IPv6.**

- ▶ Accuracy: < 10 milliseconds over long distances.
- ▶ Two types of power supply of clocks: 230VAC or PoE.
- ▶ Connection of NTP clocks: with RJ45 connector or via Wi-Fi.

In the PoE version, the power is supplied to clocks via the same RJ45 connection.

#### Configuration of NTP receiver clocks:

Upon installation, the parameters of clocks can be set remotely by groups or on selected models: IP address of the NTP server and the clocks (DHCP or fixed IP), choice of time zone, automatic Daylight Saving Time.



### 1.5. NTP TRANSMISSION VIA SCPTIME®

**NEW**

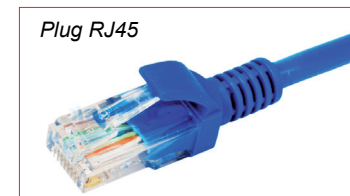
**The aim of this new service is to broadcast a legal UTC time via the TCP/IP networks for professional applications where the time constitutes a cyber-security element.**



**SCPTIME®** = the broadcast of a **Secure, Certified and Precise** time at each point of the network until it reaches the customer with precision down to the millisecond, the microsecond or a high precision within tens of nanoseconds, depending on the requirements of the application.

The **SCPTIME®** customer thus has the guarantee of using a time that is compliant with the **Precision** requirements of today's digital economy, as well into the future.

Moreover, **SCPTIME®** is **Certified** as it can be traced from the primary legal clocks to the customer. Furthermore, the complex timestamping system that has been developed enables the reconstitution of the chain of internal events (dated using **SCPTIME®**), and to associate them with external events using recent Big Data technologies.





## 2. SYNCHRONIZATION SOURCES OF TIME BASE

**Professional time synchronisation may be of high risk if not controlled or monitored.**

The methods currently used in the synchronization of master clocks, time servers and time centres offer advantages, but also security flaws that can seriously affect the proper function of an organization.

The four most commonly used synchronisation methods:

### 2.1. SATELLITES

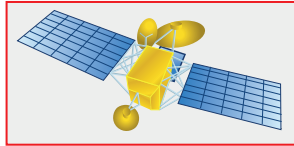
*GNSS: GPS (USA), Beidou (China), Glonass (Russia) and soon Galileo (EUR).*

#### ▶ Advantages:

- ▶ Global coverage.
- ▶ UTC time.
- ▶ High level of accuracy.
- ▶ Free to use.

#### ▶ Risks:

- ▶ Unidirectional message transmitted by Hertzian waves easily disrupted by accident or intentionally modified by a cyber attack.
- ▶ Unidirectional message not enabling supervision.
- ▶ Installation of an antenna outside on the roof of a building in order to receive the satellites signals.



### 2.2. RADIO TRANSMITTERS

*France Inter (F) 162 kHz, DCF(D) 77.5kHz, MSF (UK) 60 kHz, WWVB (USA) 60 kHz, JJY (Japan) 40 kHz*

#### ▶ Advantages:

- ▶ Daylight Saving Time .
- ▶ Free to use (except for France Inter).

#### ▶ Risks:

- ▶ Unidirectional message transmitted by Hertzian waves easily disrupted by accident or intentionally modified by a cyber attack.
- ▶ Unidirectional message not enabling supervision.
- ▶ Installation of an antenna outside on the roof of a building in order to receive the signals.



### 2.3. TIME CODES

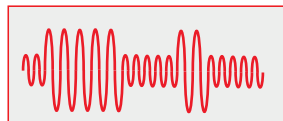
*AFNOR NFS 87500, ASCII 485, NMEA 0183*

#### ▶ Advantages:

- ▶ Coming from a known source thanks to cable connection.
- ▶ Good level of immunity to industrial interferences (AFNOR NFS 87500).

#### ▶ Risks:

- ▶ Unidirectional message not enabling supervision.
- ▶ No traceability of the time information.



### 2.4. NTP TIME PROTOCOL ON PUBLIC NETWORKS

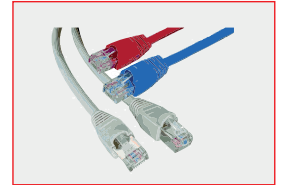
*Virtual cluster of thousands of time servers*

#### ▶ Advantages:

- ▶ Global coverage.
- ▶ UTC time.
- ▶ Standardised protocols.
- ▶ **Bi-directional** message enabling supervision and traceability.
- ▶ Remote traceability and supervision.
- ▶ Connection using RJ45 connector.

#### ▶ Risks:

- ▶ Connection to a public NTP service not designed to deliver a certified time.
- ▶ Connection to an unknown source.
- ▶ Possibility of receiving an incorrect time or date.



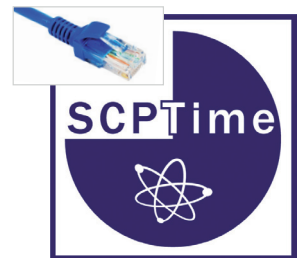
**In 2014, the French Time/Frequency sector developed a new means of time synchronization with international scope: SCPTime<sup>®</sup>, a secure, certified and traceable method over networks to detected address failures.**

**This will be operational at the end of 2015.**

### 2.5. NTP TIME PROTOCOLS ON SECURE SCPTime<sup>®</sup> NETWORKS

#### ▶ Advantages:

- ▶ Global coverage.
- ▶ UTC time.
- ▶ Standardised protocols.
- ▶ **Bi-directional** message enabling supervision and traceability.
- ▶ Connection to a known IP address.
- ▶ Remote traceability and supervision (DATA CENTRE).
- ▶ Certified time stamping (BIG DATA).
- ▶ Connection using RJ45 connector.



### 3. THE 10 REASONS FOR CHOOSING A GORGY TIMING SOLUTION

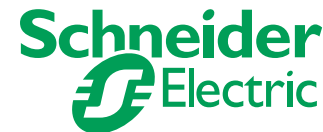
- ▶ **For its French expertise and manufacturing:**  
more than 40 years of experience in this field.
- ▶ **For its outstanding innovations:**
  - ▶ In 1976, the first LED clock with a circular luminous wave.
  - ▶ In 1985, the standardized AFNOR NFS 87500 time code.
  - ▶ In 2002, the first NTP time servers.
  - ▶ In 2014, Wi-Fi-controlled clocked with remote setting using an Android tablet.
- ▶ **For its entrepreneurial spirit:**



In 2014 Gorgy Timing was named the leading player in a consortium assembling all of the French academic experts (Observatoire de Paris, de Besançon, the Laboratoire National d'Essai LNE, FEMTO ST), manufacturers (Syrlinks, Tronics, Eolas, Muquans), two demonstrators (SNCF and Schneider) and time/frequency manufacturers around an innovative and ambitious concept, **SCPTIME®**. The aim of this Minalogic labelled project is to transmit a legal, certified and traceable time at all points within an Internet network. This development, approved by the Future Investments committee, was signed by the Prime minister on 2 June 2014, valid for a period of 42 months.

The purpose of the SCPTIME® concept is to transmit a traceable, legal time to the end user via IT networks.

- ▶ **For its unique comprehensive offering:**  
analogue clocks, digital clocks, time servers, time centers, programmers, telecom synchronization, built-in time systems.
- ▶ **For its security and reliability:**  
Hot-plug, redundancy, power backup, modularity.
- ▶ **For its selection of materials and components:**  
casings made from recyclable aluminium.
- ▶ **For its experience and international presence:**  
Commercial and technical documentation in five languages.
- ▶ **For its range of services:**  
hotline, commissioning, warranty extension, training.
- ▶ **For its new long-term rental offer.**
- ▶ **For its compliance with international standards.**
- ▶ **For its certifications: ISO 9001, ISO 14001.**



**Our commercial and pre-sales team is available to help you define the specifications.**

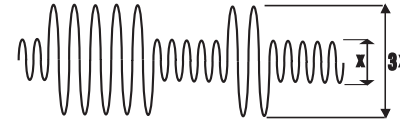
- ▶ **prescription@gorgy-timing.fr**
- ▶ **Contact us on 00 33 4 76 30 48 20**

## 4. CHOOSE THE MEANS OF TRANSMISSION THAT IS BEST SUITED TO YOUR APPLICATION

### 4.1. WIRED TECHNOLOGY

Transmission of an identical time in one or more buildings using a standardised AFNOR NFS 87500 time code for synchronization:

- ▶ **Analogue and digital clocks.**
  - ▶ Transmission of the time information on a telephone pair.
  - ▶ Unidirectional time message.
  - ▶ Max. number of clocks: 200.
  - ▶ Power supply of clocks: 230 VAC or 24 VDC or lithium batteries.
  - ▶ Maximum distance of 20km: connection of the clocks using one telephone pair.
  - ▶ Power supply of clocks: 230 VAC or 24 VDC or lithium batteries.



### 4.2. TCP/IP NETWORK TECHNOLOGY

Transmission of an identical and secure time in one or more buildings using the standardised international NTP protocol for synchronization of:

- ▶ **Analogue and digital clocks.**
- ▶ **IT network, VDI network, automated machines, access control, badge readers, CTM or TBM.**

Two options to choose from:

NTP transmission via the existing IT network to synchronise the quartz time bases of all connected devices	Wireless Wi-Fi transmission to synchronise the quartz time base of the connected clocks and devices using radio waves
<ul style="list-style-type: none"> <li>▶ Standardised international NTPv4 protocol RFC 5905.</li> <li>▶ Secure and traceable <b>bidirectional</b> message.</li> <li>▶ Distance: unlimited.</li> <li>▶ Number of connected clocks and devices: unlimited.</li> <li>▶ Remote supervision of the entire clock installation, using SNMP v1, v2c and v3.</li> <li>▶ Simple connection of devices using an RJ45 network connector.</li> <li>▶ Remote configuration via webpage or software (GTNetconfig).</li>   <li>▶ Power supply of clocks: 230 VAC or PoE (Power over Ethernet).</li> </ul>	<ul style="list-style-type: none"> <li>▶ NTP protocol v4 RFC 5905 via Wi-Fi IEEE 802.11 a, b, g, n.</li> <li>▶ Secure WEP, WPA2 <b>bidirectional</b> message.</li> <li>▶ Distance: unlimited. (Customer's existing Wi-Fi Access Points).</li> <li>▶ Number of connected clocks and devices: unlimited.</li> <li>▶ Remote supervision of the entire clock installation, using SNMP v1, v2c and v3.</li> <li>▶ Complete configuration by group (IP, colour, luminosity, location...).</li> <li>▶ Remote setting of IP addresses using an Android tablet.</li> <li>▶ Option: management of the stopwatch function via the web page.</li>   <li>▶ Power supply of clocks: 230VAC or 24VDC.</li> </ul>
Average installation cost for one clock unit, whatever the distance (point of access and cable pulling)	
<ul style="list-style-type: none"> <li>▶ With 230 VAC: €300 + €12.</li> <li>▶ With PoE: €400.</li> <li>▶ Configuration time: less than 10 seconds.</li> </ul>	<ul style="list-style-type: none"> <li>▶ With 230 VAC: €12.</li> <li>▶ &gt; With PoE: €12.</li> <li>▶ &gt; Configuration time: less than 10 seconds (Android tablet).</li> </ul>







**5.1. TIME DISTRIBUTION IN SCHOOLS, COLLEGES, AND UNIVERSITIES USING THE AFNOR NFS 87500 CODE**

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time to the clocks in the entire building.</li> <li>▶ Announcement of the start and end of classes, either of bells or PA system.</li> <li>▶ Synchronization of the CTM or BMS (Centralised Technical Management or Building Management System).</li> <li>▶ Access control.</li> <li>▶ Video surveillance.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Instant time setting without manual intervention.</li> <li>▶ Standardised AFNOR NFS 87500 code.</li> <li>▶ Reduced installation cost while allowing to use a pair available in a telephone or fibre optic cable.</li> <li>▶ Ability to transmit the time over long distances of more than 20 km and to have 200 clocks.</li> <li>▶ No interferences with telephone lines or IT environments.</li> <li>▶ Synchronization of the VDI rack by means of serial RS232 connection.</li> </ul>

**Preamble: Time distribution using the AFNOR NFS 87500 code**

Gorgy Timing recommends this method of time distribution for clock installations in schools, colleges and universities instead of pulse installations.

This code, with a standardised time message and amplitude modulation frequency can distribute the time to more than 200 clocks within a distance of up to 20 km, via a simple telephone cable.

This code has the advantage that it does not interfere with surrounding lines and is not susceptible to industrial interference.

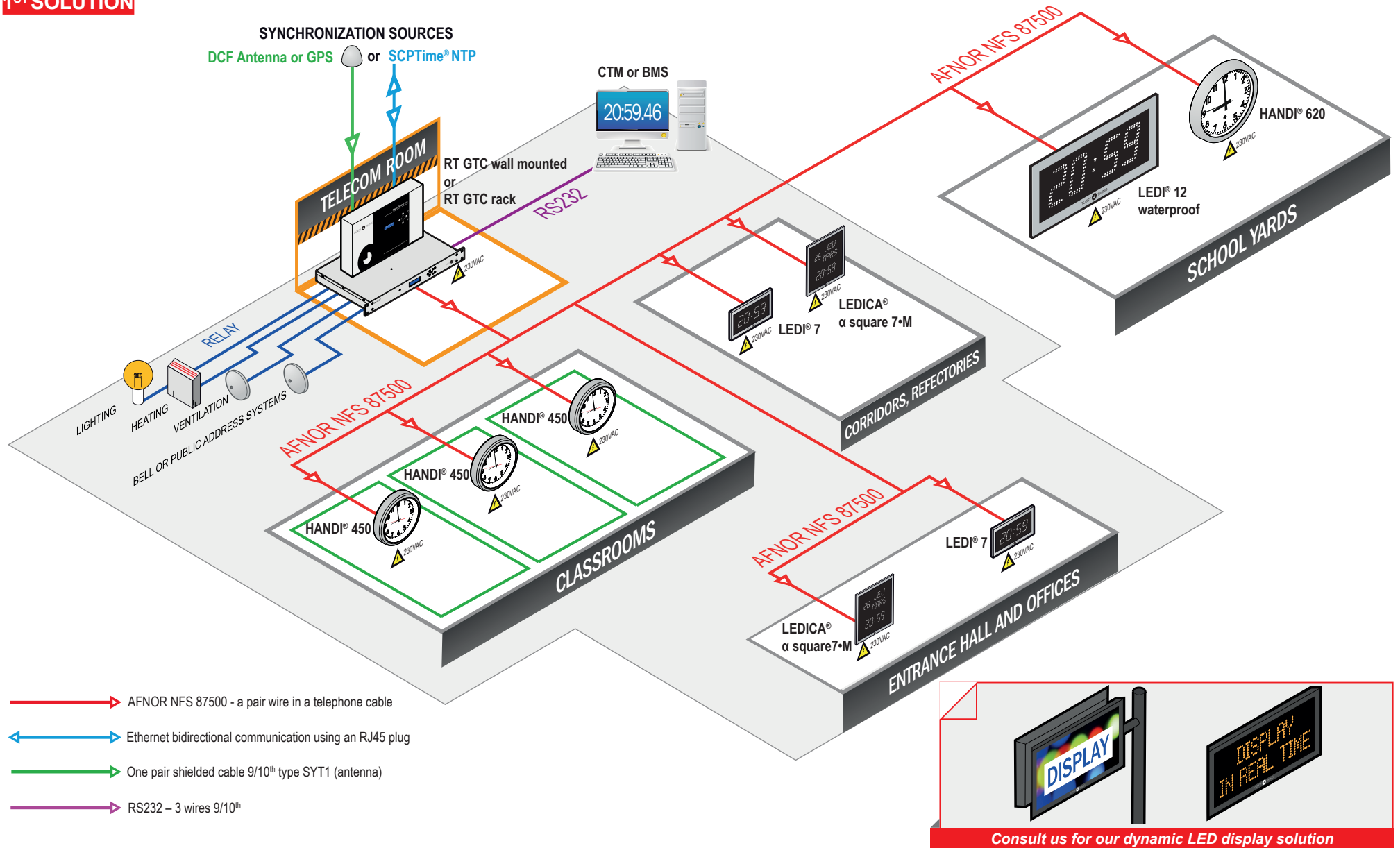
In the case of time distribution using the AFNOR NFS 87500 code, the master clock transmits a time message on a pair wire in a telephone cable using a 1000 Hz frequency, to analogue or digital clocks.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 5. EDUCATION

### Time distribution AFNOR NFS 87500 code

#### 1<sup>ST</sup> SOLUTION



### TECHNICAL ROOM



 [Download datasheet wall mounted version](#)



 [Download datasheet rack version](#)

#### RADIO TIMING® GTC programmer master clock

- ▶ With a wall mount case or 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base, with synchronization using DCF (Europe) time signals or GPS satellites, avoids manual time-setting and automatically takes care of Daylight Saving Time or **SCPTIME®**.
- ▶ Built-in programmer with 4 relays (10a) that can be configured using the keypad on the front panel.
- ▶ AFNOR NFS 87500 output synchronises the clocks.
- ▶ ASCII RS232/485 outputs synchronise the connected devices.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.

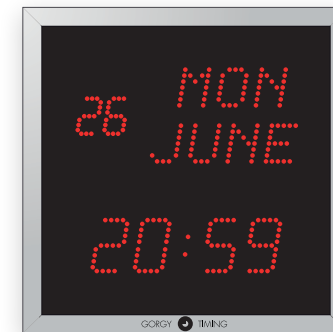
### ENTRANCE HALL AND OFFICES

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62 mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input
- ▶ Backup power for time-keeping of time base.

Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

### CORRIDORS, REFECTORIES



 [Download datasheet](#)

#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input
- ▶ Backup power for time-keeping of time base.

Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.

**OPTION:** double-sided model with ceiling or side mount bracket.



## 5. EDUCATION

### CLASSROOMS



 [Download datasheet](#)

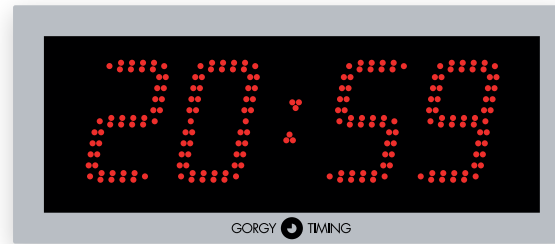
#### HANDI® analogue clock single face 450mm

- ▶ Grey painted aluminium casing, 450 mm diameter, IP30.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Distance of legibility: max. 30m.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket.

### SCHOOL YARDS



 [Download datasheet](#)

#### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing: 506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### HANDI® analogue clock, single face, 620 mm, waterproof

- ▶ Grey painted aluminium casing, 620 mm diameter, IP54.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Makrolon front face.
- ▶ Distance of legibility: max. 60m.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket and LED lighting.

 **Gorgy Timing recommends:**

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>▶ Master clock RTGTC Wall mount case - Part No.: 4580/D038A or</li> <li>▶ Master clock RTGTC Rack - Part No.: 4550/D038A                             <ul style="list-style-type: none"> <li>▶ 1 AFNOR NFS 87500 output</li> <li>▶ 2 ASCII RS232 output</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>▶ LEDICA® ALPHA SQUARE - Part No.: N306/81170</li> <li>▶ LEDI® 7 - Part No.: N360/81170</li> <li>▶ LEDI® 12 waterproof - Part No.: ND390E/184170 or HANDI 620 - Part No.: 750/791W</li> <li>▶ HANDI® 450mm - Part No.: H740/497M</li> </ul> |
|--|--|



5.2. TIME SYNCHRONIZATION IN SCHOOLS, COLLEGES AND UNIVERSITIES USING NTP 230 VAC OR POE

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time to the clocks in the entire building.</li> <li>▶ Announcement of the start and end of classes, either of bells or PA system.</li> <li>▶ Synchronization of the entire computer network</li> <li>▶ Synchronization of the CTM or BMS (Centralised Technical Management or Building Management System).</li> <li>▶ Access control.</li> <li>▶ Video surveillance.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Use of existing cables and IT networks</li> <li>▶ Standardised NTP protocol RFC 5905.</li> <li>▶ Clocks can be 230 VAC powered or PoE (Power over Ethernet – PoE 802.3 standard).</li> <li>▶ Synchronization of the IT network and connected devices (clocks available in NTP version)</li> <li>▶ Reliability of the system and simple installation.</li> <li>▶ A large number of clocks and IT equipment can be connected.</li> <li>▶ Monitoring of connected products on the network by SNMP.</li> <li>▶ MD5 encryption.</li> </ul>

**Preamble: Time synchronization using the NTP protocol with 230 VAC or PoE power supply**

Gorgy Timing recommends this innovative solution for new installation with an Ethernet network.

This solution uses the transmission of NTP time code compliant with RFC 5905 standard in unicast mode via a TCP/IP network. This use of this time distribution mode is **particularly economical as it uses the existing TCP/IP Ethernet network.**

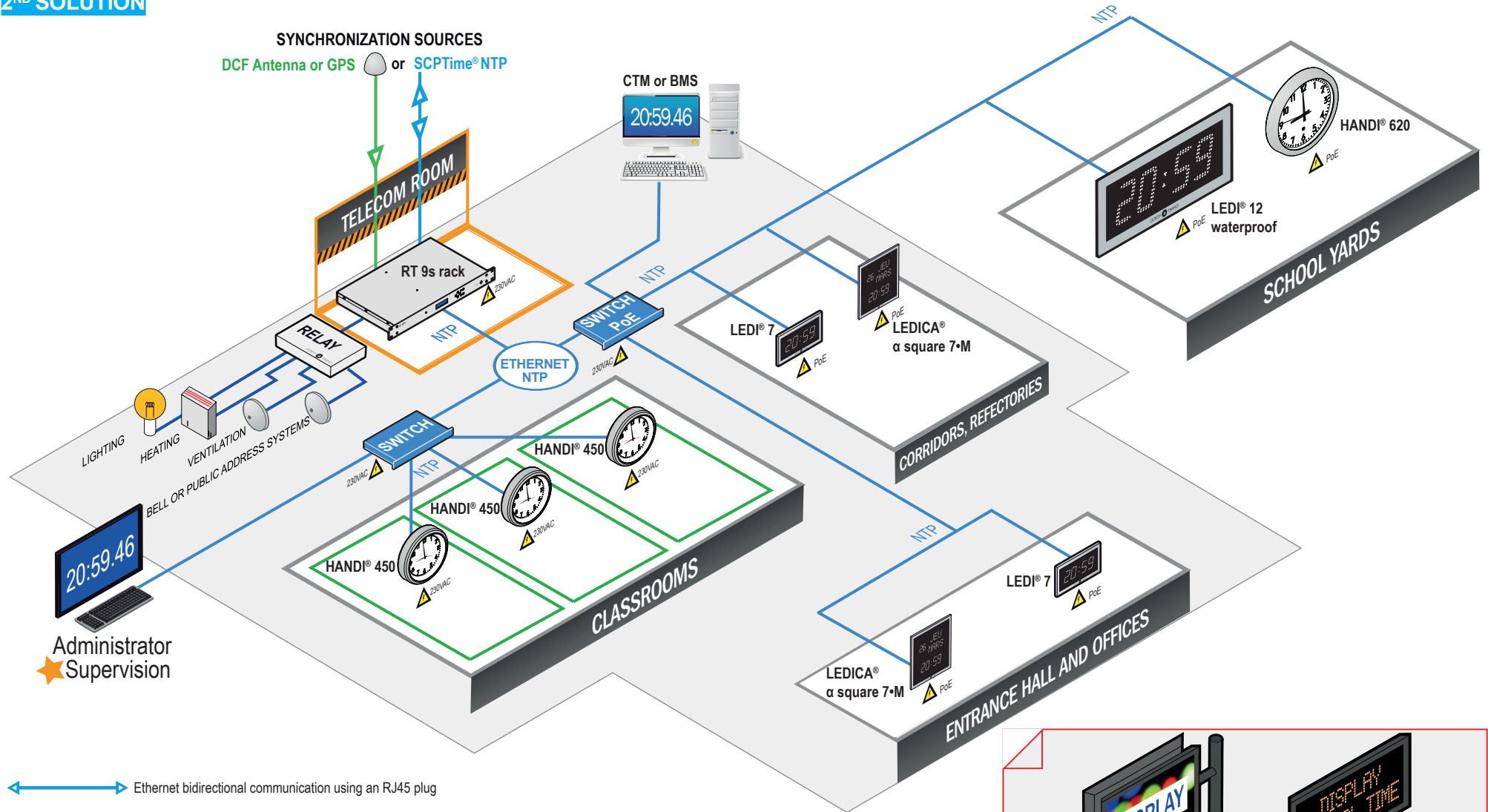
The receiver clocks are powered by 230 VAC or via the PoE switch located in VDI cabinets.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 5. EDUCATION

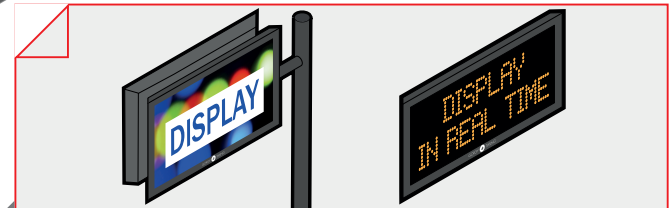
### Time synchronization using the NTP protocol with 230 VAC or PoE power supply

#### 2<sup>ND</sup> SOLUTION



↔ Ethernet bidirectional communication using an RJ45 plug

→ One pair shielded cable 9/10<sup>th</sup> type SYT1 (antenna)



Consult us for our dynamic LED display solution



TELECOM TECHNICAL ROOM



 [Download datasheet rack version](#)

**RADIO TIMING® 9S time server**

- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCTime®**.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**4 relay programming module.**

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

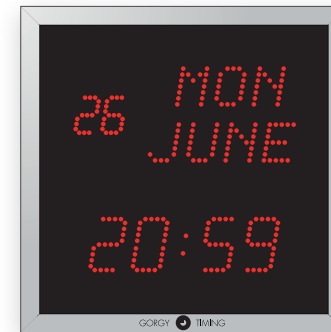
ENTRANCE HALL AND OFFICES

**LEDICA® ALPHA SQUARE 7M digital calendar clock**

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62 mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

CORRIDORS, REFECTORIES



 [Download datasheet](#)

**LEDI® 7 digital clock**

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 5. EDUCATION

### CLASSROOMS



 [Download datasheet](#)

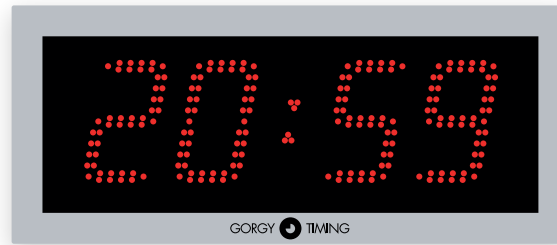
#### HANDI® analogue clock single face 450mm

- ▶ Grey painted aluminium casing, 450 mm diameter, IP30.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Distance of legibility: max. 30m.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket.

### SCHOOL YARDS



 [Download datasheet](#)

#### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing: 506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### HANDI® analogue clock, single face, 620 mm, waterproof

- ▶ Grey painted aluminium casing, 620 mm diameter, IP54.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Makrolon front face.
- ▶ Distance of legibility: max. 60m.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket and LED lighting.

#### Gorgy Timing recommends:

- ▶ RT 9S Rack time server - Part No.: 4570/3D00N
  - ▶ NTP SNMP 10/100 Base T output
- ▶ Programming relay module - Part No.: 92000216
- ▶ LEDICA® ALPHA SQUARE 7M - Part No.: N306/N1170 (230VAC power) or N306/N1177 (PoE power)
- ▶ LEDI® 7 - Part No.: N360/N1170 (230VAC power) or N360/N1177 (PoE power)
- ▶ HANDI® 450mm - Part No.: H740/4N7M (230VAC power) or H740/4P7M (PoE power)
- ▶ LEDI® 12 waterproof - Part No.: ND390E/1N4170 (230VAC power) or ND390E/1N4177 (PoE power)
- ▶ or HANDI® 620 - Part No.: 750/7N1W (230VAC power) or 750/7P1W (PoE power)
- ▶ Switches not supplied by Gorgy Timing



5.3. TIME SYNCHRONIZATION IN SCHOOLS, COLLEGES AND UNIVERSITIES USING WI-FI

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time to the clocks in the entire building.</li> <li>▶ Announcement of the start and end of classes, either of bells or PA system.</li> <li>▶ Synchronization of the entire computer network</li> <li>▶ Synchronization of the CTM or BMS (Centralised Technical Management or Building Management System).</li> <li>▶ Access control.</li> <li>▶ Video surveillance.</li> </ul>	<p><b>This solution uses the Wi-Fi transmission (IEEE 802.11 B/G/N standard) available in a building. The use of this international standard is particularly economical, as it does not require any specific terminal nor a wired connection with receiver clocks.</b></p> <ul style="list-style-type: none"> <li>▶ No distance limit for clocks, nor with regard to the number of clocks connected.</li> <li>▶ Use of GT software for configuration and supervision.</li> <li>▶ Instant setting of clocks and reduction of commissioning time for the clock installation using the integrated software on an Android tablet.</li> <li>▶ No additional electromagnetic pollution in the buildings.</li> <li>▶ The coverage can be easily expanded: all Wi-Fi terminals are compatible.</li> <li>▶ Clocks can be easily relocated from one position to another.</li> <li>▶ Monitoring of products connected to the network by SNMP.</li> <li>▶ MD5 encryption.</li> <li>▶ Reduction of installation costs.</li> </ul>

**Preamble: Time synchronization using Wi-Fi / NTP**

Gorgy Timing recommends the new Wi-Fi/NTP secure and traceable wireless time synchronization, instead of DHW 869 MHz radio time distribution.

Gorgy Timing, a strong defender of standardised norms, has aimed to bring together two international protocols: NTP protocol (RFC5905) and the wireless Wi-Fi communication protocol (IEEE 802.11 B/G/N), thus enabling exceptional transparency and increasing user satisfaction.

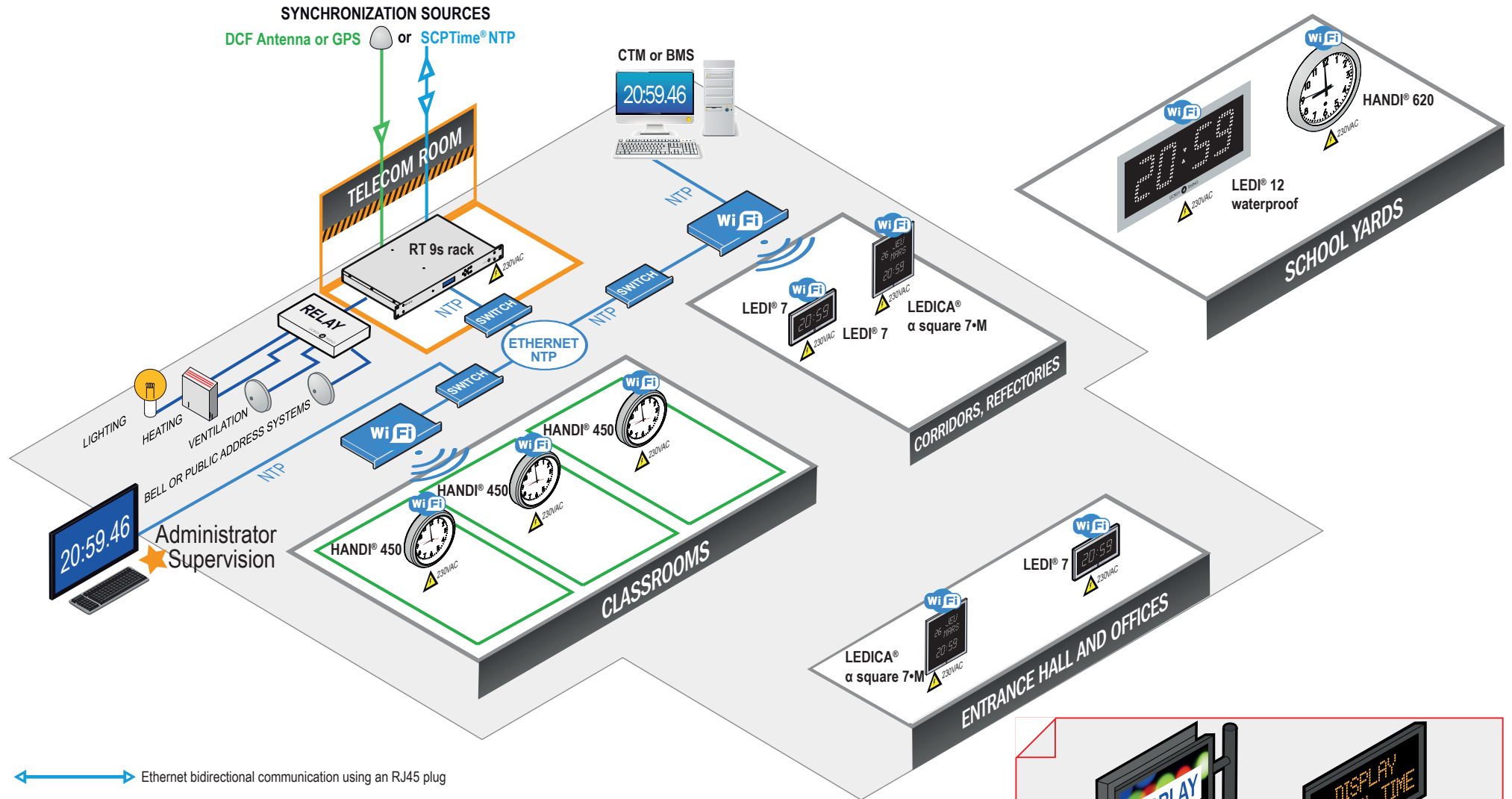
This new means of time distribution is particularly interesting for a building that is already equipped with a Wi-Fi network, to avoid additional electromagnetic pollution. The Wi-Fi/NTP protocol, on account of its bi-directional character, enables greater time security than the DHW 869 MHz code suggested so far.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 5. EDUCATION

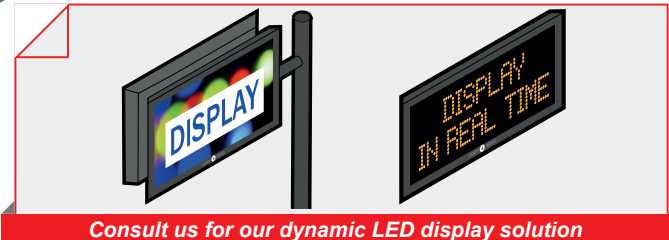
### Time synchronization using Gorgy Timing Wi-Fi/NTP

#### 3<sup>RD</sup> SOLUTION



↔ Ethernet bidirectional communication using an RJ45 plug

→ One pair shielded cable 9/10<sup>th</sup> type SYT1 (antenna)



Consult us for our dynamic LED display solution



## 5. EDUCATION

### TELECOM TECHNICAL ROOM



 [Download datasheet rack version](#)

#### RADIO TIMING® 9S time server

- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCTime®**.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

#### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

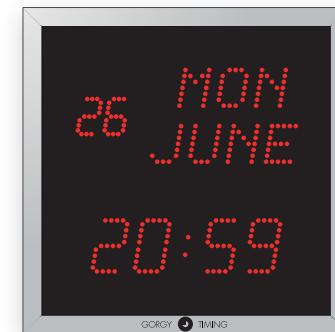
### ENTRANCE HALL AND OFFICES

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62 mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket.



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### CORRIDORS, REFECTORIES



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#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 5. EDUCATION

### CLASSROOMS



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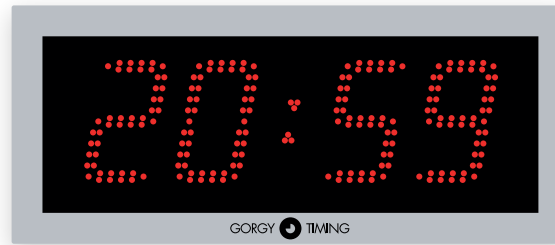
#### HANDI® analogue clock single face 450mm

- ▶ Grey painted aluminium casing, 450 mm diameter, IP30.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Distance of legibility: max. 30m.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket.

### SCHOOL YARDS



 [Download datasheet](#)

#### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing: 506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### HANDI® analogue clock, single face, 620 mm, waterproof

- ▶ Grey painted aluminium casing, 620 mm diameter, IP54.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Makrolon front face.
- ▶ Distance of legibility: max. 60m.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket and LED lighting..

 **Gorgy Timing recommends:**

- ▶ RT 9S Rack time server - Part No.: 4570/3D00N
- ▶ Programming relay module - Part No.: 92000216
- ▶ LEDICA® ALPHA SQUARE - Part No.: N306/W1170
- ▶ LEDI® 7 - Part No.: N360/W1170
- ▶ HANDI® 450mm - Part No.: H740/4W7M
- ▶ LEDI® 12 waterproof - Part No.: ND390E/1W4170
- ▶ or HANDI® 620 - Part No.: Part No.: 750/7W1W
- ▶ Switches not supplied by Gorgy Timing
- ▶ Nexus touch screen tablet option – Part No.: INF0005A

- ▶ **Option: configuration tool**  
Nexus touch screen configuration tablet: for rapid and simple setup



- ▶ Use of a touch screen tablet, preconfigured in the factory
  - ▶ Included: GT Wi-Fi Manager (mobile application).
  - ▶ Included: User manuals + documentation for Gorgy Timing products.
  - ▶ Included: videos (tutorial).
- Can be used for other purposes (monitoring, web, email...) CE/EMC product. Anti-fire standard.*



6.1. TIME DISTRIBUTION IN HOSPITALS AND CLINICS USING THE AFNOR NFS 87500 CODE

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time to the clocks in the entire building.</li> <li>▶ Synchronization of the entire computer network, PLC, access control, badging system (fixed or variable hours).</li> <li>▶ Synchronization of the CTM or BMS (Centralised Technical Management or Building Management System).</li> <li>▶ Distribution of a certified official time for legal medicine.</li> <li>▶ Video monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Instant time setting without manual intervention.</li> <li>▶ Standardised AFNOR NFS 87500 code.</li> <li>▶ Reduced installation cost while allowing to use a pair available in a telephone or fibre optic cable.</li> <li>▶ Ability to transmit the time over long distances of more than 20 km and to have 200 clocks.</li> <li>▶ No interferences with telephone lines or IT environments.</li> <li>▶ Synchronization of computer networks by NTP RFC5905 protocol.</li> </ul>

**Preamble: Time distribution using the AFNOR NFS 87500 encryption**

Gorgy Timing recommends this type of time distribution in hospitals and clinics instead of pulse or DHW 869 MHz radio time distribution.

This code, with a standardised time message and amplitude modulation frequency can distribute the time to more than 200 clocks within a distance of up to 20 km, via a simple telephone cable.

This code has the advantage that it does not interfere with surrounding lines and is not susceptible to industrial interference.

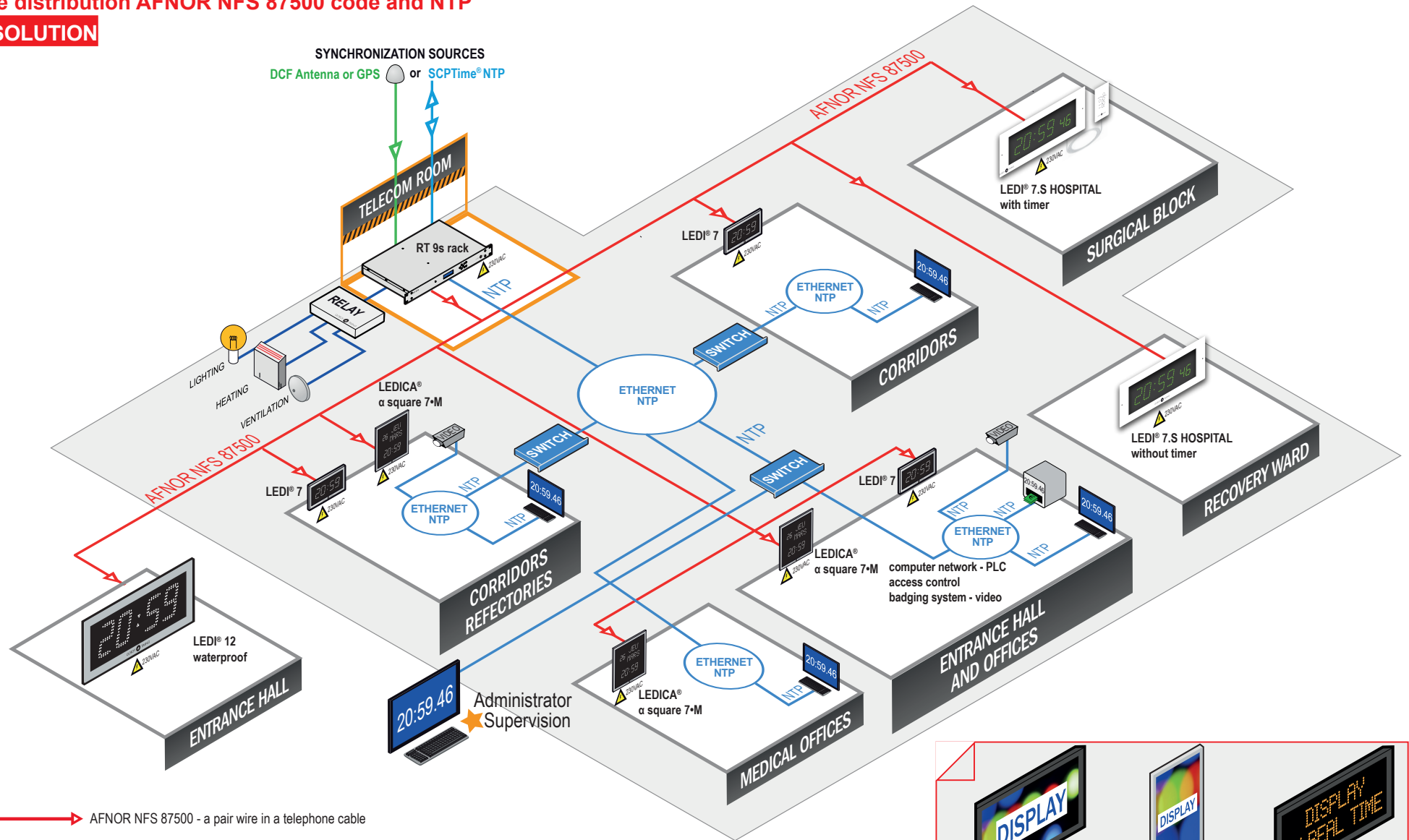
In the case of time distribution using the AFNOR NFS 87500 code, the master clock transmits a time message on a pair wire in a telephone cable using a 1000 Hz frequency, to analogue or digital clocks.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 6. HOSPITALS - CLINICS

### Time distribution AFNOR NFS 87500 code and NTP

#### 1<sup>ST</sup> SOLUTION



- AFNOR NFS 87500 - a pair wire in a telephone cable
- ↔ Ethernet bidirectional communication using an RJ45 plug
- One pair shielded cable 9/10<sup>th</sup> type SYT1 (antenna)





### TELECOMMUNICATIONS ROOM



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#### RADIO TIMING® 9S time server

- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCPTIME®**.
- ▶ 1 AFNOR NFS 87500 time code output synchronises the clocks.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

#### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

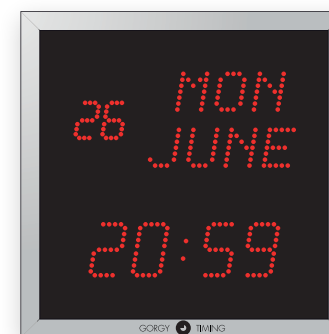
### ENTRANCE HALL AND OFFICES

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62 mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



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### CORRIDORS, REFECTORIES



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#### LEDI® 7 digital clock

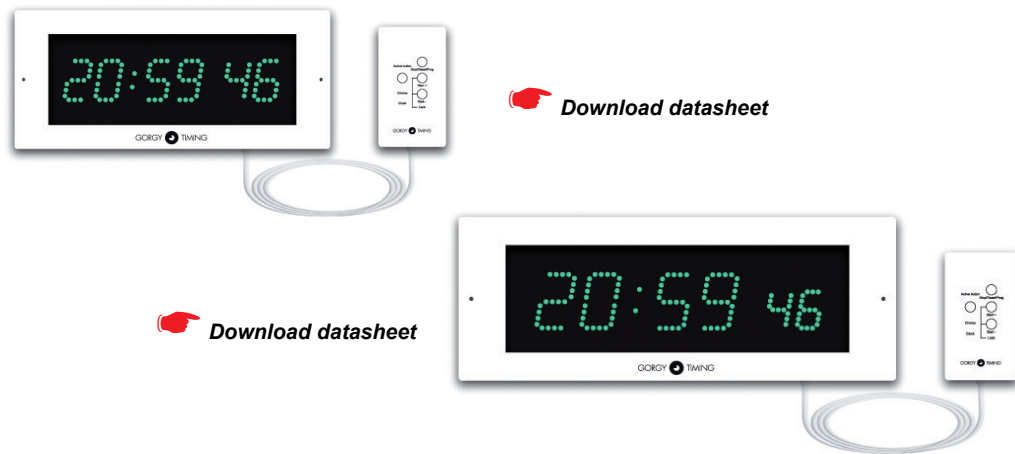
- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 6. HOSPITALS - CLINICS

### RECOVERY WARD, SURGICAL BLOCK



#### LEDI® 7/S Hospital or LEDI® 5/S Hospital digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel in anti-bacterial safety glass.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing, flush mount, IP63 waterproof front panel with sealed joint.
- ▶ Dimensions: 490 x 184 x 66mm (LxHxD)
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** Flush mount touch-screen timer casing with treated front panel.

### ENTRANCE HALL

#### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing:  
506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



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#### Gorgy Timing recommends:

- ▶ RT 9S rack-mounted time server– Part No.: 4570/3D00N8
  - ▶ AFNOR NFS 87500 output
  - ▶ NTP SNMP 10/100 Base T output
- ▶ Programming relay module - Part No.: 92000216
- ▶ LEDICA® ALPHA SQUARE - Part No.: N306/81170
- ▶ LEDI® 7/s HOSPITAL with Timer - Part No.: N366/815701U
- ▶ LEDI® 7/s HOSPITAL without timer - Part No.: N366/81570U
- ▶ LEDI® 7 - Part No.: N360/81170
- ▶ LEDI® 12 waterproof - Part No.: ND390E/184170
- ▶ Switches not supplied by Gorgy Timing



6.2. TIME SYNCHRONIZATION IN HOSPITALS AND CLINICS USING NTP 230 VAC OR POE

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time to the clocks in the entire building.</li> <li>▶ Synchronization of the entire computer network, PLC, access control, badging system (fixed or variable hours).</li> <li>▶ Synchronization of the CTM or BMS (Centralised Technical Management or Building Management System).</li> <li>▶ Distribution of a certified official time for legal medicine.</li> <li>▶ Video monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Use of existing cables and IT networks.</li> <li>▶ Standardised NTP protocol RFC 5905.</li> <li>▶ All clocks can be powered with a 230 VAC power supply or PoE (Power over Ethernet - PoE 802.3 standard).</li> <li>▶ Synchronization of the IT network and connected devices (clocks available in NTP version).</li> <li>▶ Reliability of the system and simple installation.</li> <li>▶ A large number of clocks and IT equipment can be connected.</li> <li>▶ Monitoring of connected products on the network by SNMP.</li> <li>▶ MD5 encryption.</li> </ul>

**Preamble: Time synchronization using the NTP protocol with 230 VAC or PoE power supply**

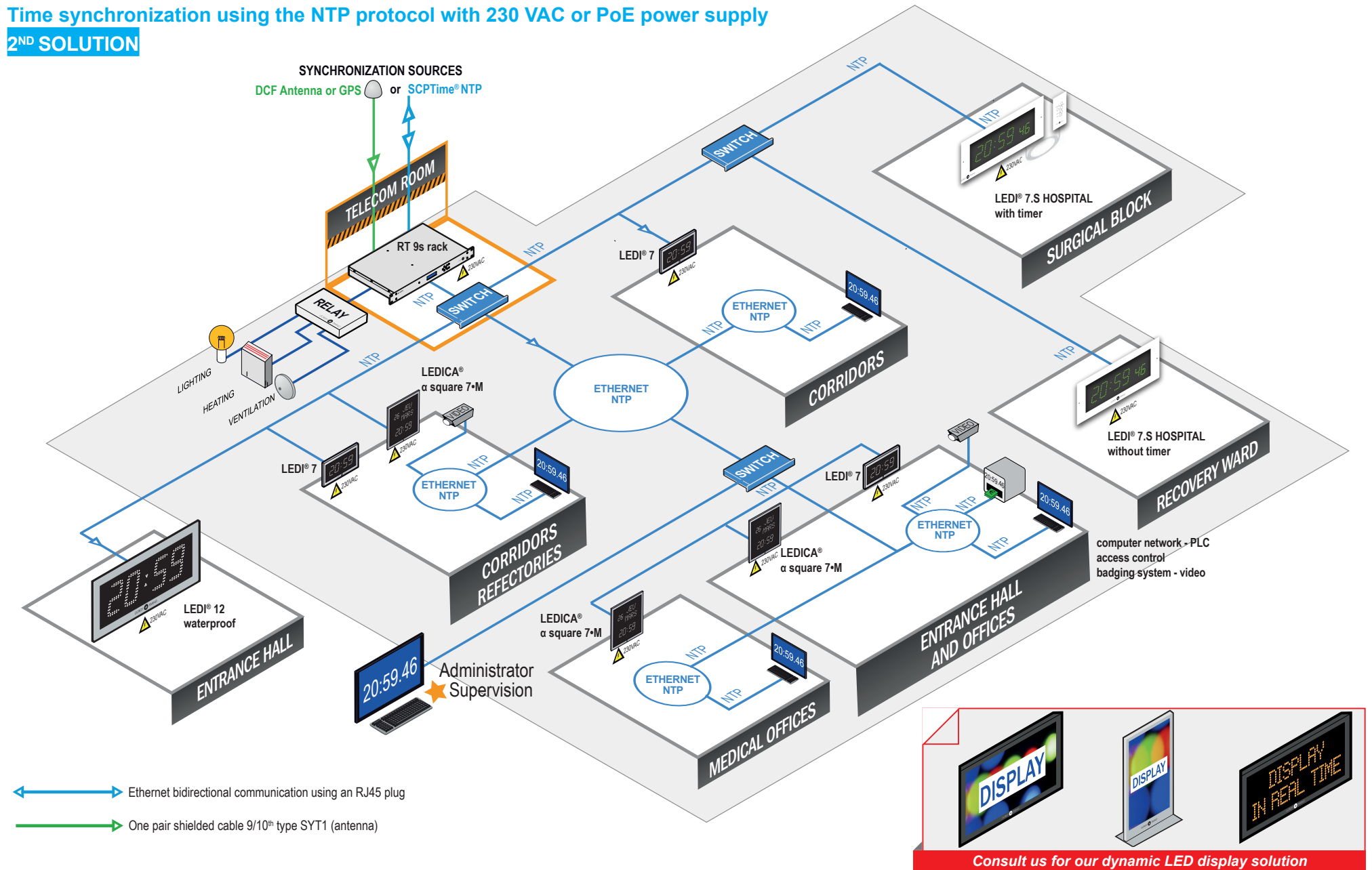
Gorgy Timing recommends this innovative solution for new installation with an Ethernet network. This solution uses the transmission of NTP time code compliant with RFC 5905 standard in unicast mode via a TCP/IP network. This use of this time distribution mode is particularly **economical as it uses the existing TCP/IP Ethernet network**. The receiver clocks are powered by 230 VAC or via the PoE switch located in VDI cabinets.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 6. HOSPITALS - CLINICS

### Time synchronization using the NTP protocol with 230 VAC or PoE power supply

#### 2<sup>ND</sup> SOLUTION





### TELECOMMUNICATIONS ROOM



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### RADIO TIMING® 9S time server

- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCPTIME®**.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

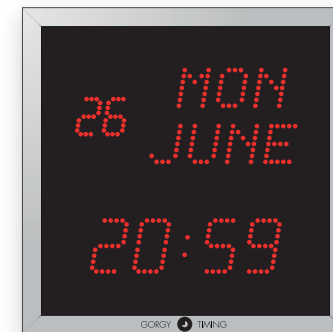
### ENTRANCE HALL AND OFFICES

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62 mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



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### CORRIDORS, REFECTORIES



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#### LEDI® 7 digital clock

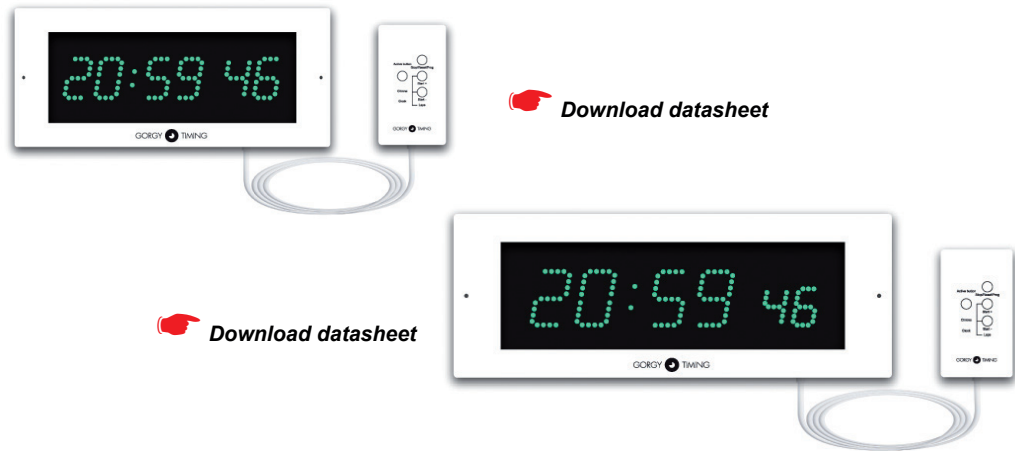
- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 6. HOSPITALS - CLINICS

### RECOVERY WARD, SURGICAL BLOCK



#### LEDI® 7/S Hospital or LEDI® 5/S Hospital digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel in anti-bacterial safety glass.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing, flush mount, IP63 waterproof front panel with sealed joint.
- ▶ Dimensions: 490 x 184 x 66mm (LxHxD)
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** Flush mount touch-screen timer casing with treated front panel.

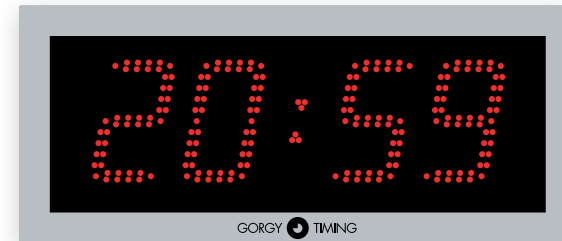
### ENTRANCE HALL

#### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing:  
506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



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#### Gorgy Timing recommends:

- ▶ RT 9S rack-mounted time server - Part No.: 4570/3D00N
  - ▶ NTP SNMP 10/100 Base T output
- ▶ Programming relay module - Part No.: 92000216
- ▶ LEDICA® ALPHA SQUARE 7M  
Part No.: N306/N1170 (230VAC power) or N306/N1177 (PoE power)
- ▶ LEDI® 7/s HOSPITAL with Timer  
Part No.: N366/N1570IU (230VAC power) or N366/N1577IU (PoE power)
- ▶ LEDI® 7/s HOSPITAL without timer  
Part No.: N366/N1570U (230VAC power) or N366/N1577U (PoE power)
- ▶ LEDI® 7 - Part No.: N360/N1170 (230VAC power) or N360/N1177 (PoE power)
- ▶ LEDI® 12 waterproof - Part No.: ND390E/1N4170 (230VAC power) or ND390E/1N4177 (PoE power)
- ▶ Switches not supplied by Gorgy Timing



6.3. TIME SYNCHRONIZATION IN HOSPITALS AND CLINICS USING Wi-Fi AND NTP 230 VAC OR POE

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time to the clocks in the entire building.</li> <li>▶ Synchronization of the entire computer network, PLC, access control, badging system (fixed or variable hours).</li> <li>▶ Synchronization of the CTM or BMS (Centralised Technical Management or Building Management System).</li> <li>▶ Distribution of a certified official time for legal medicine.</li> <li>▶ Video monitoring.</li> </ul>	<p><b>This solution uses the Wi-Fi transmission (IEEE 802.11 B/G/N standard) available in a building. The use of this international standard is particularly economical, as it does not require any specific terminal nor a wired connection with receiver clocks.</b></p> <ul style="list-style-type: none"> <li>▶ No distance limit for clocks, nor with regard to the number of clocks connected.</li> <li>▶ Use of Gorgy Timing configuration and supervision software.</li> <li>▶ Instant setting of clocks and reduction of commissioning time for the clock installation using the integrated software on an Android tablet.</li> <li>▶ No additional electromagnetic pollution in the buildings.</li> <li>▶ The coverage can be easily expanded: all Wi-Fi terminals are compatible.</li> <li>▶ Clocks can be easily relocated from one position to another.</li> <li>▶ Monitoring of connected products on the network by SNMP.</li> <li>▶ MD5 encryption.</li> <li>▶ Reduction of installation costs.</li> <li>▶ <b>NTP for the Operation Rooms</b></li> </ul>

**Preamble: Time synchronization using Gorgy Timing Wi-Fi/NTP**

**Operation Rooms are to be synchronized in NTP. In fact the operation rooms are real “Faraday cages”, which do not enable Wi-Fi 802.11 B/G/N transmissions.**

Gorgy Timing recommends the new Wi-Fi/NTP secure and traceable wireless time synchronization instead of DHW 869 MHz radio time distribution.

Gorgy Timing, a strong defender of standardised norms, has aimed to bring together two international protocols: NTP protocol (RFC5095) and the wireless Wi-Fi communication protocol (IEEE 802.11 B/G/N), thus enabling exceptional transparency and increasing user satisfaction.

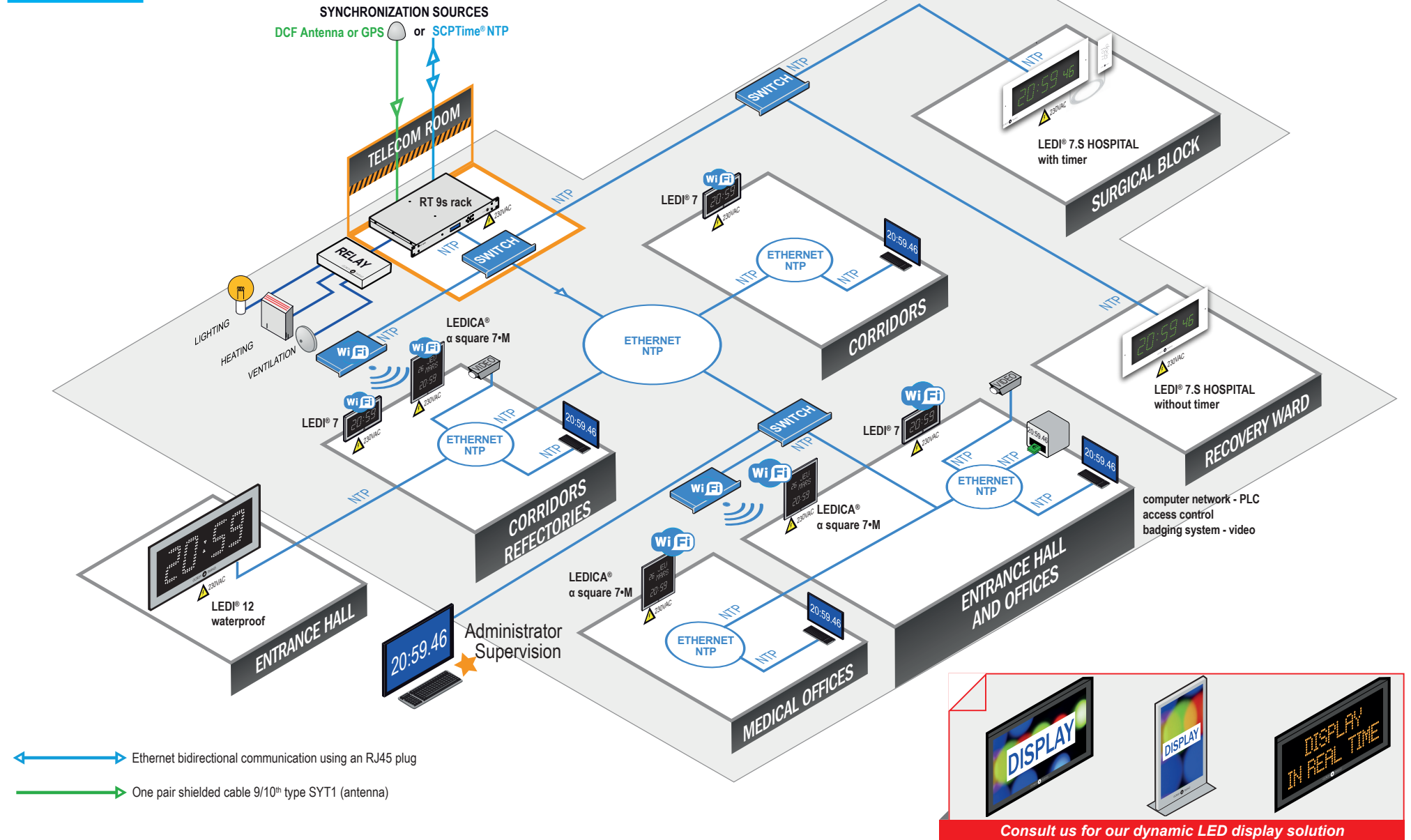
This new means of time distribution is particularly interesting for a building that is already equipped with a Wi-Fi network, to avoid additional electromagnetic pollution.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 6. HOSPITALS - CLINICS

### Time synchronization using Gorgy Timing Wi-Fi/NTP

#### 3<sup>RD</sup> SOLUTION





### TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

### RADIO TIMING® 9S time server

- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCPTIME®**.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

### ENTRANCE HALL AND OFFICES

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62 mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



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### CORRIDORS, REFECTORIES



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#### LEDI® 7 digital clock

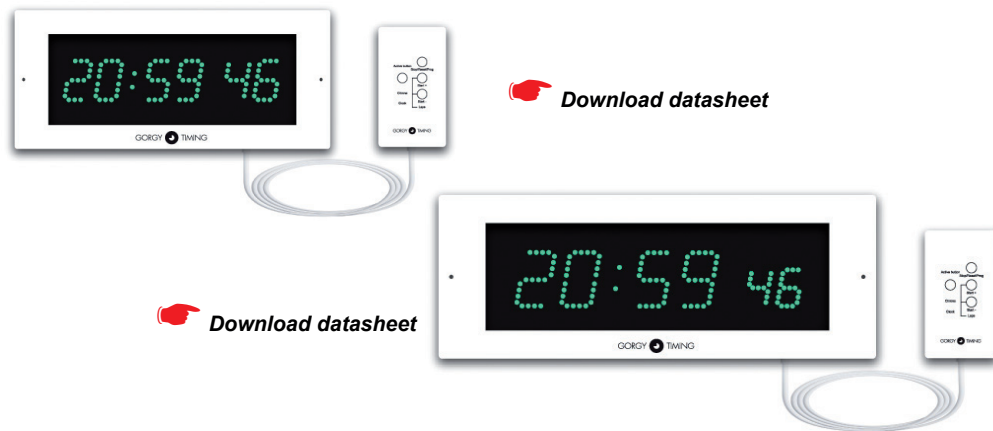
- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 6. HOSPITALS - CLINICS

### RECOVERY WARD, SURGICAL BLOCK



#### LEDI® 7/S Hospital or LEDI® 5/S Hospital digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel in anti-bacterial safety glass.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing, flush mount, IP63 waterproof front panel with sealed joint.
- ▶ Dimensions: 490 x 184 x 66mm (LxHxD)
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** Flush mount touch-screen timer casing with treated front panel.

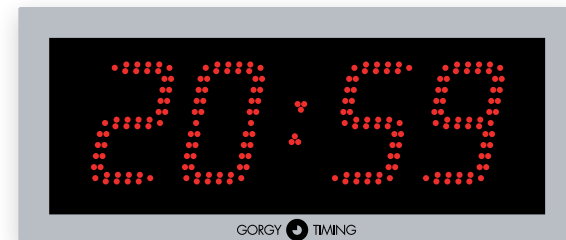
### ENTRANCE HALL

#### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing:  
506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



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#### Gorgy Timing recommends:

- ▶ RT 9S rack-mounted time server - Part No.: 4570/3D00N
  - ▶ NTP SNMP 10/100 Base T output
- ▶ Programming relay module - Part No.: 92000216
- ▶ LEDICA® ALPHA SQUARE - Part No.: N306/W1170
- ▶ LEDI® 7/s HOSPITAL with Timer N366/N1570IU (230VAC power)
- ▶ LEDI® 7/s HOSPITAL without timer N366/N1570U (230VAC power)
- ▶ LEDI® 7 - Part No.: N360/W1170
- ▶ LEDI® 12 waterproof - Part No.: ND390E/1W4170
- ▶ Switches not supplied by Gorgy Timing

## 7. DEPENDANCY CARE FOR THE ELDERLY



### 7.1. TIME DISTRIBUTION IN DEPENDANCY CARE CENTER FOR THE ELDERLY USING AFNOR NFS 87500 CODE

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"><li>▶ Transmission of an identical time to the clocks in the entire building, covering the specific needs of persons entering the establishment (Care unit for Alzheimer sufferers).</li><li>▶ Synchronization of the entire IT network, automated machines, access control, the badge reader system (fixed or variable schedule) and public address system.</li><li>▶ Synchronization of the CTM or BMS (Centralised Technical Management or Building Management System).</li></ul>	<ul style="list-style-type: none"><li>▶ Instant time setting without manual intervention.</li><li>▶ Standardised AFNOR NFS 87500 code.</li><li>▶ Reduced installation cost while allowing to use a pair available in a telephone or fibre optic cable.</li><li>▶ Ability to transmit the time over long distances of more than 20 km and to have 200 clocks.</li><li>▶ No interferences with telephone lines or IT environments.</li><li>▶ Synchronization of computer networks by NTP RFC5905 protocol.</li></ul>

#### Preamble: Time distribution using the AFNOR NFS 87500 encryption

Gorgy Timing recommends this type of time distribution in Dependency care for the elderly, instead of pulse transmission.

This code, with a standardised time message and amplitude modulation frequency can distribute the time to more than 200 clocks within a distance of up to 20 km, via a simple telephone cable. This code has the advantage that it does not interfere with surrounding lines and is not susceptible to industrial interference.

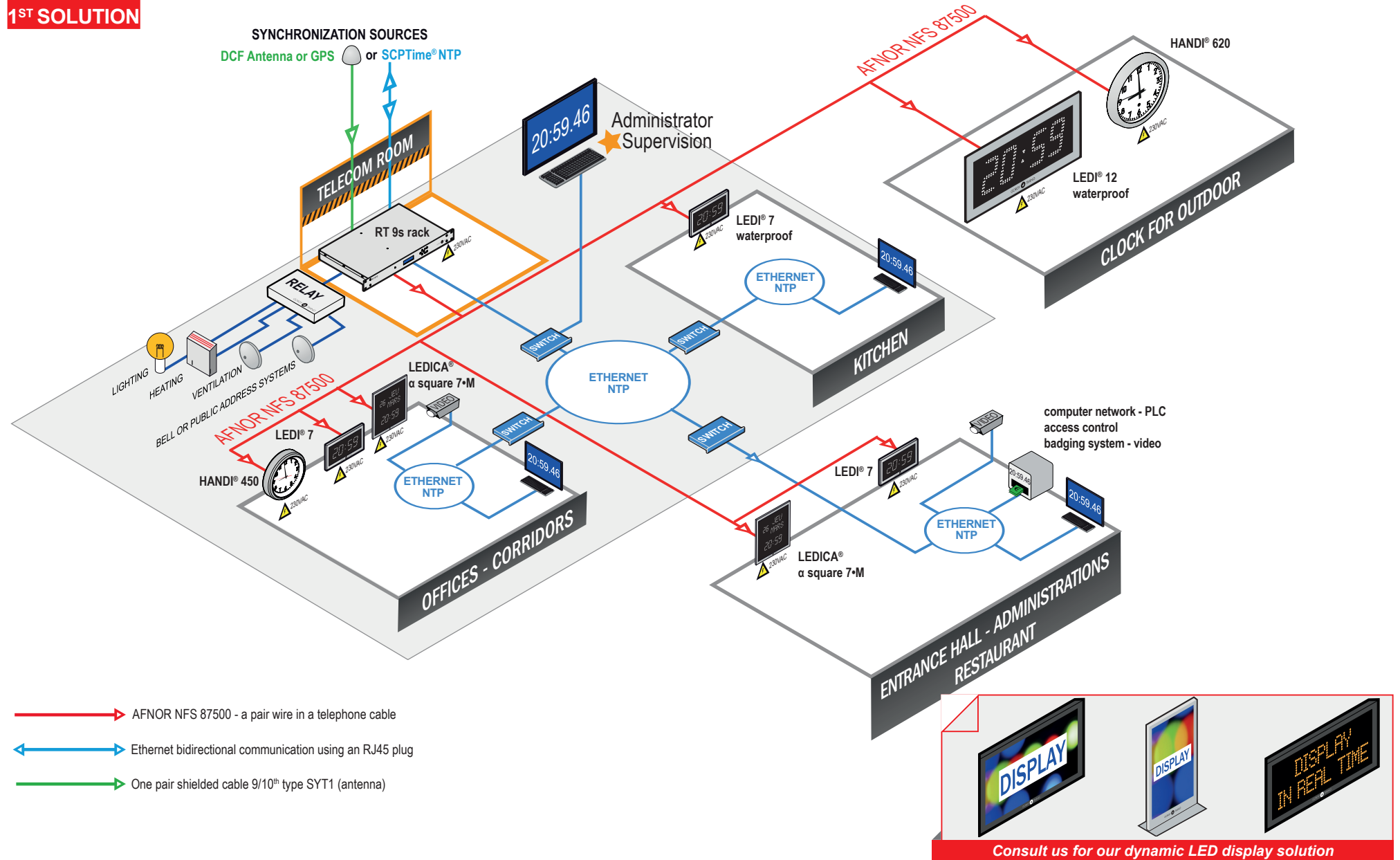
In the case of time distribution using the AFNOR NFS 87500 code, the master clock transmits a time message on a pair wire in a telephone cable using a 1000 Hz frequency, to analogue or digital clocks.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 7. DEPENDANCY CARE FOR THE ELDERLY

### Time distribution AFNOR NFS 87500 code and NTP

#### 1<sup>ST</sup> SOLUTION





### TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

#### RADIO TIMING® 9S time server

- ▶ 19"1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCPTIME®**.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ AFNOR NFS 87500 output synchronises the clocks.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

#### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

### ENTRANCE HALL, ADMINISTRATIONS, RESTAURANT

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#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### OFFICES, CORRIDORS



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#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### HANDI® single face 450 mm analogue clock

- ▶ Grey painted aluminium casing, 450 mm diameter, IP30.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Distance of legibility: max. 30m.
- ▶ Single face model for wall mount ceiling or side mount.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 7. DEPENDANCY CARE FOR THE ELDERLY

### KITCHEN



 [Download datasheet](#)

#### LEDI® 7 waterproof digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing:  
350x165x62mm (LxHxD) IP66 front face, IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### CLOCK FOR OUTDOOR



 [Download datasheet](#)

#### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing: 506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### HANDI® analogue clock, single face, 620 mm, waterproof

- ▶ Grey painted aluminium casing, 620 mm diameter, IP54.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Makrolon front face.
- ▶ Distance of legibility: max. 60m.
- ▶ Single face model for wall mount ceiling or side mount.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket and LED lighting.

#### Gorgy Timing recommends:

- ▶ RT 9S rack-mounted time server - Part No.: 4570/3D00N8
  - ▶ AFNOR NFS 87500 output
  - ▶ NTP SNMP 10/100 Base T output

- ▶ Programming relay module - Part No.: 92000216
- ▶ LEDICA® ALPHA SQUARE - Part No.: N306/81170
- ▶ LEDI® 7 - Part No.: N360/81170
- ▶ HANDI® 450mm - Part No.: H740/497M
- ▶ LEDI® 7 waterproof- Part No.: ND360E/184170
- ▶ LEDI® 12 waterproof - Part No.: ND390E/184170 or HANDI® 620 - Part No.: 750/791W
- ▶ Switches not supplied by Gorgy Timing

## 7. DEPENDANCY CARE FOR THE ELDERLY



### 7.2. TIME SYNCHRONIZATION IN DEPENDANCY CARE FOR THE ELDERLY USING NTP 230 VAC OR POE

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time to the clocks in the entire building, covering the specific needs of persons entering the establishment (Care unit for Alzheimer sufferers).</li> <li>▶ Synchronization of the entire IT network, automated machines, access control, the badge reader system (fixed or variable schedule) and public address system.</li> <li>▶ Synchronization of the CTM or BMS (Centralised Technical Management or Building Management System).</li> </ul>	<ul style="list-style-type: none"> <li>▶ Use of existing cables and IT networks.</li> <li>▶ Standardised NTP protocol RFC 5905.</li> <li>▶ All clocks can be powered with a 230 VAC power supply or PoE (Power over Ethernet - PoE 802.3 standard).</li> <li>▶ Synchronization of the IT network and connected devices (clocks available in NTP version).</li> <li>▶ Reliability of the system and simple installation.</li> <li>▶ A large number of clocks and IT equipment can be connected.</li> <li>▶ Monitoring of connected products on the network by SNMP.</li> <li>▶ MD5 encryption.</li> </ul>

#### Preamble: Time synchronization using the NTP protocol with 230 VAC or PoE power supply

Gorgy Timing recommends this innovative solution for any new installation with an Ethernet network.

This solution uses the transmission of NTP time code compliant with RFC 5905 standard in unicast mode via a TCP/IP network. This use of this time distribution mode is particularly economical as it uses the existing TCP/IP Ethernet network.

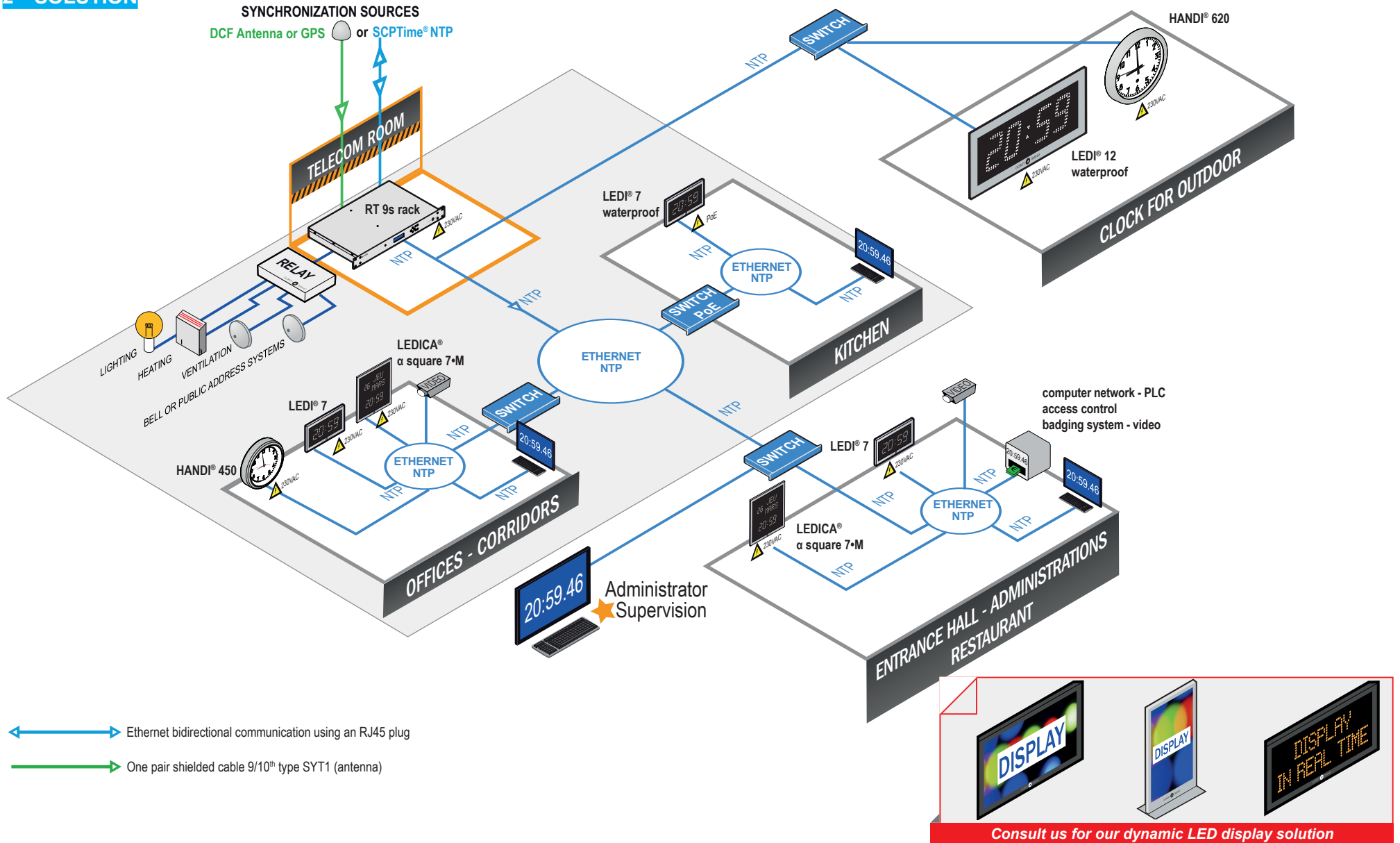
The receiver clocks are powered by 230 VAC or via the PoE switch located in VDI cabinets

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 7. DEPENDANCY CARE FOR THE ELDERLY

### Time synchronization using the NTP protocol with 230 VAC or PoE power supply

#### 2<sup>ND</sup> SOLUTION





### TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

#### RADIO TIMING® 9S time server

- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or SCPTIME®.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

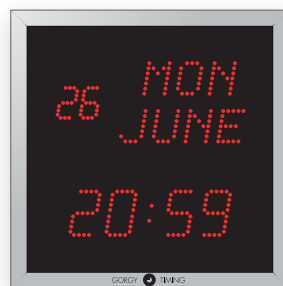
*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

#### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

### ENTRANCE HALL, ADMINISTRATIONS, RESTAURANT

 [Download datasheet](#)



#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### OFFICES, CORRIDORS



 [Download datasheet](#)

#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### HANDI® single face 450 mm analogue clock

- ▶ Grey painted aluminium casing, 450 mm diameter, IP30.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Distance of legibility: max. 30m.
- ▶ Single face model for wall mount ceiling or side mount.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 7. DEPENDANCY CARE FOR THE ELDERLY

### KITCHEN



 [Download datasheet](#)

#### LEDI® 7 waterproof digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP66 front face, IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### CLOCK FOR OUTDOOR



 [Download datasheet](#)

#### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing: 506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### HANDI® analogue clock, single face, 620 mm, waterproof

- ▶ Grey painted aluminium casing, 620 mm diameter, IP54.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Makrolon front face.
- ▶ Distance of legibility: max. 60m.
- ▶ Single face model for wall mount ceiling or side mount.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket and LED lighting.

 **Gorgy Timing recommends:**

- ▶ RT 9S rack-mounted time server - Part No.: 4570/3D00N
  - ▶ NTP SNMP 10/100 Base T output
- ▶ Programming relay module - Part No.: 92000216
- ▶ LEDICA® ALPHA SQUARE - Part No.: N306/N1170 (230VAC power) or N306/N1177 (PoE power)
- ▶ LEDI® 7 - Part No.: N360/N1170 (230VAC power) or N360/N1177 (PoE power)
- ▶ HANDI® 450mm - Part No.: H740/4N7M (230VAC power) or H740/4P7M (PoE power)
- ▶ LEDI® 7 waterproof - Part No.: ND360E/1N4170 (230VAC power) or ND360E/1N4177 (PoE power)
- ▶ LEDI® 12 waterproof - Part No.: ND390E/1N4170 (230VAC power) or ND390E/1N4177 (PoE power)
- ▶ or HANDI® 620 - Part No.: 750/7N1W (230VAC power) or 750/7P1W (PoE power)
- ▶ Switches not supplied by Gorgy Timing



7.3. TIME SYNCHRONIZATION IN DEPENDANCY CARE FOR THE ELDERLY USING WI-FI AND NTP 230 VAC OR POE

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time to the clocks in the entire building, covering the specific needs of persons entering the establishment (Care unit for Alzheimer sufferers).</li> <li>▶ Synchronization of the entire IT network, automated machines, access control, the badge reader system (fixed or variable schedule) and public address system.</li> <li>▶ Synchronization of the CTM or BMS (Centralised Technical Management or Building Management System).</li> </ul>	<p><b>This solution uses the Wi-Fi transmission (IEEE 802.11 B/G/N standard) available in a building. The use of this international standard is particularly economical, as it does not require any specific terminal nor a wired connection with receiver clocks.</b></p> <ul style="list-style-type: none"> <li>▶ No distance limit for clocks, nor with regard to the number of clocks connected.</li> <li>▶ Use of Gorgy Timing configuration and supervision software.</li> <li>▶ Instant setting of clocks and reduction of commissioning time for the clock installation using the integrated software on an Android tablet.</li> <li>▶ No additional electromagnetic pollution in the buildings.</li> <li>▶ The coverage can be easily expanded: all Wi-Fi terminals are compatible.</li> <li>▶ Clocks can be easily relocated from one position to another.</li> <li>▶ Monitoring of connected products on the network by SNMP.</li> <li>▶ MD5 encryption.</li> <li>▶ Reduction of installation costs.</li> </ul>

**Time synchronization using Gorgy Timing Wi-Fi/NTP**

Gorgy Timing recommends the new Wi-Fi/NTP secure and traceable wireless time synchronization for time installations, instead of DHW 869 MHz radio time distribution.

Gorgy Timing, a strong defender of standardised norms, has aimed to bring together two international protocols: NTP protocol (RFC5905) and the wireless Wi-Fi communication protocol (IEEE 802.11 B/G/N), thus enabling exceptional transparency and increasing user satisfaction.

This new means of time distribution is particularly interesting for a building that is already equipped with a Wi-Fi network, to avoid additional electromagnetic pollution.

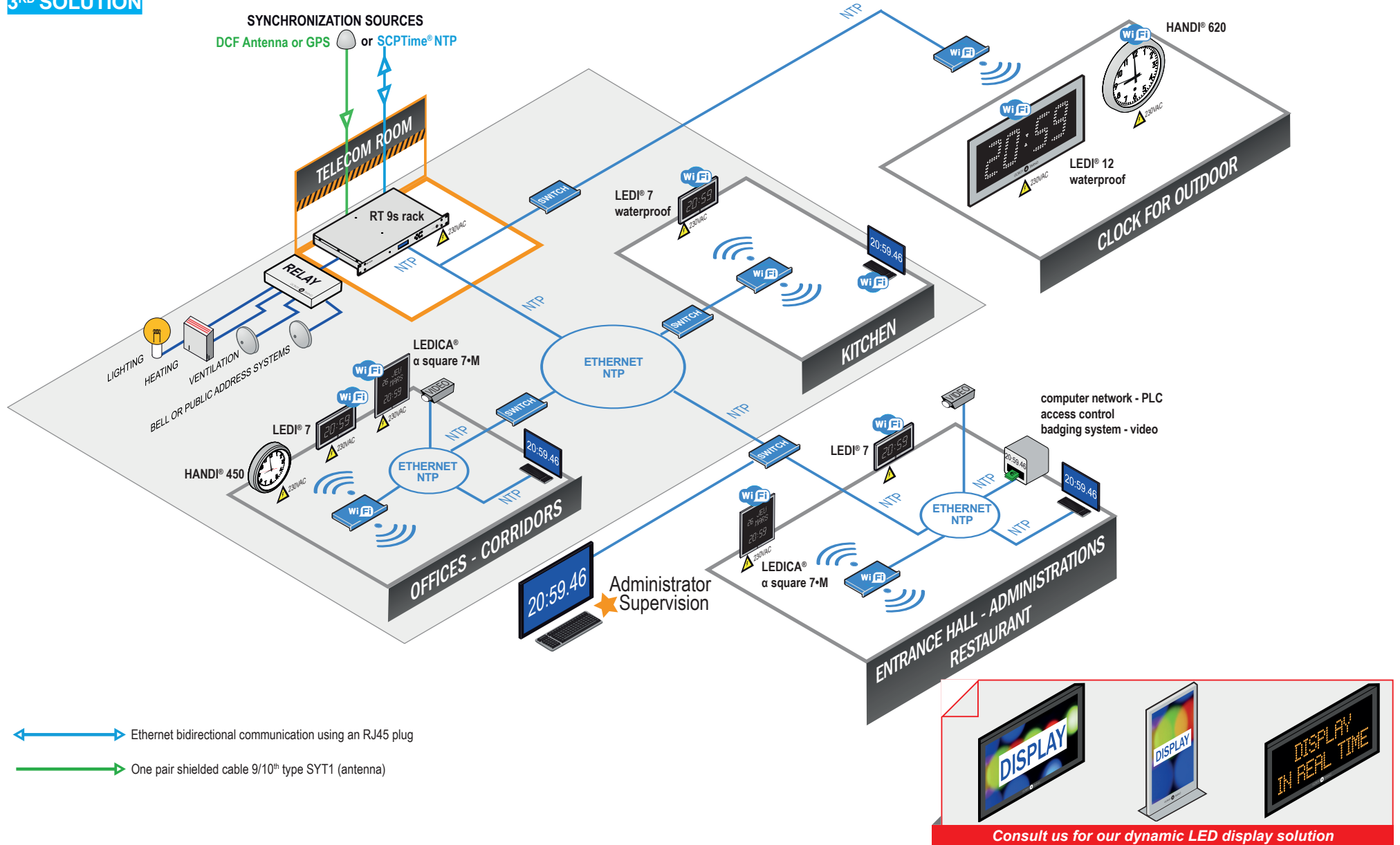
The Wi-Fi/NTP protocol, on account of its bi-directional character, enables greater time security than the DHW 869 MHz code suggested so far.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 7. DEPENDANCY CARE FOR THE ELDERLY

### Time synchronization using Gorgy Timing Wi-Fi/NTP

#### 3<sup>RD</sup> SOLUTION





### TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

### RADIO TIMING® 9S time server

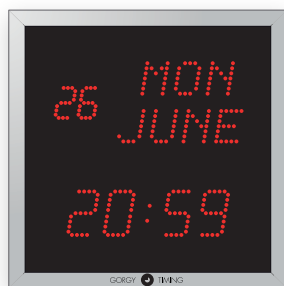
- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or SCPTIME®.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.
- ▶ *Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

### ENTRANCE HALL, ADMINISTRATIONS, RESTAURANT

 [Download datasheet](#)



### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### OFFICES, CORRIDORS

 [Download datasheet](#)



### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

### HANDI® single face 450 mm analogue clock

- ▶ Grey painted aluminium casing, 450 mm diameter, IP30.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Distance of legibility: max. 30m.
- ▶ Single face model for wall mount ceiling or side mount.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 7. DEPENDANCY CARE FOR THE ELDERLY

### KITCHEN



 [Download datasheet](#)

#### LEDI® 7 waterproof digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP66 front face, IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### CLOCK FOR OUTDOOR



 [Download datasheet](#)

#### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing: 506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### HANDI® analogue clock, single face, 620 mm, waterproof

- ▶ Grey painted aluminium casing, 620 mm diameter, IP54.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Makrolon front face.
- ▶ Distance of legibility: max. 60m.
- ▶ Single face model for wall mount ceiling or side mount.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket and LED lighting.

#### ▶ Option: configuration tool

**Nexus touch screen configuration tablet: for rapid and simple setup**



- ▶ Use of a touch screen tablet, preconfigured in the factory.
  - ▶ Included: GT Wi-Fi Manager (mobile application).
  - ▶ Included: User manuals + documentation for Gorgy Timing products.
  - ▶ Included: videos (tutorial).
  - ▶ Can be used for other purposes (monitoring, web, email...).
- CE/CEM product. Anti-fire standard.*

#### **Gorgy Timing recommends:**

- ▶ RT 9S rack-mounted time server - Part No.: 4570/3D00N
  - ▶ NTP SNMP 10/100 Base T output
- ▶ Programming relay module - Part No.: 92000216
- ▶ LEDICA® ALPHA SQUARE - Part No.: N306/W1170
- ▶ LEDI® 7 - Part No.: N360/W1170
- ▶ HANDI® 450mm - Part No.: H740/4W7M
- ▶ LEDI® 7 waterproof - Part No.: ND360E/1W4170
- ▶ LEDI® 12 waterproof - Part No.: N390E/1W4170 or HANDI 620 - Part No.: 750/7W1W
- ▶ Nexus touch screen tablet option - Part No.: INF0005A
- ▶ Switches not supplied by Gorgy Timing

## 8. SWIMMING POOLS



### 8.1. TIME DISTRIBUTION IN SWIMMING POOLS USING THE AFNOR NFS 87500 CODE

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"><li>▶ Transmission of an identical time around the entire swimming pool, activation of opening and closing announcement (in accordance with opening hours of the pool), either by bells or via PA system.</li><li>▶ Synchronization of the CTM or BMS (Centralised Technical Management or Building Management System).</li><li>▶ Synchronization of Access control, video surveillance, etc.</li></ul>	<ul style="list-style-type: none"><li>▶ Instant time setting without manual intervention.</li><li>▶ AFNOR NFS 87500 standard code</li><li>▶ Reduced installation cost while allowing to use a pair available in a telephone or fibre optic cable.</li><li>▶ Ability to transmit the time over long distances of more than 20 km and to have 200 clocks.</li><li>▶ No interferences with telephone lines or IT environments.</li><li>▶ Synchronization of the VDI rack by means of a serial RS232 connection.</li></ul>

#### Preamble: Time distribution using the AFNOR NFS 87500 encryption

Gorgy Timing recommends this type of time distribution in swimming pool instead of pulse or DHW 869 MHz radio time distribution.

This code, with a standardised time message and amplitude modulation frequency can distribute the time to more than 200 clocks within a distance of up to 20 km, via a simple telephone cable.

This code has the advantage that it does not interfere with surrounding lines and is not susceptible to industrial interference.

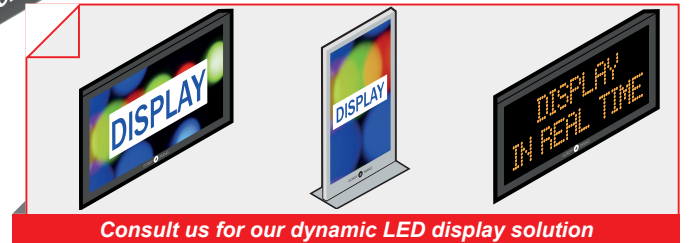
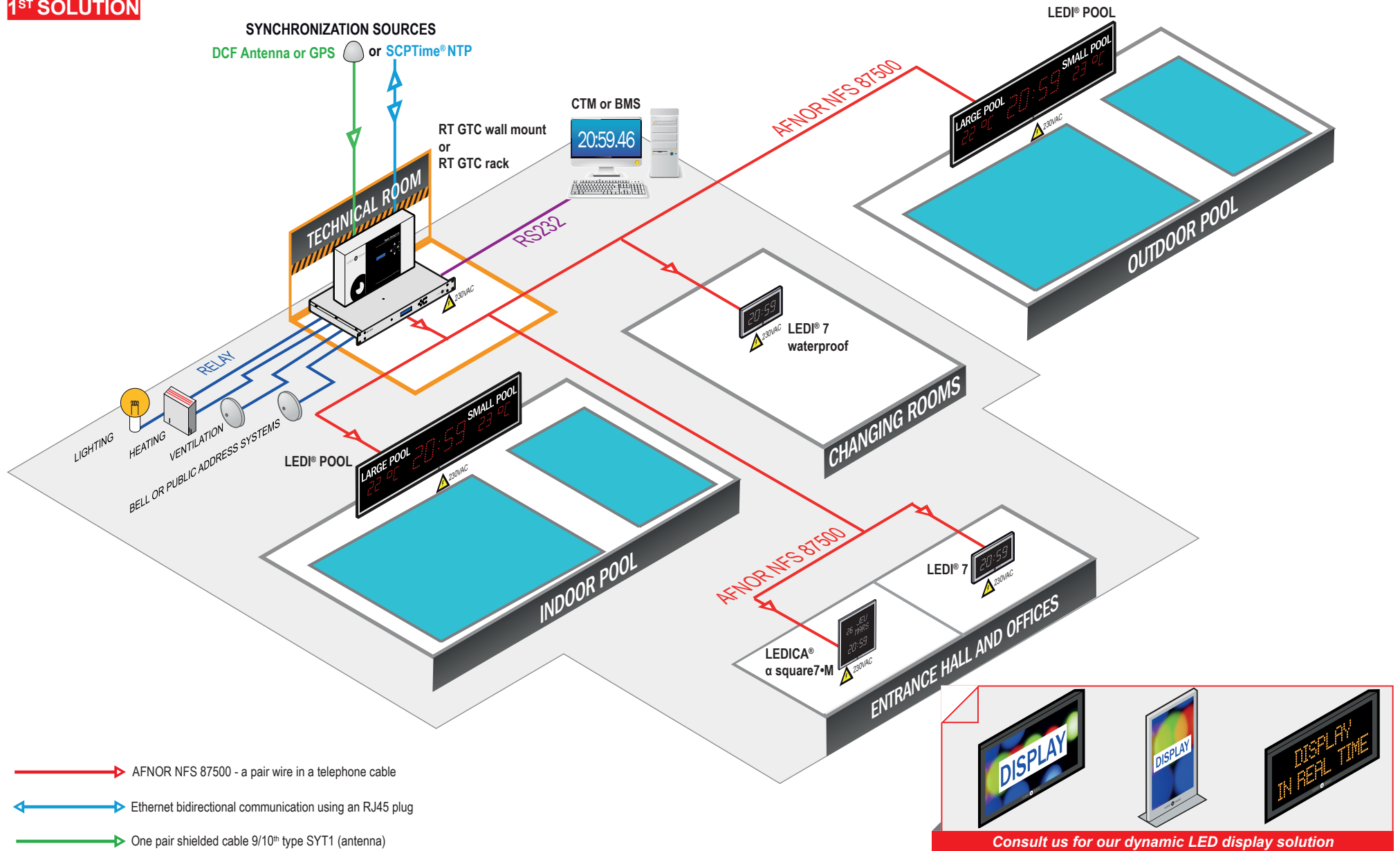
In the case of time distribution using the AFNOR NFS 87500 code, the master clock transmits a time message on a pair wire in a telephone cable using a 1000 Hz frequency, to analogue or digital clocks.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 8. SWIMMING POOLS

### Time distribution AFNOR NFS 87500 code

#### 1<sup>ST</sup> SOLUTION





## 8. SWIMMING POOLS

### TECHNICAL ROOM



 [Download datasheet wall mounted version](#)



 [Download datasheet rack version](#)

#### RADIO TIMING® GTC master programmer clock

- ▶ With a wall mount case or 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCPTIME®**.
- ▶ Built-in programmer with 4 relays (10a) that can be configured using the keypad on the front panel.
- ▶ AFNOR NFS 87500 output synchronises the clocks.
- ▶ 2 ASCII RS 232/485 outputs synchronise the connected devices.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

### ENTRANCE HALL AND OFFICES



 [Download datasheet.](#)

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumeric display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62 mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 8. SWIMMING POOLS

### CHANGING ROOMS



 [Download datasheet](#)

#### LEDI® 7 waterproof digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP66 front face, IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### CLOCK FOR THE POOL AREA

#### LEDI® POOL digital clock

The LEDI® POOL displays the water temperatures for one or two pools and alternates between display of ambient air temperature and that of time.

- ▶ Compliant with the French Sport Code, Article R322-18.
- ▶ Its rectangular shape enables it to be positioned at a height that is out of reach of swimmers.
- ▶ Digital display, Height of digits for hours and minutes: 110 mm temperature: 70 mm in bi-colour SMD LEDs, enabling the user to adjust the colour of the display to red, green or yellow. Its light guide enables a 160° time reading angle.
- ▶ Front panel treated with a patented antiglare and anti-scratch coating.
- ▶ Anodised matt aluminium casing: 1150 x 260 x 62 mm (LxHxD).
- ▶ IP54. Single-sided model for wall-mount, ceiling mount or flush mount.
- ▶ Tropicalisation of the electronic circuits.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.
- ▶ 230 VAC power supply.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*



 [Download datasheet](#)

#### Measurements

- ▶ Temperature sensor for the pool: PT1000 Class B compliant with the CEI 751 standard, stainless steel tube diameter 6mm, available in both wired and wireless version.
- ▶ Water temperature transmitter by 4/20 mA input.
- ▶ Air temperature measurement: PT1000 Class B compliant with the CEI 751 standard. Stainless steel tube diameter 4.5 mm, length 40 mm, PVC-sheathed and shielded cable 2 x 0.22 mm<sup>2</sup> of 5 meters.
- ▶ The sensors are composed of a 316L stainless steel tube, with or without extension by means of a cable; they are screwed directly onto the control unit.

#### Gorgy Timing recommends:

- ▶ Master clock RTGTC Wall case - Part No.: 4580/D038A  
or
- ▶ Master clock RTGTC Rack - Part No.: 4550/D038A
  - ▶ 1 AFNOR NFS 87500 output
  - ▶ 2 ASCII RS232 outputs

- ▶ LEDICA® ALPHA SQUARE - Part No.: N306/81170
- ▶ LEDI® 7 - Part No.: N360/81170
- ▶ LEDI® 7 waterproof - Part No.: ND360E/184170
- ▶ LEDI® POOL - Part No.: N3006/84170GG Wired sensors  
or
- ▶ LEDI® POOL - Part No.: N3006/84170TT Radio sensors

## 8. SWIMMING POOLS



### 8.2. TIME SYNCHRONIZATION IN SWIMMING POOLS USING NTP AND 230 VAC OR POE

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"><li>▶ Transmission of an identical time around the entire swimming pool, activation of opening and closing announcement (in accordance with opening hours of the pool), either by bells or via PA system.</li><li>▶ Synchronization of the CTM or BMS (Centralised Technical Management or Building Management System).</li><li>▶ Synchronization of Access control, video surveillance, etc.</li></ul>	<ul style="list-style-type: none"><li>▶ Use of existing cables and IT networks.</li><li>▶ Standardised NTP protocol RFC 5905.</li><li>▶ All clocks can be powered with a 230 VAC power supply or PoE (Power over Ethernet - PoE 802.3 standard).</li><li>▶ Synchronization of the IT network and connected devices (clocks available in NTP version).</li><li>▶ Reliability of the system and simple installation.</li><li>▶ A large number of clocks and IT equipment can be connected.</li><li>▶ Monitoring of connected products on the network by SNMP.</li><li>▶ MD5 encryption.</li></ul>

#### Preamble: Time synchronization using the NTP protocol with 230 VAC or PoE power supply

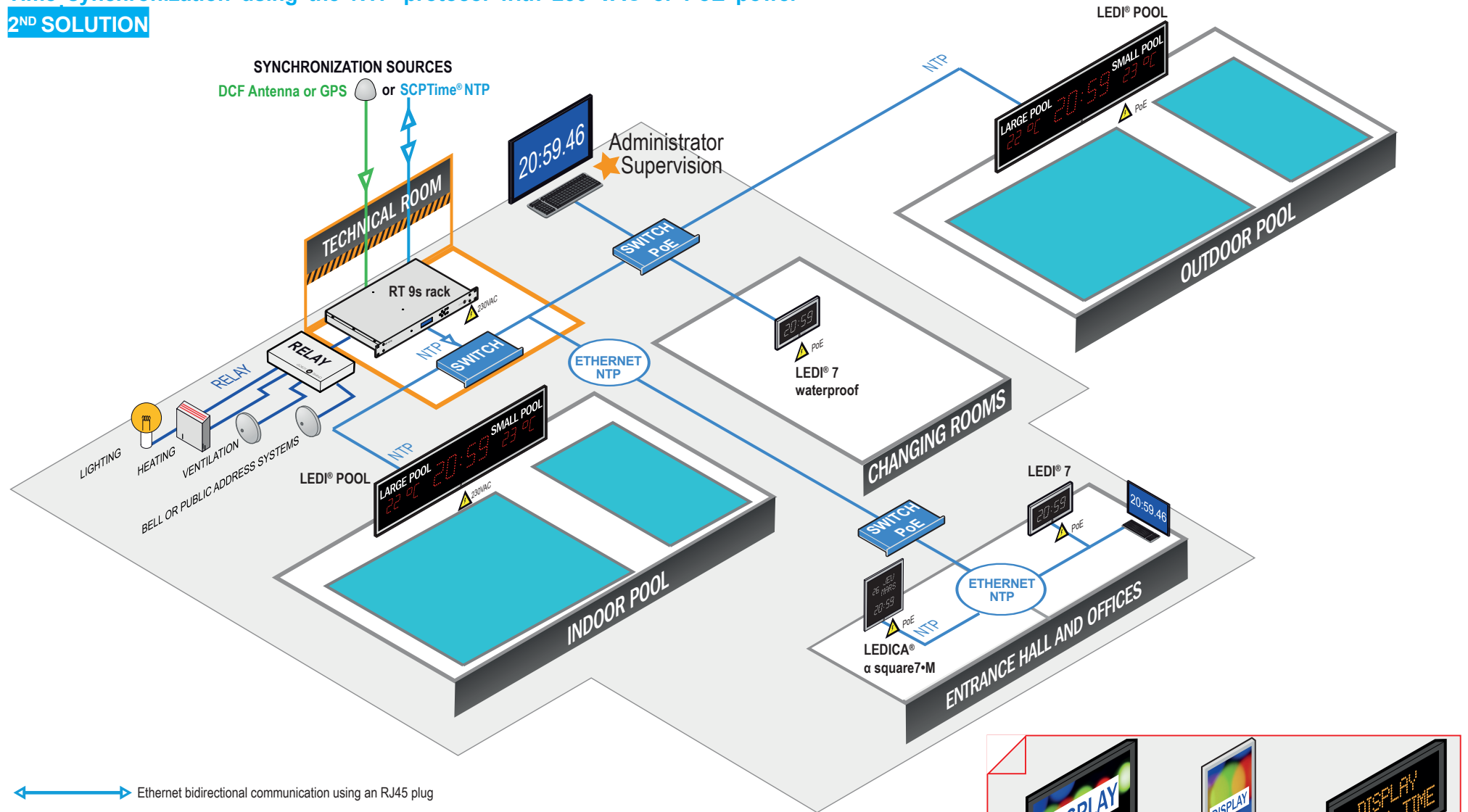
Gorgy Timing recommends this innovative solution for new installation with an Ethernet network. This solution uses the transmission of NTP time code compliant with RFC 5905 standard in unicast mode via a TCP/IP network. This use of this time distribution mode is particularly **economical as it uses the existing TCP/IP Ethernet network**. The receiver clocks are powered by 230 VAC or via the PoE switch located in VDI cabinets.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 8. SWIMMING POOLS

### Time synchronization using the NTP protocol with 230 VAC or PoE power

#### 2<sup>ND</sup> SOLUTION



↔ Ethernet bidirectional communication using an RJ45 plug

→ One pair shielded cable 9/10<sup>th</sup> type SYT1 (antenna)



Consult us for our dynamic LED display solution



## 8. SWIMMING POOLS

### TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

#### RADIO TIMING® 9S time server

- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCPTIME®**.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

#### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

### ENTRANCE HALL AND OFFICES



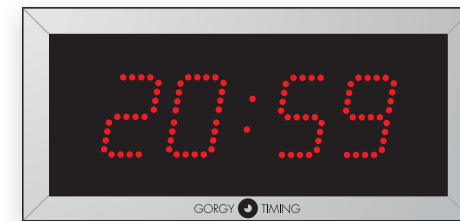
 [Download datasheet.](#)

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62 mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 8. SWIMMING POOLS

### CHANGING ROOMS



 [Download datasheet](#)

#### LEDI® 7 waterproof digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP66 front face, IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### CLOCK FOR THE POOL AREA

#### LEDI® POOL digital clock

The LEDI® POOL displays the water temperatures for one or two pools and alternates between display of ambient air temperature and that of time.

- ▶ Compliant with the French Sport Code, Article R322-18.
- ▶ Its rectangular shape enables it to be positioned at a height that is out of reach of swimmers.
- ▶ Digital display, Height of digits for hours and minutes: 110 mm temperature: 70 mm in bi-colour SMD LEDs, enabling the user to adjust the colour of the display to red, green or yellow. Its light guide enables a 160° time reading angle.
- ▶ Front panel treated with a patented antiglare and anti-scratch coating.
- ▶ Anodised matt aluminium casing: 1150 x 260 x 62 mm (LxHxD).
- ▶ IP54. Single-sided model for wall-mount, ceiling mount or flush mount.
- ▶ Tropicalisation of the electronic circuits.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.
- ▶ 230 VAC power supply.

*Electrical device compliant with the EN60950CE/CEM standard.*



 [Download datasheet](#)

#### Measurements

- ▶ Temperature sensor for the pool: PT1000 Class B compliant with the CEI 751 standard, stainless steel tube diameter 6mm, available in both wired and wireless version.
- ▶ Water temperature transmitter by 4/20 mA input.
- ▶ Air temperature measurement: PT1000 Class B compliant with the CEI 751 standard. Stainless steel tube diameter 4.5 mm, length 40 mm, PVC-sheathed and shielded cable 2 x 0.22 mm<sup>2</sup> of 5 meters.
- ▶ The sensors are composed of a 316L stainless steel tube, with or without extension by means of a cable; they are screwed directly onto the control unit.

#### Gorgy Timing recommends:

- ▶ RT 9S rack-mounted time server - Part No.: 4570/3D00N
  - ▶ NTP SNMP 10/100 Base T output
- ▶ Programming relay module - Part No.: 92000216
- ▶ LEDICA® ALPHA SQUARE - Part No.: N306/N1170 (230VAC power) or N306/N1177 (PoE power)
- ▶ LEDI® 7 - Part No.: N360/N1170 (230VAC power) or Part No.: N360/N1177 (PoE power)
- ▶ LEDI® POOL - Part No.: N3006/N4170GG (230VAC power) or N3006/N4177GG (PoE power) Wired sensors
- or
- ▶ LEDI® POOL - Part No.: N3006/N4170TT (230VAC power) or N3006/N4177TT (PoE power) Radio sensors
- ▶ Switches not supplied by Gorgy Timing

## 8. SWIMMING POOLS



### 8.3. TIME SYNCHRONIZATION IN SWIMMING POOLS USING WI-FI

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"><li>▶ Transmission of an identical time around the entire swimming pool, activation of opening and closing announcement (in accordance with opening hours of the pool), either by bells or via PA system.</li><li>▶ Synchronization of the CTM or BMS (Centralised Technical Management or Building Management System).</li><li>▶ Synchronization of Access control, video surveillance, etc.</li></ul>	<p><b>This solution uses the Wi-Fi transmission (IEEE 802.11 B/G/N standard) available in a building. The use of this international standard is particularly economical, as it does not require any specific terminal nor a wired connection with receiver clocks.</b></p> <ul style="list-style-type: none"><li>▶ No distance limit for clocks, nor with regard to the number of clocks connected.</li><li>▶ Use of Gorgy Timing configuration and supervision software.</li><li>▶ Instant setting of clocks and reduction of commissioning time for the clock installation using the integrated software on an Android tablet.</li><li>▶ No additional electromagnetic pollution in the buildings.</li><li>▶ The coverage can be easily expanded: all Wi-Fi terminals are compatible.</li><li>▶ Clocks can be easily relocated from one position to another.</li><li>▶ Monitoring of connected products on the network by SNMP.</li><li>▶ MD5 encryption.</li><li>▶ Reduction of installation costs.</li></ul>

#### Preamble: Time synchronization using Gorgy Timing Wi-Fi/NTP

Gorgy Timing recommends the new Wi-Fi/NTP secure and traceable wireless time synchronization for time installations, instead of DHW 869 MHz radio time distribution.

Gorgy Timing, a strong defender of standardised norms, has aimed to bring together two international protocols: NTP protocol (RFC5905) and the wireless Wi-Fi communication protocol (IEEE 802.11 B/G/N), thus enabling exceptional transparency and increasing user satisfaction.

This new means of time distribution is particularly interesting for a building that is already equipped with a Wi-Fi network, to avoid additional electromagnetic pollution.

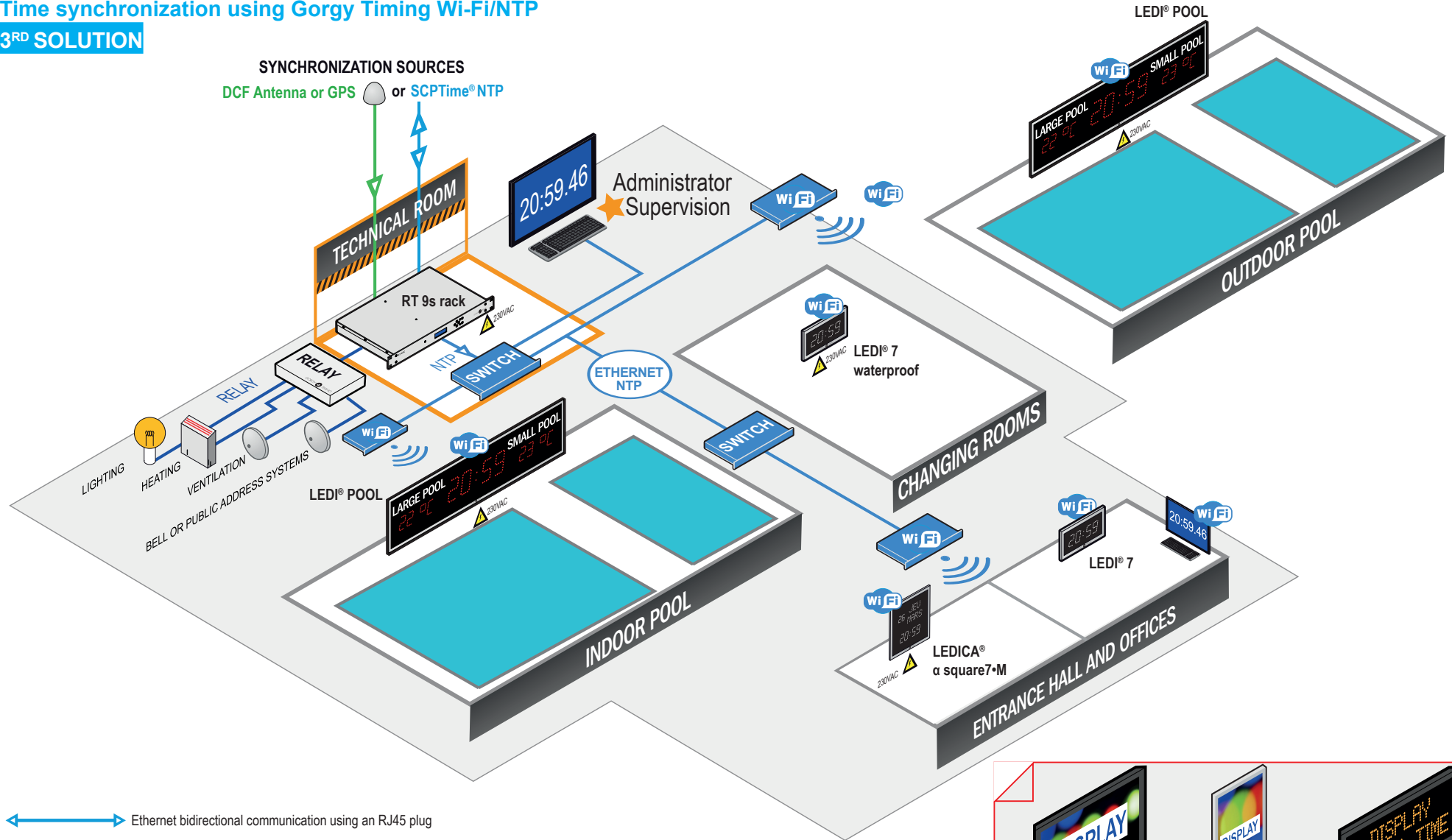
The Wi-Fi/NTP protocol, on account of its bi-directional character, enables greater time security than the DHW 869 MHz code suggested so far.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 8. SWIMMING POOLS

### Time synchronization using Gorgy Timing Wi-Fi/NTP

#### 3<sup>RD</sup> SOLUTION



↔ Ethernet bidirectional communication using an RJ45 plug

→ One pair shielded cable 9/10<sup>th</sup> type SYT1 (antenna)





## 8. SWIMMING POOLS

### TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

#### RADIO TIMING® 9S time server

- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCPTIME®**.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

#### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

### ENTRANCE HALL AND OFFICES



 [Download datasheet.](#)

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62 mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 8. SWIMMING POOLS

### CHANGING ROOMS



 [Download datasheet](#)

### LEDI® 7 waterproof digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP66 front face, IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### CLOCK FOR THE POOL AREA

#### LEDI® POOL digital clock

The LEDI® POOL displays the water temperatures for one or two pools and alternates between display of ambient air temperature and that of time.

- ▶ Compliant with the French Sport Code, Article R322-18.
- ▶ Its rectangular shape enables it to be positioned at a height that is out of reach of swimmers.
- ▶ Digital display, Height of digits for hours and minutes: 110 mm temperature: 70 mm in bi-colour SMD LEDs, enabling the user to adjust the colour of the display to red, green or yellow. Its light guide enables a 160° time reading angle.
- ▶ Front panel treated with a patented antiglare and anti-scratch coating.
- ▶ Anodised matt aluminium casing: 1150 x 260 x 62 mm (LxHxD).
- ▶ IP54. Single-sided model for wall-mount, ceiling mount or flush mount.
- ▶ Tropicalisation of the electronic circuits.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ 230 VAC power supply.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*



 [Download datasheet](#)

#### Measurements

- ▶ Temperature sensor for the pool: PT1000 Class B compliant with the CEI 751 standard, stainless steel tube diameter 6mm, available in both wired and wireless version.
- ▶ Water temperature transmitter by 4/20 mA input.
- ▶ Air temperature measurement: PT1000 Class B compliant with the CEI 751 standard. Stainless steel tube diameter 4.5 mm, length 40 mm, PVC-sheathed and shielded cable 2 x 0.22 mm<sup>2</sup> of 5 meters.
- ▶ The sensors are composed of a 316L stainless steel tube, with or without extension by means of a cable, they are screwed directly onto the control unit.

#### Gorgy Timing recommends:

- |   |   |
|---|---|
| ▶ RT 9S rack-mounted time server - Part No.: 4570/3D00N | ▶ LEDI® POOL - Part No.: N3006/W4170GG<br>Wired sensors |
| ▶ NTP SNMP 10/100 Base T output                         | or  |
| ▶ Programming relay module - Part No.: 92000216         | ▶ LEDI® POOL - Part No.: N3006/W4170TT<br>Radio sensors |
| ▶ LEDICA® ALPHA SQUARE - Part No.: N306/W1170           | ▶ Switch et routeur hors furniture Gorgy Timing         |
| ▶ LEDI® 7 - Part No.: N360/W1170                        | ▶ Nexus touch screen tablet option - Part No.: INF0005A |
| ▶ LEDI® 7 waterproof - Part No.: ND360E/1W4170          |   |

- ▶ **Option: configuration tool**  
**Nexus touch screen configuration tablet:**  
**for rapid and simple setup**

- ▶ Use of a touch screen tablet, preconfigured in the factory.
  - ▶ Included: GT Wi-Fi Manager (mobile application).
  - ▶ Included: User manuals + documentation for Gorgy Timing products.
  - ▶ Included: videos (tutorial).
  - ▶ Can be used for other purposes (monitoring, web, email...).
- CE/CEM product. Anti-fire standard.*



## 9. SPORTS HALLS AND GYMNASIUMS



### 9.1. TIME DISTRIBUTION IN SPORTS HALLS AND GYMNASIUMS USING THE AFNOR NFS 87500 CODE

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time on the clocks throughout the entire building.</li> <li>▶ Programming of opening and closing announcement (in accordance with opening hours of the sport halls and gymnasiums), either by bells or via PA system.</li> <li>▶ Synchronization of the CTM or BMS (Centralised Technical Management or Building Management System).</li> <li>▶ Synchronization of Access control, video surveillance, etc.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Instant time setting without manual intervention.</li> <li>▶ AFNOR NFS 87500 standard code.</li> <li>▶ Reduced installation cost while allowing to use a pair available in a telephone or fibre optic cable.</li> <li>▶ Ability to transmit the time over long distances of more than 20 km and to have 200 clocks.</li> <li>▶ No interferences with telephone lines or IT environments.</li> <li>▶ Synchronization of the VDI rack by means of serial RS232 connection.</li> </ul>

#### Preamble: Time distribution using the AFNOR NFS 87500 encryption

Gorgy Timing recommends this type of time distribution in Sports halls and gymnasiums, instead of pulse or DHM 869MHz transmission.

This code, with a standardised time message and amplitude modulation frequency can distribute the time to more than 200 clocks within a distance of up to 20 km, via a simple telephone cable.

This code has the advantage that it does not interfere with surrounding lines and is not susceptible to industrial interference.

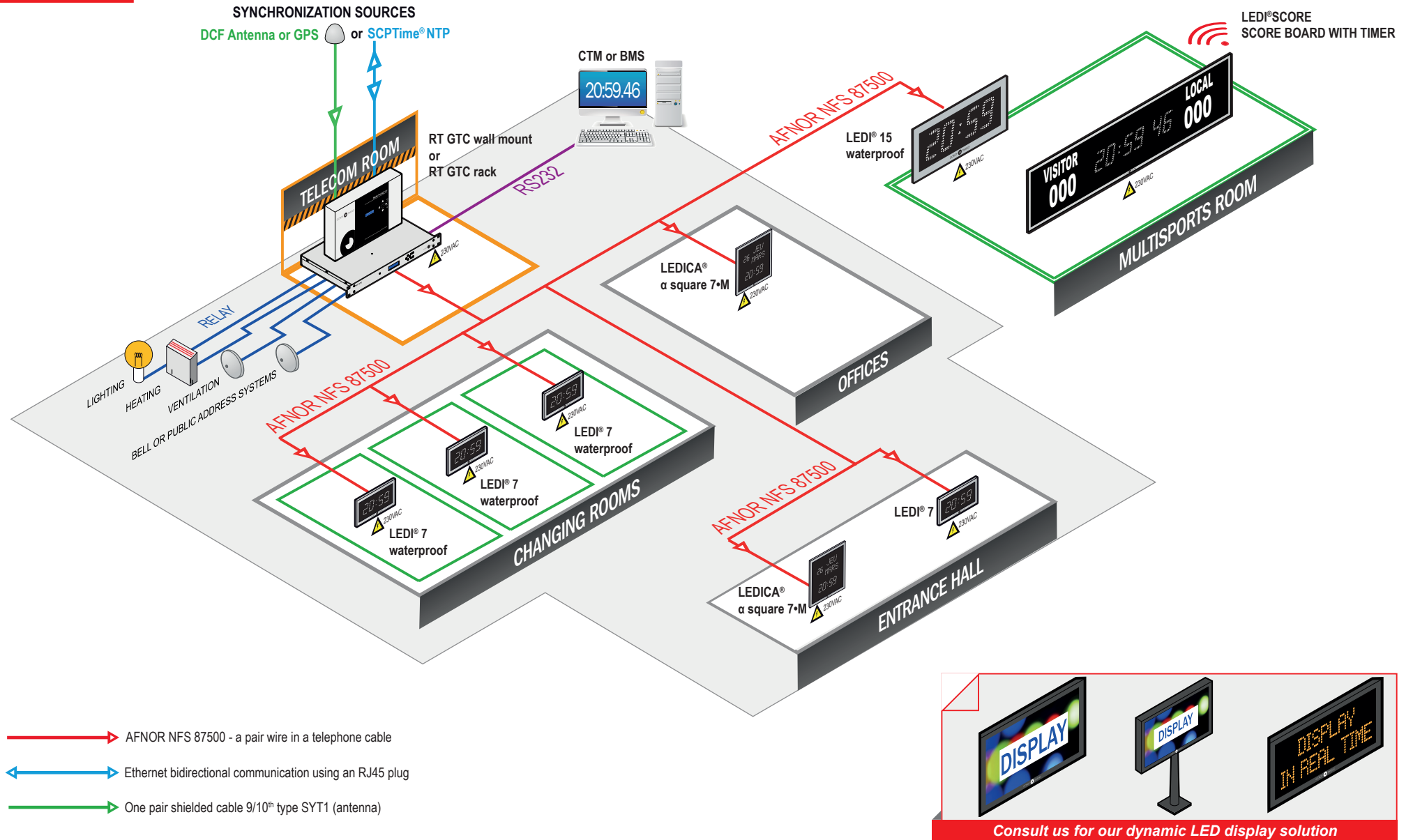
In the case of time distribution using the AFNOR NFS 87500 code, the master clock transmits a time message on a pair wire in a telephone cable using a 1000 Hz frequency, to analogue or digital clocks.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 9. SPORTS HALLS AND GYMNASIUMS

### Time distribution AFNOR NFS 87500 code

#### 1<sup>ST</sup> SOLUTION





### TELECOMMUNICATIONS ROOM



 [Download datasheet wall mounted version](#)



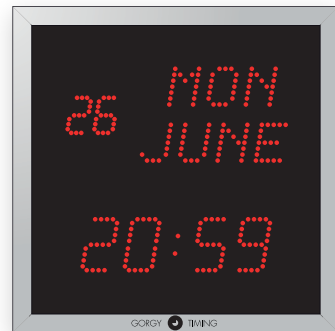
 [Download datasheet rack version](#)

#### RADIO TIMING® GTC master programmer clock

- ▶ With a wall mount case or 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or SCPTIME®.
- ▶ Built-in programmer with 4 relays (10a) that can be configured using the keypad on the front panel.
- ▶ AFNOR NFS 87500 output synchronises the clocks.
- ▶ 2 ASCII RS 232/485 outputs synchronise the connected devices.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

### ENTRANCE HALL AND OFFICES



 [Download datasheet.](#)

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62 mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 9. SPORTS HALLS AND GYMNASIUMS

### CHANGING ROOMS

#### LEDI® 7 waterproof digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP66 front face, IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

### MULTISPORTS HALL



 [Download datasheet](#)

#### LEDI® 15 waterproof digital clock


- ▶ Double-row bi-colour LED display (SMD technology) showing hours and minutes (150 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 80m.
- ▶ Anodised matt aluminium casing: 766x321x75mm (LxHxP) IP66 front face, IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### SCORE BOARD WITH TIMER

- ▶ Outdoor LED score board and timer.
- ▶ Display by means of wireless communication (PC operating software not supplied).
- ▶ Autonomous functionality.
- ▶ 88:88:88 timer display in the centre for HH / MM / SS, and a 3-digit score on each side, left side for the home team and right side for the visiting team.
- ▶ Character height 200 mm.
- ▶ Casing dimensions H500 x L2350 x D105 mm.
- ▶ Single-sided waterproof casing, IP54.
- ▶ Maintenance by rear panel.
- ▶ 230 VAC power supply.

 **Gorgy Timing recommends:**

- ▶ **Master clock RTGTC Wall case - Part No.: 4580/D0380A**  
or
- ▶ **Master clock RTGTC Rack - Part No.: 4550/D0380A**
  - ▶ 1 AFNOR NFS 87500 output
  - ▶ 2 ASCII RS232 outputs
- ▶ **LEDICA® ALPHA SQUARE - Part No.: N306/81170**
- ▶ **LEDI® 7 - Part No.: N360/81170**
- ▶ **LEDI® 7 waterproof - Part No.: ND360E/184170**
- ▶ **LEDI® 15 waterproof- Part No.: ND3007E/184170**
- ▶ **SCORE BOARD WITH TIMER**

## 9. SPORTS HALLS AND GYMNASIUMS



### 9.2. TIME SYNCHRONIZATION IN SPORTS HALLS AND GYMNASIUMS USING NTP 230 VAC OR POE

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"><li>▶ Transmission of an identical time on the clocks throughout the entire building.</li><li>▶ Programming of opening and closing announcement (in accordance with opening hours of the sport halls and gymnasiums), either by bells or via PA system.</li><li>▶ Synchronization of the CTM or BMS (Centralised Technical Management or Building Management System).</li><li>▶ Synchronization of Access control, video surveillance, etc.</li></ul>	<ul style="list-style-type: none"><li>▶ Use of existing cables and IT networks.</li><li>▶ Standardised NTP protocol RFC 5905.</li><li>▶ All clocks can be powered with a 230 VAC power supply or PoE (Power over Ethernet - PoE 802.3 standard).</li><li>▶ Synchronization of the IT network and connected devices (clocks available in NTP version).</li><li>▶ Reliability of the system and simple installation.</li><li>▶ A large number of clocks and IT equipment can be connected.</li><li>▶ Monitoring of connected products on the network by SNMP.</li><li>▶ MD5 encryption.</li></ul>

#### Preamble: Time synchronization using the NTP protocol with 230 VAC or PoE power supply

Gorgy Timing recommends this innovative solution for new installation with an Ethernet network.

This solution uses the transmission of NTP time code compliant with RFC 5905 standard in unicast mode via a TCP/IP network. This use of this time distribution mode is particularly **economical as it uses the existing TCP/IP Ethernet network.**

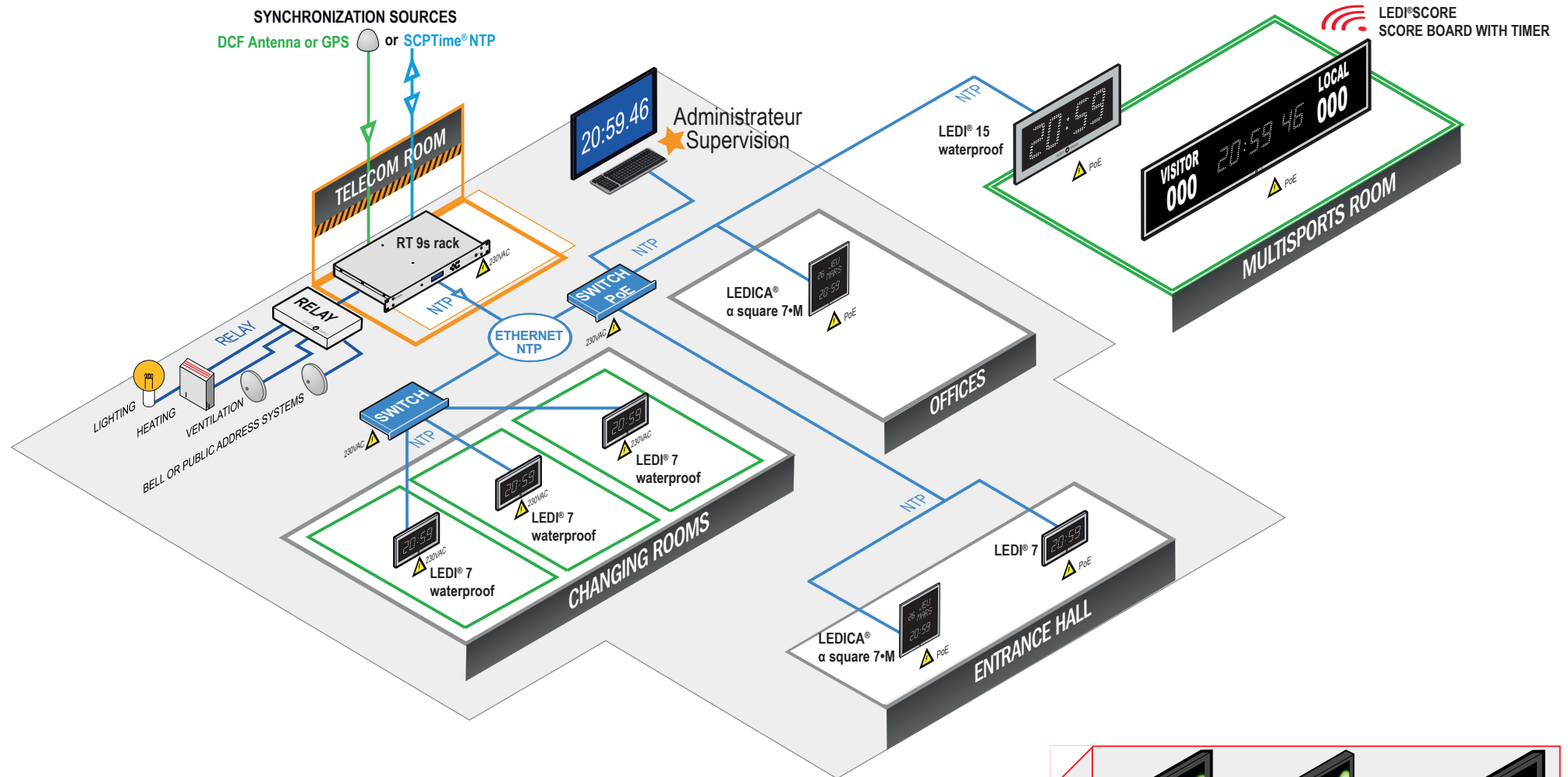
The receiver clocks are powered by 230 VAC or via the PoE switch located in VDI cabinets.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 9. SPORTS HALLS AND GYMNASIUMS

### Time synchronization using the NTP protocol with 230 VAC or PoE power supply

#### 2<sup>ND</sup> SOLUTION



↔ Ethernet bidirectional communication using an RJ45 plug

→ One pair shielded cable 9/10<sup>th</sup> type SYT1 (antenna)





### TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

#### RADIO TIMING® 9S time server

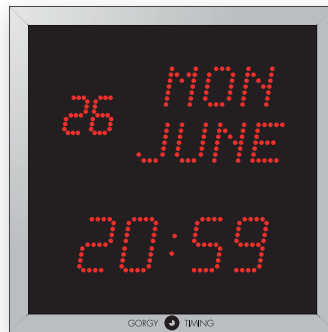
- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or SCPTIME®.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

#### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

### ENTRANCE HALL AND OFFICES



 [Download datasheet.](#)

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62 mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 9. SPORTS HALLS AND GYMNASIUMS

### CHANGING ROOMS

#### LEDI® 7 waterproof digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP66 front face, IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

### MULTISPORTS HALL



 [Download datasheet](#)

#### LEDI® 15 waterproof digital clock

- ▶ Double-row bi-colour LED display (SMD technology) showing hours and minutes (150 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 80m.
- ▶ Anodised matt aluminium casing: 766x321x75mm (LxHxP) IP66 front face, IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### SCORE BOARD WITH TIMER

- ▶ Outdoor LED score board and timer.
- ▶ Display by means of wireless communication (PC operating software not supplied).
- ▶ Autonomous functionality.
- ▶ 88:88:88 timer display in the centre for HH / MM / SS, and a 3-digit score on each side, left side for the home team and right side for the visiting team.
- ▶ Character height 200 mm.
- ▶ Casing dimensions H500 x L2350 x D105 mm.
- ▶ Single-sided waterproof casing, IP54.
- ▶ Maintenance by rear panel.
- ▶ 230 VAC power supply.

 **Gorgy Timing recommends:**

- ▶ **RT 9S rack-mounted time server - Part No.: 4570/3D00N**
  - ▶ NTP SNMP 10/100 Base T output
- ▶ **Programming relay module - Part No.: 92000216**
- ▶ **LEDICA® ALPHA SQUARE - Part No.: N306/N1170 (230VAC power) or N306/N1177 (PoE power)**
- ▶ **LEDI® 7 - Part No.: N360/N1170 (230VAC power) or N306/N1177 (PoE power)**
- ▶ **LEDI® 7 waterproof - Part No.: ND360E/1N4170 (230VAC power) or ND360E/1N4177 (PoE power)**
- ▶ **LEDI® 15 waterproof - Part No.: ND3007E/1N4170 (230VAC power) or ND3007E/1N4177 (PoE power)**
- ▶ **SCORE BOARD WITH TIMER**
- ▶ **Switches not supplied by Gorgy Timing**



### 9.3. TIME SYNCHRONIZATION IN SPORTS HALLS AND GYMNASIUMS USING WI-FI

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time on the clocks throughout the entire building.</li> <li>▶ Programming of opening and closing announcement (in accordance with opening hours of the sport halls and gymnasiums), either by bells or via PA system.</li> <li>▶ Synchronization of the CTM or BMS (Centralised Technical Management or Building Management System).</li> <li>▶ Synchronization of Access control, video surveillance, etc.</li> </ul>	<p><b>This solution uses the Wi-Fi transmission (IEEE 802.11 B/G/N standard) available in a building. The use of this international standard is particularly economical, as it does not require any specific terminal nor a wired connection with receiver clocks.</b></p> <ul style="list-style-type: none"> <li>▶ No distance limit for clocks, nor with regard to the number of clocks connected.</li> <li>▶ Use of Gorgy Timing configuration and supervision software.</li> <li>▶ Instant setting of clocks and reduction of commissioning time for the clock installation using the integrated software on an Android tablet.</li> <li>▶ No additional electromagnetic pollution in the buildings.</li> <li>▶ The coverage can be easily expanded: all Wi-Fi terminals are compatible.</li> <li>▶ Clocks can be easily relocated from one position to another.</li> <li>▶ Monitoring of connected products on the network by SNMP.</li> <li>▶ MD5 encryption.</li> <li>▶ Reduction of installation costs.</li> </ul>

#### Time synchronization using Gorgy Timing Wi-Fi/NTP

Gorgy Timing recommends the new Wi-Fi/NTP secure and traceable wireless time synchronization for time installations, instead of DHW 869 MHz radio time distribution.

Gorgy Timing, a strong defender of standardised norms, has aimed to bring together two international protocols: NTP protocol (RFC5905) and the wireless Wi-Fi communication protocol (IEEE 802.11 B/G/N), thus enabling exceptional transparency and increasing user satisfaction.

This new means of time distribution is particularly interesting for a building that is already equipped with a Wi-Fi network, to avoid additional electromagnetic pollution.

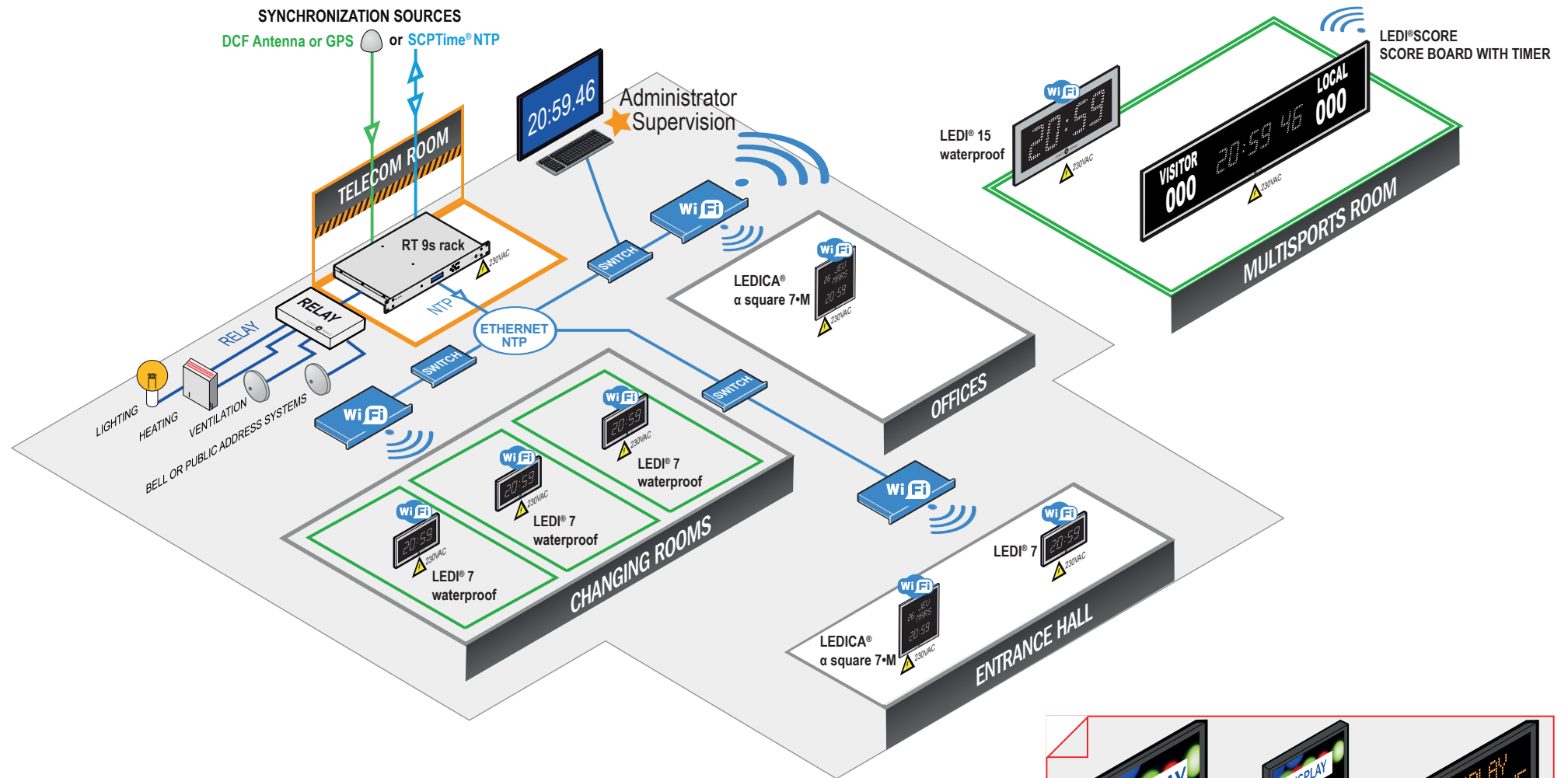
The Wi-Fi/NTP protocol, on account of its bi-directional character, enables greater time security than the DHW 869 MHz code suggested so far.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 9. SPORTS HALLS AND GYMNASIUMS

### Time synchronization using Gorgy Timing Wi-Fi/NTP

#### 3<sup>RD</sup> SOLUTION



↔ Ethernet bidirectional communication using an RJ45 plug

→ One pair shielded cable 9/10<sup>th</sup> type SYT1 (antenna)





### TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

#### RADIO TIMING® 9S time server

- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or SCPTIME®.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

#### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

### ENTRANCE HALL AND OFFICES



 [Download datasheet.](#)

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumeric display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62 mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 9. SPORTS HALLS AND GYMNASIUMS

### CHANGING ROOMS

#### LEDI® 7 waterproof digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP66 front face, IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



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### MULTISPORTS HALL



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#### LEDI® 15 waterproof digital clock


- ▶ Double-row bi-colour LED display (SMD technology) showing hours and minutes (150 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 80m.
- ▶ Anodised matt aluminium casing: 766x321x75mm (LxHxP) IP66 front face, IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### SCORE BOARD WITH TIMER

- ▶ Outdoor LED score board and timer.
- ▶ Display by means of wireless communication (PC operating software not supplied).
- ▶ Autonomous functionality.
- ▶ 88:88:88 timer display in the centre for HH / MM / SS, and a 3-digit score on each side, left side for the home team and right side for the visiting team.
- ▶ Character height 200 mm.
- ▶ Casing dimensions H500 x L2350 x D105 mm.
- ▶ Single-sided waterproof casing, IP54.
- ▶ Maintenance by rear panel.
- ▶ 230 VAC power supply.

 **Gorgy Timing recommends:**

- ▶ **RT 9S rack-mounted time server - Part No.: 4570/3D00N**
  - ▶ **NTP SNMP 10/100 Base T output**
- ▶ **Programming relay module - Part No.: 92000216**
- ▶ **LEDICA® ALPHA SQUARE - Part No.: N306/W1170**
- ▶ **LEDI® 7 - Part No.: N360/W1170**
- ▶ **LEDI® 7 waterproof - Part No.: ND360E/W4170**
- ▶ **LEDI® 15 waterproof - Part No.: ND3006E/1W4170**
- ▶ **SCORE BOARD WITH TIMER**
- ▶ **Switches not supplied by Gorgy Timing**



10.1. TIME DISTRIBUTION IN INDUSTRY USING THE AFNOR NFS 87500 CODE AND NTP

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time on the clocks throughout the entire building.</li> <li>▶ Synchronization of the entire IT network, automated machines, access control, the badge reader system (fixed or variable schedule) and the triggering of bells at the entry and exit of work, either by bells or by PA system.</li> <li>▶ Synchronization of the IT network.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Instant time setting without manual intervention.</li> <li>▶ Standardised AFNOR NFS 87500 code.</li> <li>▶ Reduced installation cost while allowing to use a pair available in a telephone or fibre optic cable.</li> <li>▶ Ability to transmit the time over long distances of more than 20 km and to have 200 clocks.</li> <li>▶ No interferences with telephone lines or IT environments.</li> <li>▶ Synchronization of computer networks by NTP RFC5905 protocol.</li> </ul>

**Preamble: Time distribution using the AFNOR NFS 87500 and NTP encryption**

Gorgy Timing recommends this type of time distribution in industries instead of pulse transmission.

This code, with a standardised time message and amplitude modulation frequency can distribute the time to more than 200 clocks within a distance of up to 20 km, via a simple telephone cable.

This code has the advantage that it does not interfere with surrounding lines and is not susceptible to industrial interference.

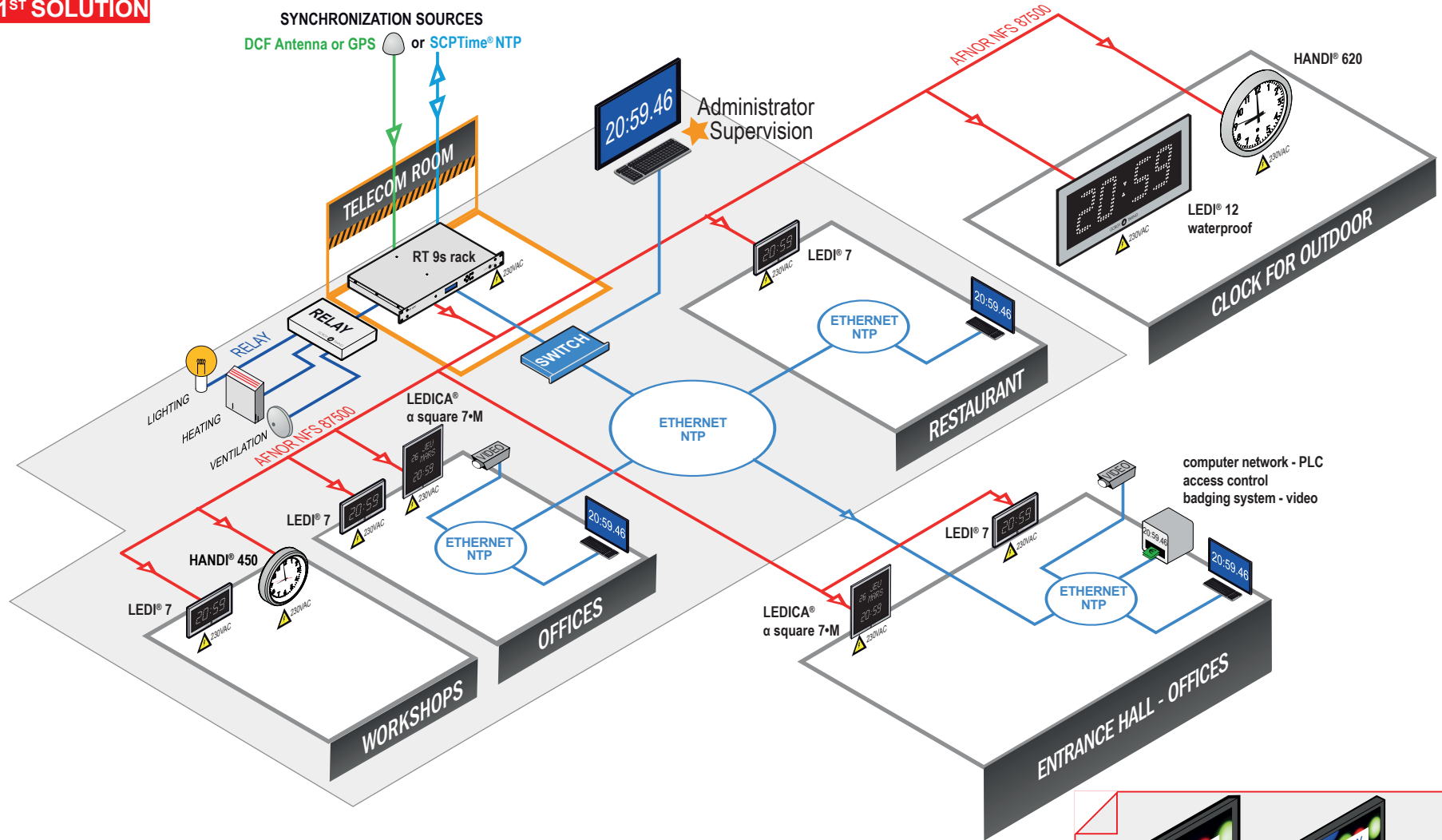
In the case of time distribution using the AFNOR NFS 87500 code, the master clock transmits a time message on a pair wire in a telephone cable using a 1000 Hz frequency, to analogue or digital clocks.

NTP (Network Time Protocol) synchronises the whole of the IT network, the badge reader system, access control, video and industrial automation processes control.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

Time distribution AFNOR NFS 87500 code and NTP

1<sup>ST</sup> SOLUTION



- AFNOR NFS 87500 - a pair wire in a telephone cable
- ↔ Ethernet bidirectional communication using an RJ45 plug
- One pair shielded cable 9/10<sup>th</sup> type SYT1 (antenna)





TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

**RADIO TIMING® 9S time server**

- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCTime®**.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ AFNOR NFS 87500 output synchronises the clocks.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**4 relay programming module.**

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

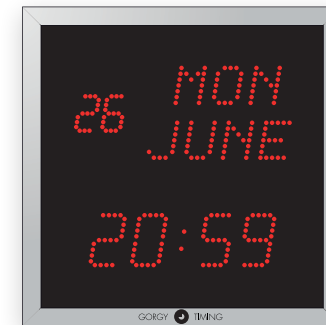
ENTRANCE HALL AND OFFICES

**LEDICA® ALPHA SQUARE 7M digital calendar clock**

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62 mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

CORRIDORS, REFECTORIES, OFFICES



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**LEDI® 7 digital clock**

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 10. INDUSTRIES

### WORKSHOPS

 [Download datasheet](#)



#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### HANDI® single face 450 mm analogue clock

- ▶ Grey painted aluminium casing, 450 mm diameter, IP30.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Distance of legibility: max. 30m.
- ▶ Single face model for wall mount ceiling or side mount.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### OUTDOOR CLOCKS

 [Download datasheet](#)



#### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing: 506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### HANDI® analogue clock, single face, 620 mm, waterproof

- ▶ Grey painted aluminium casing, 620 mm diameter, IP54.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Makrolon front face.
- ▶ Distance of legibility: max. 60m.
- ▶ Single face model for wall mount ceiling or side mount.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket and LED lighting.

#### Gorgy Timing recommends:

- ▶ RT 9S rack-mounted time server - Part No.: 4570/3D00N8
  - ▶ AFNOR NFS 87500 output
  - ▶ NTP SNMP 10/100 Base T output
- ▶ Programming relay module - Part No.: 92000216
- ▶ LEDICA® ALPHA SQUARE - Part No.: N306/81170
- ▶ LEDI® 7 - Part No.: N360/81170

- ▶ HANDI® 450mm - Part No.: H740/497M
- ▶ LEDI® 12 waterproof - Part No.: ND390E/184170 or
- ▶ HANDI® 620mm - Part No.: 750/791W
- ▶ Switches not supplied by Gorgy Timing



10.2. TIME SYNCHRONIZATION IN INDUSTRY USING NTP WITH 230 VAC OR POE POWER SUPPLY

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time to the clocks in the entire building.</li> <li>▶ Synchronization of the entire IT network, automated machines, access control, the badge reader system (fixed or variable schedule) and the triggering of bells at the entry and exit of work, either by bells or by PA system.</li> <li>▶ Synchronization of the IT network.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Use of existing cables and IT networks.</li> <li>▶ Standardised NTP protocol RFC 5905.</li> <li>▶ All clocks can be powered with a 230 VAC power supply or PoE (Power over Ethernet - PoE 802.3 standard).</li> <li>▶ Synchronization of the IT network and connected devices (clocks available in NTP version).</li> <li>▶ Reliability of the system and simple installation.</li> <li>▶ A large number of clocks and IT equipment can be connected.</li> <li>▶ Monitoring of connected products on the network by SNMP.</li> <li>▶ MD5 encryption.</li> </ul>

**Preamble: Time synchronization using the NTP protocol with 230 VAC or PoE power supply**

Gorgy Timing recommends this innovative solution for new installation with an Ethernet network.

This solution uses the transmission of NTP time code compliant with RFC 5905 standard in unicast mode via a TCP/IP network. This use of this time distribution mode is particularly **economical as it uses the existing TCP/IP Ethernet network**.

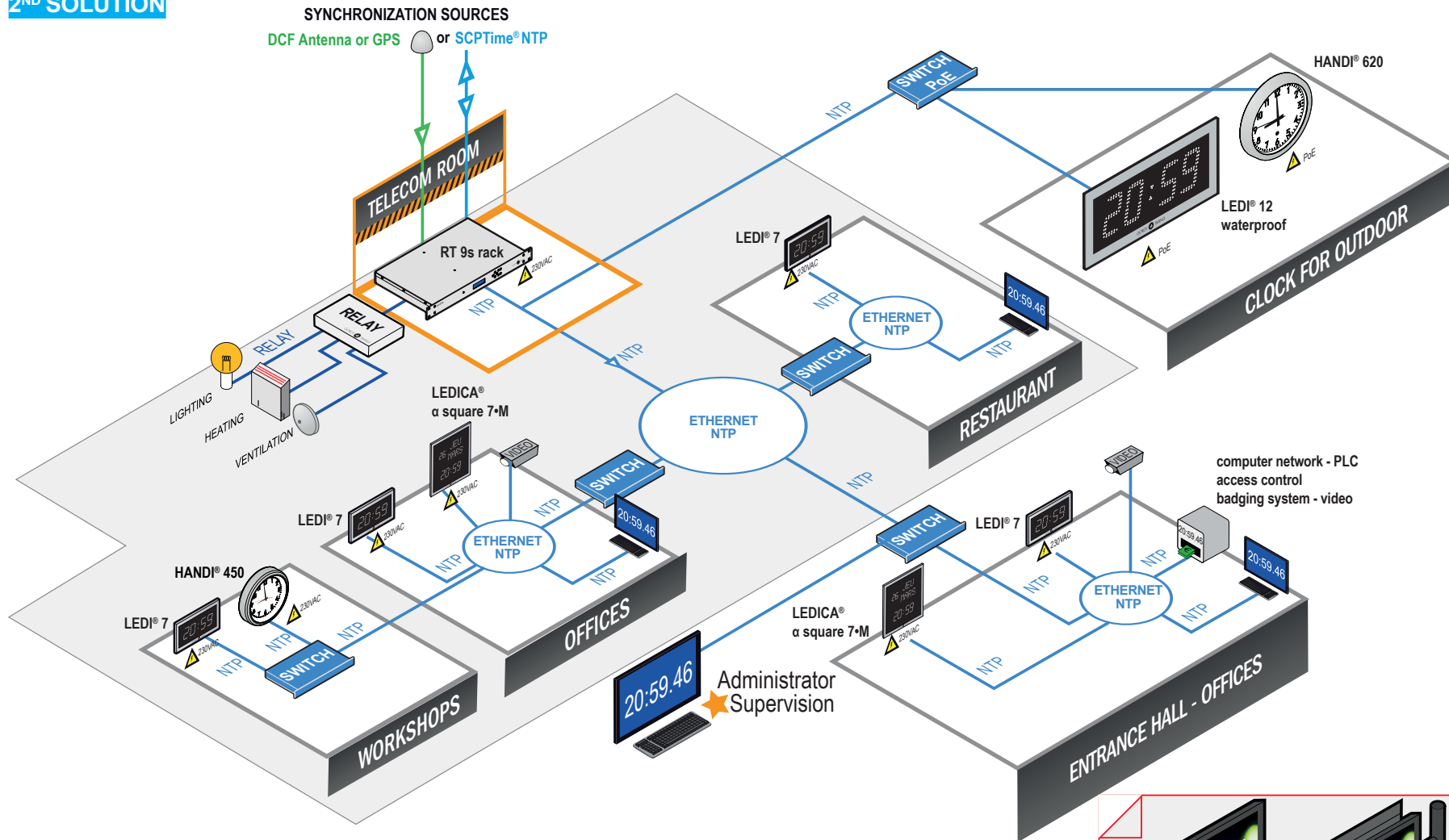
The receiver clocks are powered by 230 VAC or via the PoE switch located in VDI cabinets.

NTP (Network Time Protocol) is used to synchronize the entire IT network, badge reader system, access control, and industrial automation process control.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

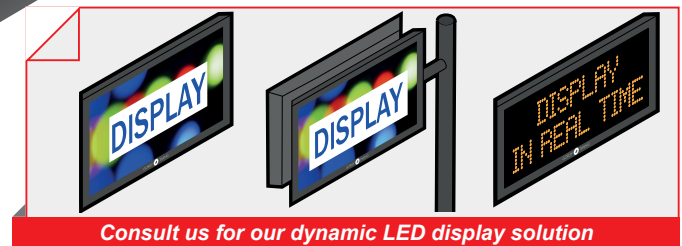
Time synchronization using the NTP protocol with 230 VAC or PoE power supply

2<sup>ND</sup> SOLUTION



↔ Ethernet bidirectional communication using an RJ45 plug

→ One pair shielded cable 9/10<sup>th</sup> type SYT1 (antenna)



Consult us for our dynamic LED display solution



### TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

#### RADIO TIMING® 9S time server

- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCPTIME®**.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

#### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

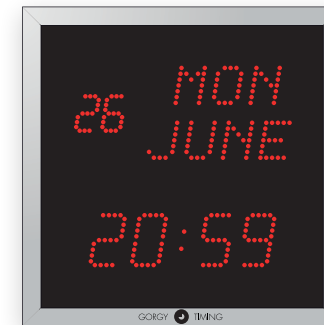
### ENTRANCE HALL AND OFFICES

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62 mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



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### CORRIDORS, REFECTORIES, OFFICES



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#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 10. INDUSTRIES

### WORKSHOPS

 [Download datasheet](#)



#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### HANDI® single face 450 mm analogue clock

- ▶ Grey painted aluminium casing, 450 mm diameter, IP30.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Distance of legibility: max. 30m.
- ▶ Single face model for wall mount ceiling or side mount.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### OUTDOOR CLOCKS

 [Download datasheet](#)



#### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing: 506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### HANDI® analogue clock, single face, 620 mm, waterproof

- ▶ Grey painted aluminium casing, 620 mm diameter, IP54.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Makrolon front face.
- ▶ Distance of legibility: max. 60m.
- ▶ Single face model for wall mount ceiling or side mount.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket and LED lighting.

 **Gorgy Timing recommends:**

- ▶ RT 9S rack-mounted time server - Part No.: 4570/3D00N
  - ▶ NTP SNMP 10/100 Base T output
- ▶ Programming relay module - Part No.: 92000216
- ▶ LEDICA® ALPHA SQUARE - Part No.: N306/N1170 (230VAC power) or N306/N1177 (PoE power)
- ▶ LEDI® 7 - Part No.: N360/N1170 (230VAC power) or N360/N1177 (PoE power)

- ▶ HANDI® 450mm - Part No.: H740/4N7M (230VAC power) or H740/4P7M (PoE power)
- ▶ LEDI® 12 waterproof - Part No.: ND390E /1N4170 (230VAC power) or ND390E /1N4177 (PoE power)
- ▶ or HANDI® 620mm - Part No.: 750/7N1W (230VAC power) or 750/7P1W (PoE power)
- ▶ Switches not supplied by Gorgy Timing



10.3. TIME SYNCHRONIZATION IN INDUSTRY USING Wi-Fi/NTP

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time to the clocks in the entire building.</li> <li>▶ Synchronization of the entire IT network, automated machines, access control, the badge reader system (fixed or variable schedule) and the triggering of bells at the entry and exit of work, either by bells or by PA system.</li> <li>▶ Synchronization of the IT network.</li> </ul>	<p><b>This solution uses the Wi-Fi transmission (IEEE 802.11 B/G/N standard) available in a building. The use of this international standard is particularly economical, as it does not require any specific terminal nor a wired connection with receiver clocks.</b></p> <ul style="list-style-type: none"> <li>▶ No distance limit for clocks, nor with regard to the number of clocks connected.</li> <li>▶ Use of Gorgy Timing configuration and supervision software.</li> <li>▶ Instant setting of clocks and reduction of commissioning time for the clock installation using the integrated software on an Android tablet.</li> <li>▶ No additional electromagnetic pollution in the buildings.</li> <li>▶ The coverage can be easily expanded: all Wi-Fi terminals are compatible.</li> <li>▶ Clocks can be easily relocated from one position to another.</li> <li>▶ Monitoring of connected products on the network by SNMP.</li> <li>▶ MD5 encryption.</li> <li>▶ Reduction of installation costs.</li> </ul>

**Preamble: Time synchronization using Gorgy Timing Wi-Fi/NTP**

Gorgy Timing recommends the new Wi-Fi/NTP secure and traceable wireless time synchronization, instead of DHW 869 MHz radio time distribution.

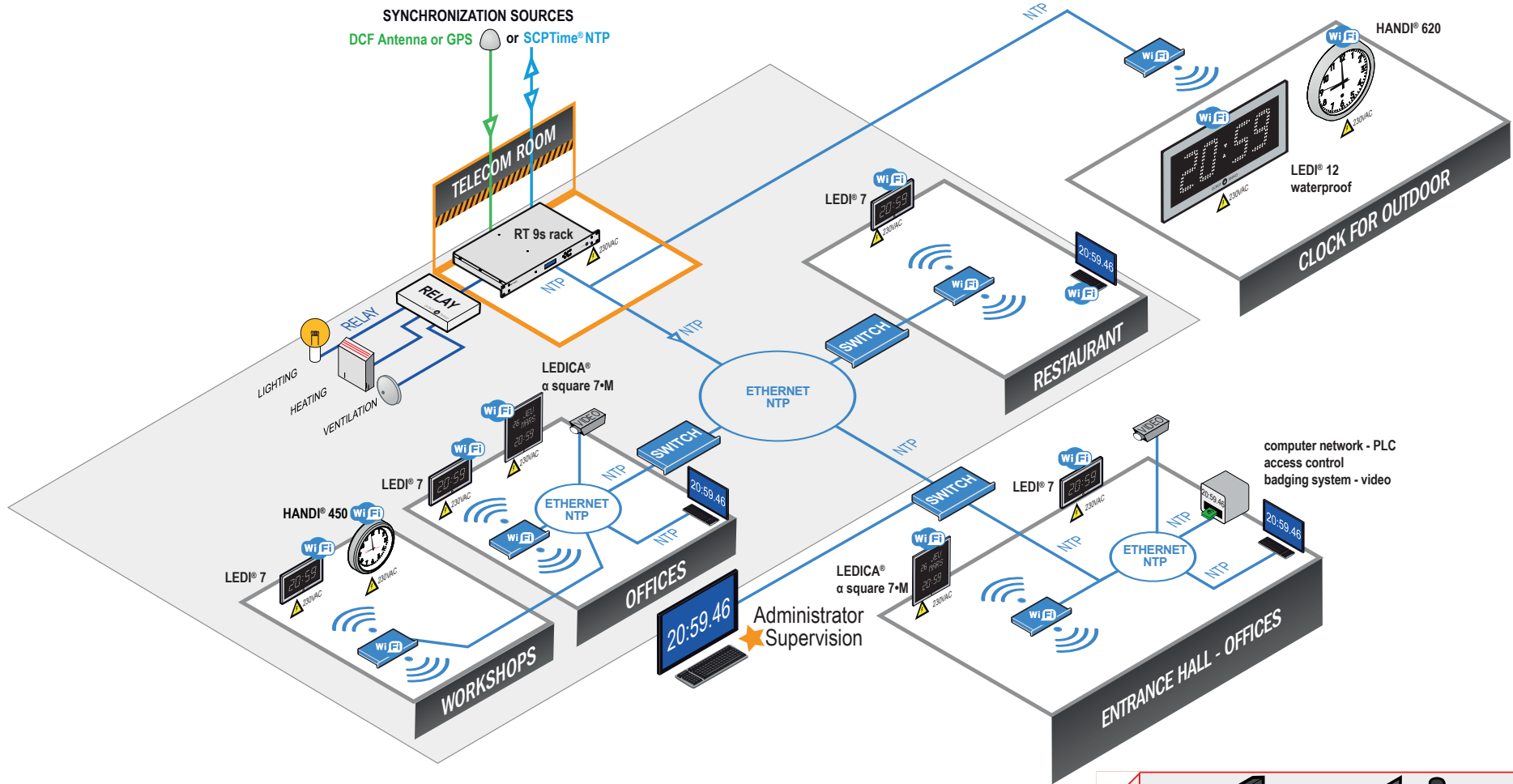
Gorgy Timing, a strong defender of standardised norms, has aimed to bring together two international protocols: NTP protocol (RFC5905) and the wireless Wi-Fi communication protocol (IEEE 802.11 B/G/N), thus enabling exceptional transparency and increasing user satisfaction.

This new means of time distribution is particularly interesting for a building that is already equipped with a Wi-Fi network, to avoid additional electromagnetic pollution.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

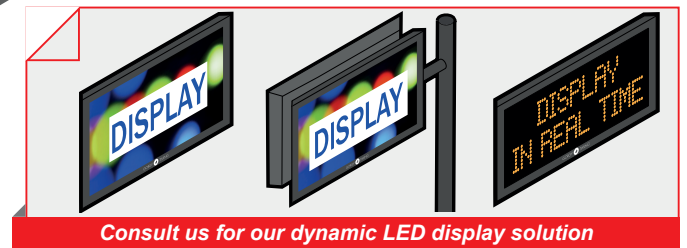
Time synchronization using Gorgy Timing Wi-Fi/NTP

3<sup>RD</sup> SOLUTION



↔ Ethernet bidirectional communication using an RJ45 plug

→ One pair shielded cable 9/10<sup>th</sup> type SYT1 (antenna)



Consult us for our dynamic LED display solution



TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

**RADIO TIMING® 9S time server**

- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCTime®**.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**4 relay programming module.**

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

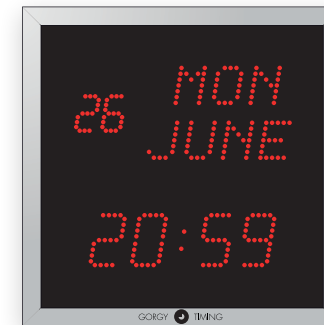
ENTRANCE HALL AND OFFICES

**LEDICA® ALPHA SQUARE 7M digital calendar clock**

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62 mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

CORRIDORS, REFECTORIES, OFFICES



 [Download datasheet](#)

**LEDI® 7 digital clock**

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 10. INDUSTRIES

### WORKSHOPS

 [Download datasheet](#)



#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### HANDI® single face 450 mm analogue clock

- ▶ Grey painted aluminium casing, 450 mm diameter, IP30.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Distance of legibility: max. 30m.
- ▶ Single face model for wall mount ceiling or side mount.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### OUTDOOR CLOCKS

 [Download datasheet](#)



#### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing: 506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.
- ▶ *Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*
- ▶ **OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### HANDI® analogue clock, single face, 620 mm, waterproof

- ▶ Grey painted aluminium casing, 620 mm diameter, IP54.
- ▶ White dial, black Arabic numerals and black hands.
- ▶ Makrolon front face.
- ▶ Distance of legibility: max. 60m.
- ▶ Single face model for wall mount ceiling or side mount.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket and LED lighting.

#### ▶ Option: configuration tool

##### Nexus touch screen configuration tablet: for rapid and simple setup

- ▶ Use of a touch screen tablet, preconfigured in the factory.
- ▶ Included: GT Wi-Fi Manager (mobile application).
- ▶ Included: User manuals + documentation for Gorgy Timing products.
- ▶ Included: videos (tutorial).
- ▶ Can be used for other purposes (monitoring, web, email...).

*CE/CEM product. Anti-fire standard.*

#### Gorgy Timing recommends:

- |   |   |
|---|---|
| ▶ RT 9S rack-mounted time server - Part No.: 4570/3D00N | ▶ HANDI® 450mm - Réf. H740/4W7M                         |
| ▶ NTP SNMP 10/100 Base T output                         | ▶ LEDI® 12 waterproof - Part No.: ND390E /1N4170 or     |
| ▶ Programming relay module - Part No.: 92000216         | ▶ HANDI® 620 - Part No.: 750/7W1W                       |
| ▶ LEDICA® ALPHA SQUARE - Part No.: N306/W1170           | ▶ Switches not supplied by Gorgy Timing                 |
| ▶ LEDI® 7 - Part No.: N360/W1170                        | ▶ Nexus touch screen tablet option - Part No.: INF0005A |



11.1. TIME SYNCHRONIZATION IN BANKS – TRADING ROOMS – CENTRAL OFFICES – LOCAL BRANCHES

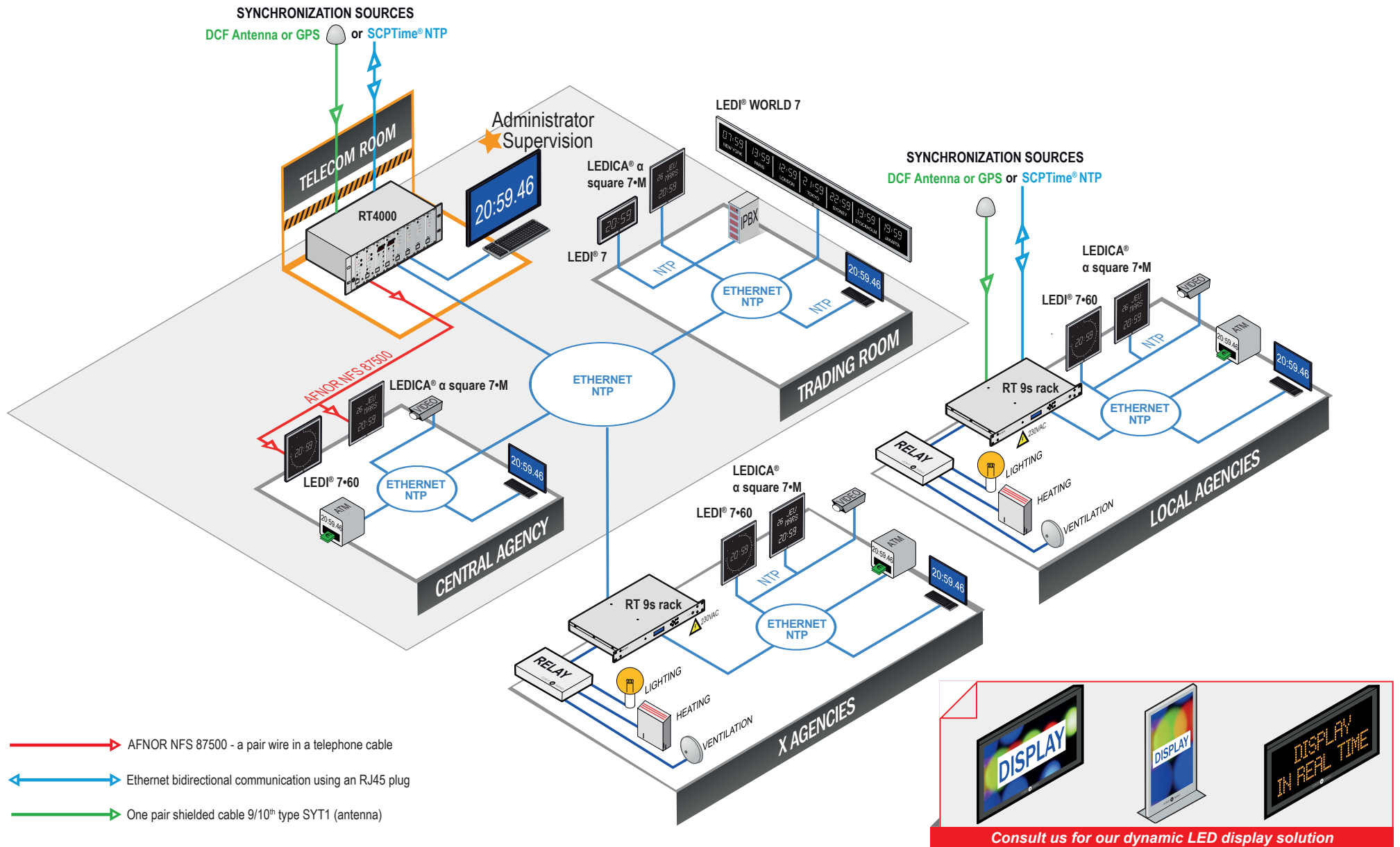
REQUIREMENTS	ADVANTAGES
<p>The activities of banking establishments are in a process of diversification. They no longer simply manage the bank accounts of their customers, but also operate in the fields of insurance and real estate, which results in a need to keep customers informed.</p> <ul style="list-style-type: none"> <li>▶ It is important for a bank with several branches to have the same time at all sites and to be able to display information in real time.</li> <li>▶ With the increasing development of ecommerce and the management of accounts via the Internet, banks must secure their systems and date their data exchange with precision, with a view to avoiding litigation.</li> <li>▶ In trading rooms it is essential to display the exact time in the various financial centres or stock markets.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Display an identical time on the clocks and on all equipment connected to the IT network.</li> <li>▶ Synchronise the IT network.</li> <li>▶ Display the official time throughout the entire building (trading rooms, offices, branches...).</li> <li>▶ Provide different time zones on the same display.</li> <li>▶ Save energy: programme the lighting, heating and ventilation</li> <li>▶ Transmit and display information in real time for agents and specific customers (video, advertisements, photos...).</li> </ul>

**Preamble: AFNOR NFS 87500 and NTP encrypted time distribution**

Gorgy Timing recommends this type of time distribution for a sector in which security is very important. IRIG/B AFNOR NS87500 international time code can be used to synchronize clocks. The combination with NTP enable the use of existing IT networks, the transmission of time information using the standardised NTP RFC 5905 protocol, enabling a reduction in installation costs. All clocks can be powered using 230 VAC. The system is reliable and simple to use. A large number of clocks and IT equipment can be connected. Products connected to the network are monitored using SNMP with MD5 encryption.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

Time distribution AFNOR NFS 87500 code + NTP protocol with 230 VAC or PoE power supply





### TELECOM TECHNICAL ROOM

#### RT4000 Time Center

To unify all equipment in technical room, the time center shall be rack mountable in a cabinet (international standard 19" rack).

- ▶ Modular design.
- ▶ 19"3U rack equipped with an inter-modules bus, a backplane with connectors and terminals. Guiding system of modules. Connection and switching system between racks.
- ▶ 1 to 4 stackable racks.



#### Key features

- ▶ Allows a specific composition and perfectly adapted to each use.
- ▶ Remote supervision over Ethernet (SNMP, HTTP), supporting NTP/SNTP.
- ▶ Protection filter against overvoltage and industrial noise.
- ▶ Replacement of module « hot plug », without shutdown.

#### Security

- ▶ Automatic or manual module redundancy.
- ▶ Power backup in case of main power supply cutting off.
- ▶ Led indicators for battery and power failure.
- ▶ Key control lock.

#### Supervision

- ▶ Supervision via HTTP, SNMP, Telnet, "GT Network Manager", "GT Ethernet Supervision" operating on Windows® NT/XP/2000/2003/Vista (32 bits)/Windows 7.

#### Power supply module – NT102

- ▶ Battery and power failure alarm indicators.
- ▶ 1/8<sup>th</sup> rack format.
- ▶ 230VAC input. Ni-mh 2.1AH Batteries.

#### Power supply module – NT124

- ▶ Battery and power failure alarm indicators.
- ▶ 1/8<sup>th</sup> rack format.
- ▶ 24VDC input. Ni-mh 2.1AH Batteries.

#### OCXO Time base module – NT829

- ▶ OCXO high accuracy oscillator
- ▶ Frequency stability  $1.10^{-8}$  (0° to 60°C)
- ▶ Temperature range -20° to 70°C
- ▶ Ageing  $2.10^{-10}$ /day
- ▶ Redundancy: up to 8 time base modules
- ▶ Alphanumerical LED front display, 4 program buttons.
- ▶ AFNOR NFS 87500/IRIG-b 1000Hz output, 10 MHz output,
- ▶ PPS (TTL)output
- ▶ 1/8<sup>th</sup> rack format
- ▶ GPS antenna with coaxial cable + surge protector.

#### TCXO Time base module – NT825

- ▶ NTP input. Consumption 3.5W.
- ▶ TCXO high accuracy oscillator.
- ▶ Frequency stability  $1.10^{-6}$  (0° to 60°C)
- ▶ Temperature range -20° to 70°C
- ▶ Ageing  $5.10^{-9}$ /day
- ▶ Redundancy: up to 8 time base modules
- ▶ Alphanumerical LED front display, 4 program buttons.
- ▶ AFNOR NFS 87500/IRIG-b 1000Hz output, 10 MHz output,
- ▶ PPS (TTL)output
- ▶ 1/8<sup>th</sup> rack format.

#### SNMP Supervision module – NT022

- ▶ SNMP V1/ V2c/V3, alarm management on 5 different SNMP supervisors.
- ▶ Configuration via web browser (http et http(s)) and/or Telnet by Ethernet 10/100 Base T.
- ▶ One dry contact alarm, LED alarm indicator on front panel.
- ▶ Consumption 3W.
- ▶ Supporting IP V4/V6.
- ▶ 1/8<sup>th</sup> rack format.

#### 2 NTP server modules - NT023

- ▶ 2 NTP server modules
- ▶ NTP (Network Time Protocol) output (RFC-1305 & RFC-5905).
- ▶ Remote Supervision and configuration via a WEB browser (http + http(s)).
- ▶ LED alarm indicator on front panel.
- ▶ Compatible with GT NTP Client software CDG 021.
- ▶ Ethernet 10/100 base T. Supporting NTP v4 / IPv6
- ▶ Consumption 2.1W. Accuracy of 50µs to 1ms.
- ▶ 1/8<sup>th</sup> rack format.

#### AFNOR NFS 87500 Time code output module – NT600

- ▶ Modulated code frequency 1000Hz and DCLS
- ▶ 2 AFNOR NFS 87500/IRIG B outputs or IEEE 1344.
- ▶ Consumption 0.5W.

## 11.3 BANKS: TRADING ROOM

### FOYER, OFFICES, TRADING ROOM



[Download datasheet](#)

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



[Download datasheet](#)

#### LEDI® WORLD multizone digital clock

**Clock panel consisting of 2 to 7 LEDI clocks, each indicating the local time of a chosen city**

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Names of cities marked in white adhesive letters.
- ▶ Anodised matt aluminium casing: IP20.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

#### OPTION

- ▶ Marking of cities in white adhesive letters replaced by a dynamic display controlled via TCP/IP, enabling the remote changing of the city names.
- ▶ 10 characters (40mm height) dot matrix digital zone label.

### OFFICES, CORRIDORS

#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxD) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



[Download datasheet](#)

**Gorgy Timing recommends:**

#### ▶ Time Center RT4000

- |            |           |
|------------|-----------|
| ▶ 1 NTRK02 | ▶ 1 NT815 |
| ▶ 1 NT102  | ▶ 1 NT022 |
| ▶ 1 NT124  | ▶ 2 NT023 |
| ▶ 1 NT829  | ▶ 1 NT600 |

- ▶ LEDICA® ALPHA SQUARE - Part No.: N306/N1170 (230VAC power) or N306/N1177 (PoE power)
- ▶ LEDI® 7 - Part No.: N360/N1170 (230VAC power) or N360/N1177 (PoE power)
- ▶ LEDI® WORLD - Part No.: N577/N1170 (230VAC power) or N577/N1178 (PoE power+)

ENTRANCE HALL, OFFICES AND ADMINISTRATIONS



Download datasheet



Download datasheet

OFFICES, CORRIDORS



Download datasheet

**LEDICA® ALPHA SQUARE 7M digital calendar clock**

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

**LEDI® 7/60 digital clock**

- ▶ Digital display showing hours and minutes (70 mm) and analogue display of the seconds by means of a wave of 60 diodes. The user can modify the colour of the display (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° time reading angle.
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

**LEDI® 7 digital clock**

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

Gorgy Timing recommends:

- ▶ LEDICA® ALPHA SQUARE - Part No.: N306/81170
- ▶ LEDI® 7 - Part No.: N360/81170
- ▶ LEDI® 7/60 - Part No.: N363/81170

Possibility of NTP synchronization on RJ45

- ▶ LEDICA® ALPHA SQUARE - Part No.: N306/N1170 (230VAC power) or N306/N1177 (PoE power)
- ▶ LEDI® 7 - Part No.: N360/N1170 (230VAC power) or N360/N1177 (PoE power)
- ▶ LEDI® 7/60 - Part No.: N363/N1170 (230VAC power) or N363/N1177 (PoE power)

## 11.5 BANKS: AGENCIES

### TELECOMMUNICATIONS ROOM:



 [Download datasheet](#)

#### RADIO TIMING® 9S time server

- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCPTIME®**.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.

- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.
- ▶ *Electrical device compliant with the EN60950 standard (electrical hazards, fire...)* CE/EMC.

#### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

### ENTRANCE HALL, ADMINISTRATIONS, OFFICES



 [Download datasheet](#)

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

#### LEDI® 7/60 digital clock

- ▶ Digital display showing hours and minutes (70 mm) and analogue display of the seconds by means of a wave of 60 diodes. The user can modify the colour of the display (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° time reading angle.
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket.

### OFFICES, CORRIDORS



 [Download datasheet](#)

#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° time reading angle. Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket.

#### **Gorgy Timing recommends:**

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>▶ <b>RT 9S rack-mounted time server - Part No.: 4570/3N00N</b></li> <li>▶ <b>NTP SNMP 10/100 Base T output</b></li> <li>▶ <b>Programming relay module - Part No.: 92000216</b></li> </ul> | <ul style="list-style-type: none"> <li>▶ <b>LEDICA® ALPHA SQUARE - Part No.: N306/N1170 (230VAC power) or N306/N1177 (PoE power)</b></li> <li>▶ <b>LEDI® 7 - Part No.: N360/N1170 (230VAC power) or N360/N1177 (PoE power)</b></li> <li>▶ <b>LEDI® 7/60 - Part No.: N363/N1170 (230VAC power) or N363/N1177 (PoE power)</b></li> <li>▶ <b>Switches not supplied by Gorgy Timing</b></li> </ul> |
|--|--|



## TELECOMMUNICATIONS ROOM



 [Download datasheet](#)

### RADIO TIMING® 9S time server

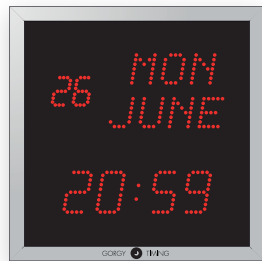
- ▶ 19"1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCPTIME®**.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.

- ▶ Backup power for time-keeping of time base.
  - ▶ Operating temperature -20°C to 60°C.
- Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

## ENTRANCE HALL, ADMINISTRATIONS, OFFICES



 [Download datasheet](#)

### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



 [Download datasheet](#)

### LEDI® 7/60 digital clock

- ▶ Digital display showing hours and minutes (70 mm) and analogue display of the seconds by means of a wave of 60 diodes. The user can modify the colour of the display (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° time reading angle. Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket.

## OFFICES, CORRIDORS



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### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° time reading angle.
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

**OPTION:** double-sided model with ceiling or side mount bracket.

### Gorgy Timing recommends:

- |  |   |
|--|---|
| ▶ <b>RT 9S rack-mounted time server - Part No.: 4570/3G00N</b> | ▶ <b>LEDICA® ALPHA SQUARE - Part No.: N306/N1170 (230VAC power) or N306/N1177 (PoE power)</b> |
| ▶ <b>Sortie NTP/SNMP 10/100 Base T</b>                         | ▶ <b>LEDI® 7 - Part No.: N360/N1170 (230VAC power) or N360/N1177 (PoE power)</b>              |
| ▶ <b>Programming relay module - Part No.: 92000216</b>         | ▶ <b>LEDI® 7/60 - Part No.: N363/N1170 (230VAC power) or N363/N1177 (PoE power)</b>           |

## 12. RAILWAY STATIONS





## 12. RAILWAY STATIONS



### 12.1. TIME DISTRIBUTION IN LOCAL STATIONS USING THE AFNOR NFS 87500 CODE

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"><li>▶ To transmit an identical time to clocks and to synchronise all of the VDI networks (voice, data, images), IT networks, automated machines, access control, automated ticketing machines, ticket validation machines, display boards and alarm systems.</li></ul>	<ul style="list-style-type: none"><li>▶ Instant time setting without manual intervention.</li><li>▶ Standardised AFNOR NFS 87500 code.</li><li>▶ Reduced installation cost while allowing to use a pair available in a telephone or fibre optic cable.</li><li>▶ Ability to transmit the time over long distances of more than 20 km and to have 200 clocks.</li><li>▶ No interferences with telephone lines or IT environments.</li><li>▶ Synchronization of computer networks by NTP RFC5905 protocol.</li></ul>

#### Preamble: Time distribution using the AFNOR NFS 87500 encryption

Gorgy Timing recommends this type of time distribution in small Railway stations, instead of pulse transmission.

This code, with a standardised time message and amplitude modulation frequency can distribute the time to more than 200 clocks within a distance of up to 20 km, via a simple telephone cable.

This code has the advantage that it does not interfere with surrounding lines and is not susceptible to industrial interference.

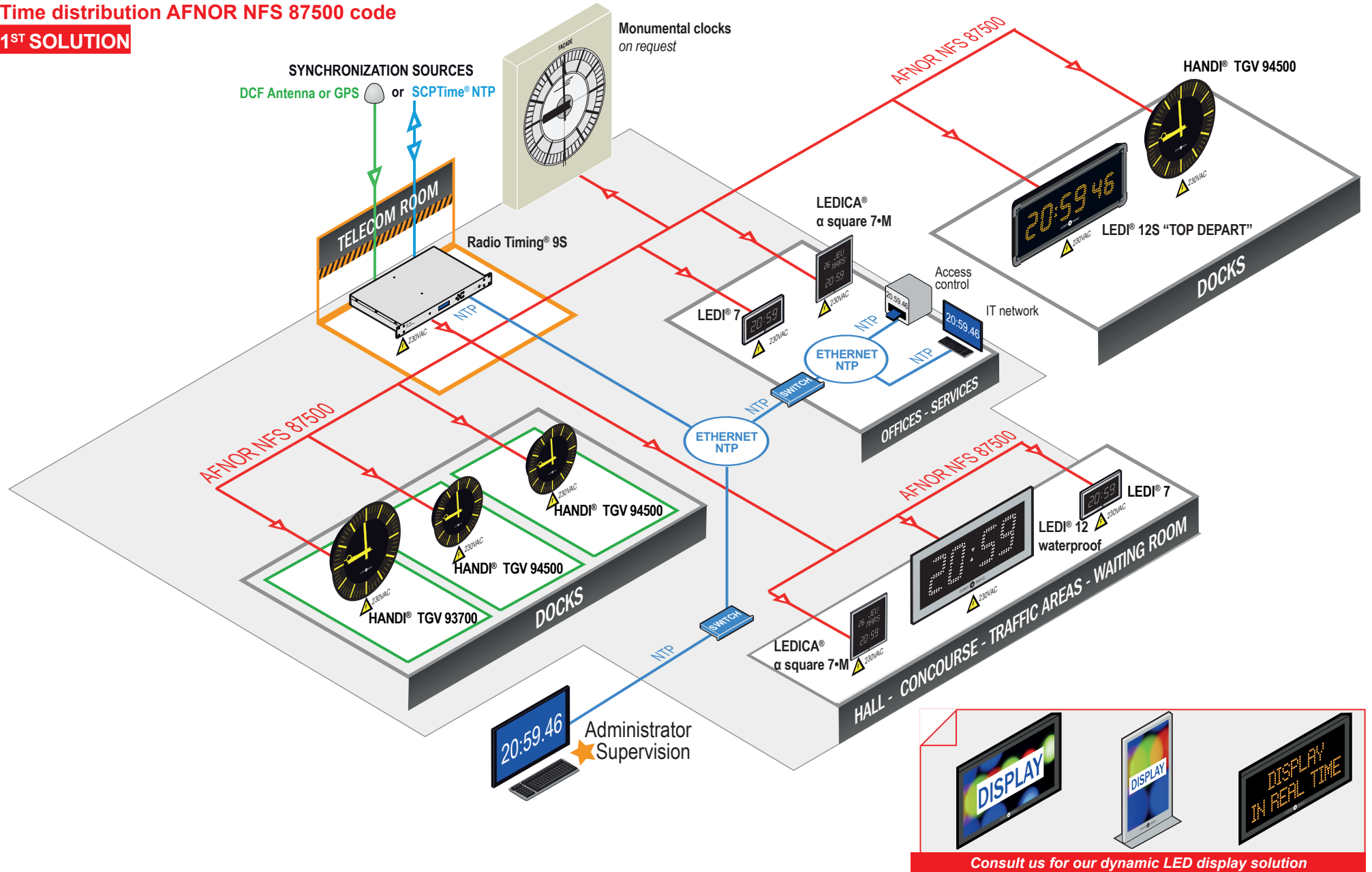
In the case of time distribution using the AFNOR NFS 87500 code, the master clock transmits a time message on a pair wire in a telephone cable using a 1000 Hz frequency, to analogue or digital clocks.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 12. RAILWAY STATIONS

### Time distribution AFNOR NFS 87500 code

#### 1<sup>ST</sup> SOLUTION





### TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

### RADIO TIMING® 9S time server

- ▶ 19"1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCPTIME®**.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ AFNOR NFS 87500 output synchronises the clocks.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

### CLOCK FOR PASSENGER BUILDINGS – TICKET OFFICE



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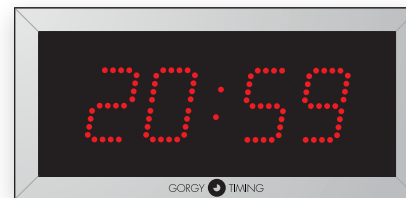
### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### PASSENGER WAITING ROOM



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### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### CONCOURSE, TRAFFIC AREAS



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### LEDI® 10 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (110 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 50m.
- ▶ Anodised matt aluminium casing: 500x210x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 12. RAILWAY STATIONS

### PLATFORMS



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#### LEDI® 12/S platforms digital clock

- ▶ Double-row ULTRA BRIGHT LED display showing hours and minutes (120 mm).
- ▶ Mono-colour yellow display (to comply with railway safety requirements).
- ▶ Distance of legibility: max. 60m.
- ▶ Satin-finish black painted casing: 500x210x62mm (LxHxD) IP54.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

#### HANDI® TGV 93-700

##### Round analogue clock for outdoor installation

- ▶ Diameter 700 mm.
- ▶ Design approved by SNCF Planning Directorate
- ▶ Black dial.
- ▶ Black silk-screened glass with hour and minute markers in yellow.
- ▶ Hour, minute and second hands in yellow
- ▶ Stepper motor ensuring continuous movement of the second hand.
- ▶ No skip every minute.
- ▶ Black waterproof casing supplied with 4 wall-mounting spacers.
- ▶ IP53. Safety glass.
- ▶ Long-life LED lighting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

#### HANDI® TGV 94-500

##### Round analogue clock for outdoor installation

- ▶ Diameter 500 mm.
- ▶ Design approved by the SNCF Planning Directorate.
- ▶ Black dial.
- ▶ Black silk-screened glass with hour and minute markers in yellow.
- ▶ Hour, minute and second hands in yellow.
- ▶ Stepper motor ensuring continuous movement of the second hand.
- ▶ No skip every minute.
- ▶ Black waterproof casing supplied with 4 wall-mounting spacers.
- ▶ IP53. Safety glass.
- ▶ Long-life LED lighting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### MONUMENTAL CLOCKS



- ▶ Mechanism adapted to suit existing dials or according to specification
- ▶ Diameters ranging from 1 to 10 meters.

#### Gorgy Timing recommends:

- ▶ RT 9S rack-mounted time server - Part No.: 4570/3D00N8
  - ▶ AFNOR NFS 87500 output
  - ▶ NTP SNMP 10/100 Base T output
- ▶ LEDICA® ALPHA SQUARE - Part No.: N306/81170
- ▶ LEDI® 7 WHITE DIODES - Part No.: N360/85170
- ▶ LEDI® 7 - Part No.: N360/81170
- ▶ LEDI® 10 - Part No.: N390/81170
- ▶ LEDI® 12/S waterproof "TOP DÉPART" (STARTING SIGNAL) - Part No.: 3868/670A0
- ▶ HANDI® 94500: 2058/380
- ▶ HANDI® 93700: 2078/380
- ▶ Mounting fixtures for 94500 and 93700 not included
- ▶ **MONUMENTAL CLOCK AVAILABLE ON REQUEST**
- ▶ **Switches not supplied by Gorgy Timing**

## 12. RAILWAY STATIONS



### 12.2. TIME SYNCHRONIZATION IN RAILWAY STATIONS USING NTP AND 230 VAC OR POE POWER SUPPLY

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"><li>▶ To transmit an identical time to clocks and to synchronise all of the VDI networks (voice, data, images), IT networks, automated machines, access control, automated ticketing machines, ticket validation machines, display boards and alarm systems.</li></ul>	<ul style="list-style-type: none"><li>▶ Use of existing cables and IT networks.</li><li>▶ Standardised NTP protocol RFC 5905.</li><li>▶ All clocks can be powered with a 230 VAC power supply or PoE (Power over Ethernet - PoE 802.3 standard).</li><li>▶ Synchronization of the IT network and connected devices (clocks available in NTP version).</li><li>▶ Reliability of the system and simple installation.</li><li>▶ A large number of clocks and IT equipment can be connected.</li><li>▶ Monitoring of connected products on the network by SNMP.</li><li>▶ MD5 encryption.</li></ul>

#### Preamble: NTP protocol Time synchronization using 230 VAC or PoE power supply

Gorgy Timing offers this innovative solution for any new installation with an Ethernet network.

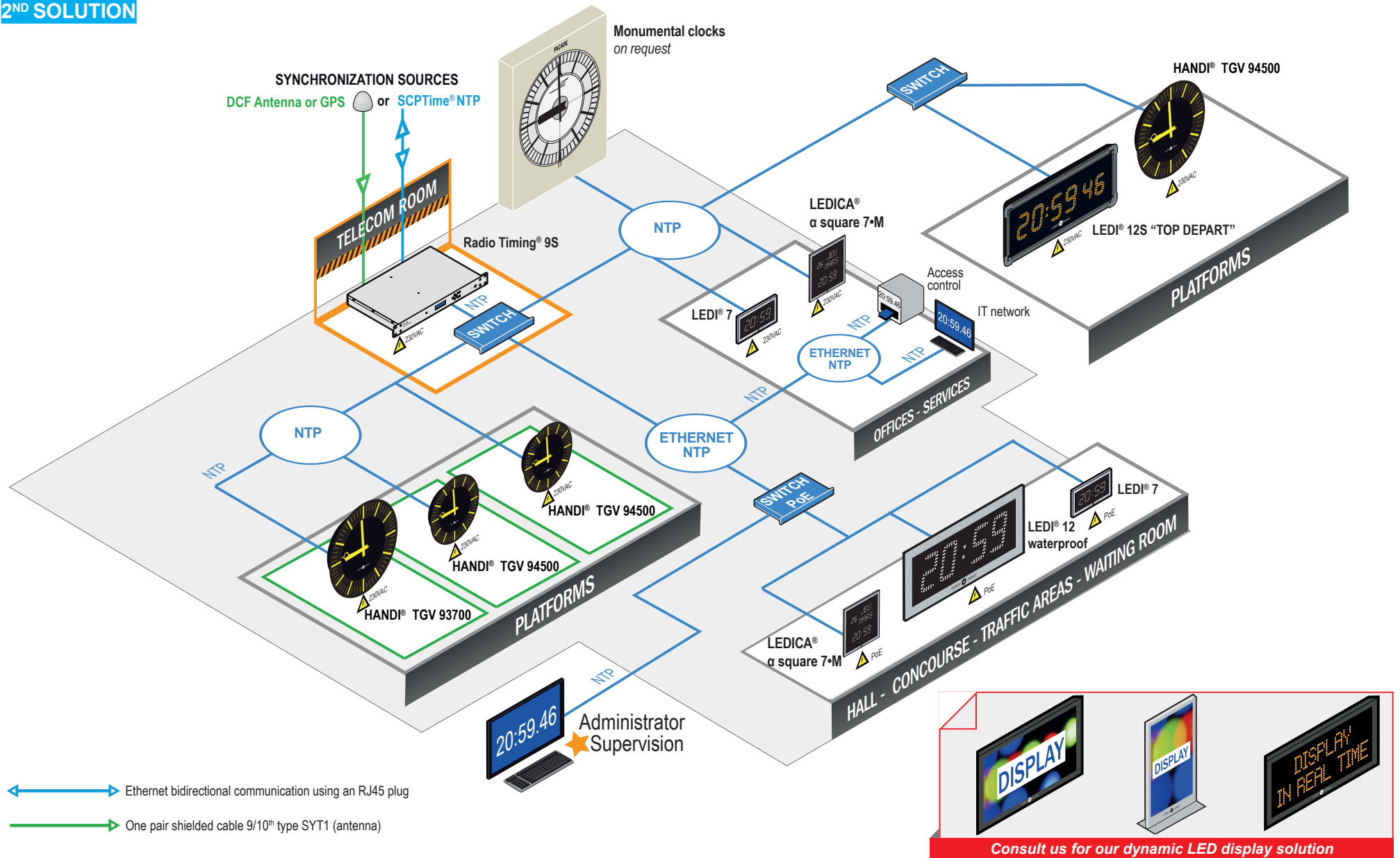
This solution uses the transmission of an NTP time code compliant with the **RFC 5905 standard in unicast mode via a TCP/IP network**. This time distribution is particularly economical as it uses the existing TCP/IP Ethernet network. The wired connection between the time centre and the receiver clocks will use CAT6 cabling. The power supply to the receiver clocks is 230 VAC or via the PoE switch integrated into the VDI racks.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

## 12. RAILWAY STATIONS

### Time synchronization using the NTP protocol with 230 VAC or PoE power supply

#### 2<sup>ND</sup> SOLUTION





### TELECOMMUNICATIONS ROOM



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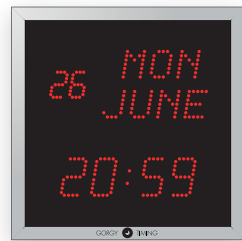
#### RADIO TIMING® 9S time server

- ▶ 19"1U rack.
  - ▶ Front LCD display indicates hours, minutes, seconds and date.
  - ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCPTIME®**.
  - ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
  - ▶ Backup power for time-keeping of time base.
  - ▶ Operating temperature -20°C to 60°C.
- Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

#### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

### CLOCK FOR PASSENGER BUILDINGS – TICKET OFFICE



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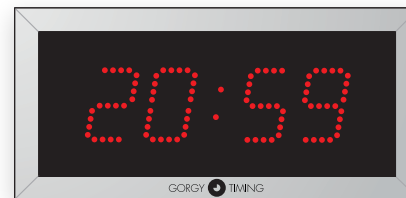
#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### PASSENGER WAITING ROOM



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#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### CONCOURSE, TRAFFIC AREAS



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#### LEDI® 10 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (110 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 50m.
- ▶ Anodised matt aluminium casing: 500x210x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 12. RAILWAY STATIONS

### PLATFORMS



#### LEDI® 12/S platforms digital clock

- ▶ Double-row ULTRA BRIGHT LED display showing hours and minutes (120 mm).
- ▶ Mono-colour yellow display (to comply with railway safety requirements).
- ▶ Distance of legibility: max. 60m.
- ▶ Satin-finish black painted casing: 500x210x62mm (LxHxD) IP54.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



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#### HANDI® TGV 93-700

##### Round analogue clock for outdoor installation

- ▶ Diameter 700 mm.
- ▶ Design approved by SNCF Planning Directorate
- ▶ Black dial.
- ▶ Black silk-screened glass with hour and minute markers in yellow.
- ▶ Hour, minute and second hands in yellow
- ▶ Stepper motor ensuring continuous movement of the second hand.
- ▶ No skip every minute.
- ▶ Black waterproof casing supplied with 4 wall-mounting spacers.
- ▶ IP53. Safety glass.
- ▶ Long-life LED lighting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



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#### HANDI® TGV 94-500

##### Round analogue clock for outdoor installation

- ▶ Diameter 500 mm.
- ▶ Design approved by the SNCF Planning Directorate.
- ▶ Black dial.
- ▶ Black silk-screened glass with hour and minute markers in yellow.
- ▶ Hour, minute and second hands in yellow.
- ▶ Stepper motor ensuring continuous movement of the second hand.
- ▶ No skip every minute.
- ▶ Black waterproof casing supplied with 4 wall-mounting spacers.
- ▶ IP53. Safety glass.
- ▶ Long-life LED lighting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### MONUMENTAL CLOCKS



- ▶ Mechanism adapted to suit existing dials or according to specification
- ▶ Diameters ranging from 1 to 10 meters.

#### Gorgy Timing recommends:

- ▶ RT 9S rack-mounted time server - Part No.: 4570/3D00N
  - ▶ NTP SNMP 10/100 Base T output
- ▶ LEDICA® ALPHA SQUARE
  - Part No.: N306/N1170 (230VAC power) or N306/N1177 (PoE power)
- ▶ LEDI® 7 WHITE DIODES
  - Part No.: N360/N5170 (230VAC power) or N360/N5177 (PoE power)
- ▶ LEDI® 7 - Part No.: N360/N1170 (230VAC power) or N360/N1177 (PoE power)
- ▶ LEDI® 10 - Part No.: N390/N1170 (230VAC power) or N390/N1177 (PoE power)
- ▶ LEDI® 12/S waterproof "TOP DÉPART" (STARTING SIGNAL) Réf: 386N/670A0 (230VAC power)
- ▶ HANDI® 94500: 205N/380 (230VAC power)
- ▶ HANDI® 93700: 207N/380 (230VAC power)
- ▶ Mounting fixtures for 94500 and 93700 not included
- ▶ **MONUMENTAL CLOCK AVAILABLE ON REQUEST**
- ▶ **Switches not supplied by Gorgy Timing**



### 12.3. TIME SYNCHRONIZATION IN RAILWAY STATIONS USING NTP, WI-FI AND A 230 VAC OR POE POWER SUPPLY

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ To transmit an identical time to clocks and to synchronise all of the VDI networks (voice, data, images), IT networks, automated machines, access control, automated ticketing machines, ticket validation machines, display boards and alarm systems.</li> </ul>	<p><b>This solution uses the Wi-Fi transmission (IEEE 802.11 B/G/N standard) available in a building. The use of this international standard is particularly economical, as it does not require any specific terminal nor a wired connection with receiver clocks.</b></p> <ul style="list-style-type: none"> <li>▶ No distance limit for clocks, nor with regard to the number of clocks connected.</li> <li>▶ Use of Gorgy Timing configuration and supervision software.</li> <li>▶ Instant remote setting of clocks using an Android tablet.</li> <li>▶ No additional electromagnetic pollution in the buildings.</li> <li>▶ Reduction of the commissioning time for the clock installation using the integrated software on an Android tablet.</li> <li>▶ The traffic consumed by the clocks on the network is very low: 1 pair of messages per hour.</li> <li>▶ The coverage can be easily expanded: all Wi-Fi terminals are compatible.</li> <li>▶ Clocks can be easily relocated from one position to another.</li> </ul> <p><b>Some clocks could be connected to the Ethernet TCP/IP network.</b></p> <ul style="list-style-type: none"> <li>▶ The clocks can have a 230 VAC power supply. Or PoE 802.3.</li> <li>▶ Synchronization of the IT network and connected devices (clocks available in NTP version).</li> <li>▶ Reliability of the system and simple installation.</li> <li>▶ A large number of clocks and IT equipment can be connected.</li> <li>▶ Monitoring of connected products on the network by SNMP.</li> <li>▶ MD5 encryption.</li> </ul>

#### Preamble: NTP, Wi-Fi with 230 VAC power supply.

Gorgy Timing recommends this innovative solution for new installation with an Ethernet network. This solution uses the transmission of NTP time code compliant with RFC 5905 standard in unicast mode via a TCP/IP network. This use of this time distribution mode is particularly **economical as it uses the existing TCP/IP Ethernet network.**

The receiver clocks are powered by 230 VAC or via the PoE switch located in VDI cabinets.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.





## 12. RAILWAY STATIONS

### TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

#### RADIO TIMING® 9S time server

- ▶ 19"1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or SCPTIME®.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

#### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

### CLOCK FOR PASSENGER BUILDINGS – TICKET OFFICE



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#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### PASSENGER WAITING ROOM



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#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### CONCOURSE, TRAFFIC AREAS



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#### LEDI® 10 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (110 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 50m.
- ▶ Anodised matt aluminium casing: 500x210x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 12. RAILWAY STATIONS

### PLATFORMS



 [Download datasheet](#)



 [Download datasheet](#)

#### LEDI® 12/S platforms digital clock

- ▶ Double-row ULTRA BRIGHT LED display showing hours and minutes (120 mm).
- ▶ Mono-colour yellow display (to comply with railway safety requirements).
- ▶ Distance of legibility: max. 60m.
- ▶ Satin-finish black painted casing: 500x210x62mm (LxHxD) IP54.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

#### HANDI® TGV 93-700

##### Round analogue clock for outdoor installation

- ▶ Diameter 700 mm.
- ▶ Design approved by SNCF Planning Directorate
- ▶ Black dial.
- ▶ Black silk-screened glass with hour and minute markers in yellow.
- ▶ Hour, minute and second hands in yellow
- ▶ Stepper motor ensuring continuous movement of the second hand.
- ▶ No skip every minute.
- ▶ Black waterproof casing supplied with 4 wall-mounting spacers.
- ▶ IP53. Safety glass.
- ▶ Long-life LED lighting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

#### HANDI® TGV 94-500

##### Round analogue clock for outdoor installation

- ▶ Diameter 500 mm.
- ▶ Design approved by the SNCF Planning Directorate.
- ▶ Black dial.
- ▶ Black silk-screened glass with hour and minute markers in yellow.
- ▶ Hour, minute and second hands in yellow.
- ▶ Stepper motor ensuring continuous movement of the second hand.
- ▶ No skip every minute.
- ▶ Black waterproof casing supplied with 4 wall-mounting spacers.
- ▶ IP53. Safety glass.
- ▶ Long-life LED lighting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### MONUMENTAL CLOCKS



- ▶ Mechanism adapted to suit existing dials or according to specification
- ▶ Diameters ranging from 1 to 10 meters.

#### Gorgy Timing recommends:

- ▶ RT 9S rack-mounted time server - Part No.: 4570/3D00N
  - ▶ NTP SNMP 10/100 Base T output
- ▶ LEDICA® ALPHA SQUARE - Part No.: N306/W1170
- ▶ LEDI® 7 WHITE DIODES - Part No.: N360/W5170
- ▶ LEDI® 7 - Part No.: N360/W1170
- ▶ LEDI® 10 - Part No.: N390/W1170
- ▶ LEDI® 12/S waterproof "TOP DÉPART" (STARTING SIGNAL) - Réf: 386W/670A0
- ▶ HANDI® 94500: 205N/380
- ▶ HANDI® 93700: 207N/380
- ▶ Mounting fixtures for 94500 and 93700 not included
- ▶ MONUMENTAL CLOCK AVAILABLE ON REQUEST
- ▶ Switches not supplied by Gorgy Timing



### 12.4. TIME SYNCHRONIZATION IN CENTRAL STATIONS USING THE AFNOR NFS 87500 CODE AND NTP WITH RT4000 TIME CENTRE

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ To transmit an identical time to clocks and to synchronise all of the VDI networks (voice, data, images), IT networks, automated machines, access control, automated ticketing machines, ticket validation machines, display boards and alarm systems.</li> </ul>	<p><b>The solutions developed by Gorgy Timing Engineering services are based on 40 years of experience in this field. Today a large number of railway stations in France and abroad are equipped with our time synchronization systems. The synchronization requirements in railway stations are multiple.</b></p> <ul style="list-style-type: none"> <li>▶ Reliable time information, redundant timing equipment.</li> <li>▶ Rapid and simple maintenance of our time centres thanks to the hot-plug modular system.</li> <li>▶ Warranty of product continuity for more than 10 years.</li> <li>▶ Transmission of a UTC and a local time on IT networks.</li> <li>▶ Entirely redundant "hot-plug" time centre.</li> <li>▶ Instant time setting without manual intervention.</li> <li>▶ Standardised AFNOR NFS 87500 code.</li> <li>▶ Reduced installation cost using a pair wire available in a telephone or fibre optic cable.</li> <li>▶ Ability to transmit the time over long distances of more than 20 km and to have 200 clocks.</li> <li>▶ No interference with telephone lines or IT environments.</li> <li>▶ Synchronization of the IT networks using the NTP RFC5905 protocol or other specific codes.</li> </ul>

#### Preamble: AFNOR NFS 87500 and NTP encrypted time distribution

Gorgy Timing recommends this type of time distribution for time installations in major railway stations, instead of pulse installations.

This code, with a standardised time message and amplitude modulation frequency can distribute the time to more than 200 clocks within a distance of up to 20 km, via a simple telephone cable.

This code has the advantage that it does not interfere with surrounding lines and is not susceptible to industrial interference.

In the case of time distribution using the AFNOR NFS 87500 code, the master clock transmits a time message on a pair wire in a telephone cable using a 1000 Hz frequency, to analogue or digital clocks.

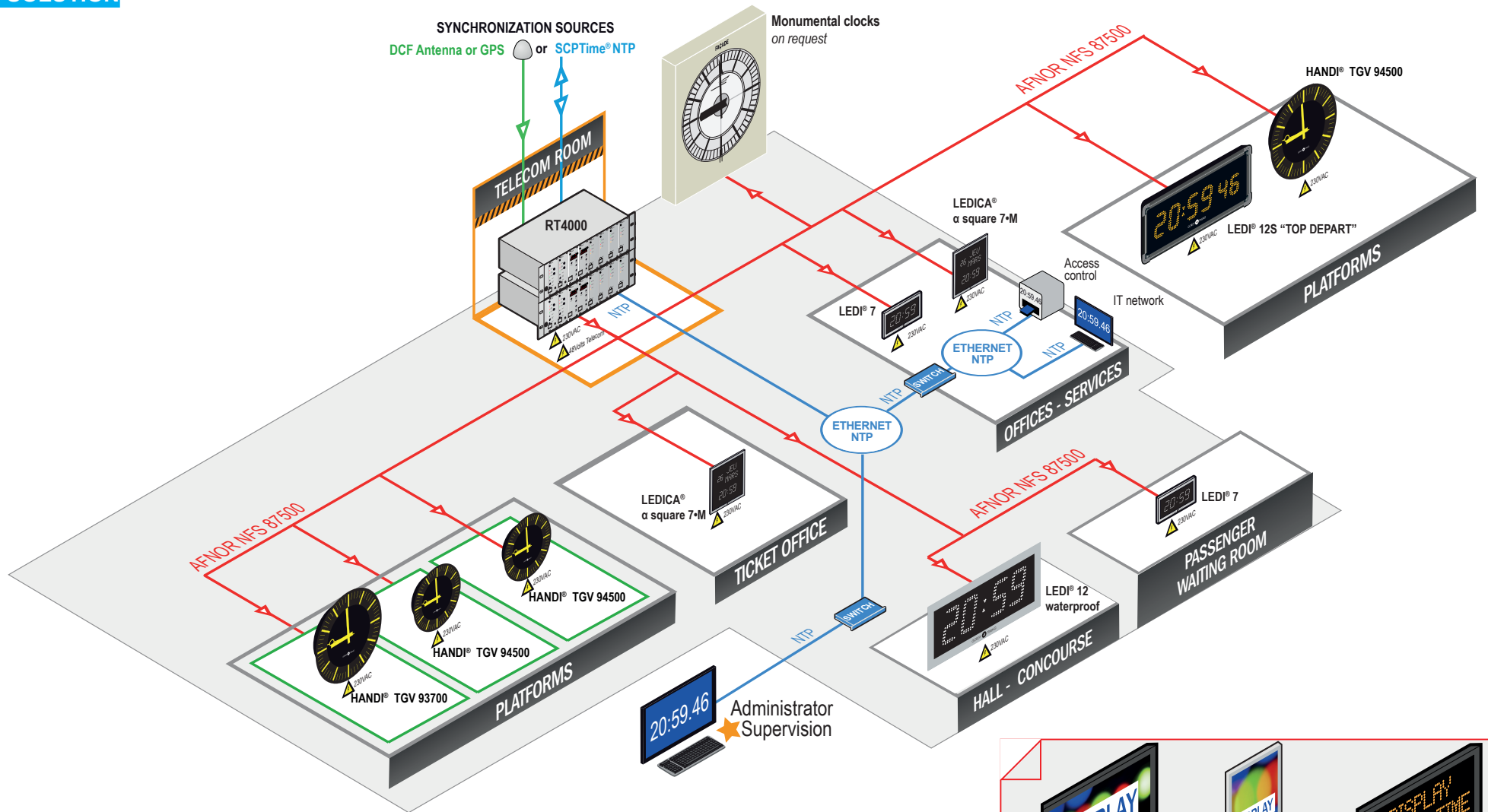
The time centre synchronises the entire IT network via the NTP protocol (Network Time Protocol).

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

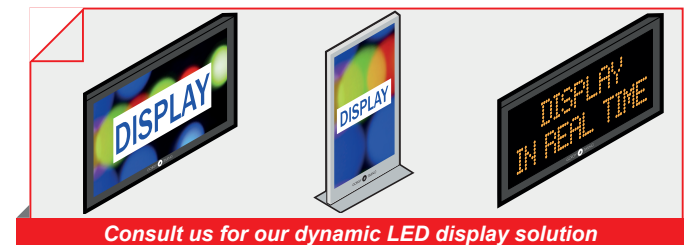
## 12. RAILWAY STATIONS

### Time distribution AFNOR NFS 87500 code + NTP protocol with RT4000 time center

#### 4<sup>TH</sup> SOLUTION



- AFNOR NFS 87500 - a pair wire in a telephone cable
- ↔ Ethernet bidirectional communication using an RJ45 plug
- One pair shielded cable 9/10<sup>th</sup> type SYT1 (antenna)





### TECHNICAL ROOM

#### RT4000 Time Center

To unify all equipment in technical room, the time center shall be rack mountable in a cabinet (international standard 19" rack).

- ▶ Modular design.
- ▶ 19"3U rack equipped with an inter-modules bus, a backplane with connectors and terminals. Guiding system of modules. Connection and switching system between racks.
- ▶ 1 to 4 stackable racks.



#### Key features

- ▶ Allows a specific composition and perfectly adapted to each use.
- ▶ Remote supervision over Ethernet (SNMP, HTTP), supporting NTP/SNTP.
- ▶ Protection filter against overvoltage and industrial noise.
- ▶ Replacement of module « hot plug », without shutdown.

#### Security

- ▶ Automatic or manual module redundancy.
- ▶ Power backup in case of main power supply cutting off.
- ▶ Led indicators for battery and power failure.
- ▶ Key control lock.

#### Supervision

- ▶ Supervision via HTTP, SNMP, Telnet, "GT Network Manager", "GT Ethernet Supervision" operating on Windows® NT/XP/2000/2003/Vista (32 bits)/Windows 7.

#### Power supply module – NT102

- ▶ Battery and power failure alarm indicators.
- ▶ 1/8<sup>th</sup> rack format.
- ▶ 230VAC input. Ni-mh 2.1AH Batteries.

#### Power supply module – NT124

- ▶ Battery and power failure alarm indicators.
- ▶ 1/8<sup>th</sup> rack format.
- ▶ 24VDC input. Ni-mh 2.1AH Batteries.

#### OCXO Time base module – NT829

- ▶ OCXO high accuracy oscillator
- ▶ Frequency stability  $1.10^{-8}$  (0° to 60°C)
- ▶ Temperature range -20° to 70°C
- ▶ Ageing  $2.10^{-10}$ /day
- ▶ Redundancy: up to 8 time base modules
- ▶ Alphanumerical LED front display, 4 program buttons.
- ▶ AFNOR NFS 87500/IRIG-b 1000Hz output, 10 MHz output,
- ▶ PPS (TTL)output
- ▶ 1/8<sup>th</sup> rack format
- ▶ GPS antenna with coaxial cable + surge protector.

#### TCXO Time base module – NT825

- ▶ NTP input. Consumption 3.5W.
- ▶ TCXO high accuracy oscillator.
- ▶ Frequency stability  $1.10^{-6}$  (0° to 60°C)
- ▶ Temperature range -20° to 70°C
- ▶ Ageing  $5.10^{-9}$ /day
- ▶ Redundancy: up to 8 time base modules
- ▶ Alphanumerical LED front display, 4 program buttons.
- ▶ AFNOR NFS 87500/IRIG-b 1000Hz output, 10 MHz output,
- ▶ PPS (TTL)output
- ▶ 1/8<sup>th</sup> rack format.

#### SNMP Supervision module – NT022

- ▶ SNMP V1/ V2c/V3, alarm management on 5 different SNMP supervisors.
- ▶ Configuration via web browser (http et http(s)) and/or Telnet by Ethernet 10/100 Base T.
- ▶ One dry contact alarm, LED alarm indicator on front panel.
- ▶ Consumption 3W.
- ▶ Supporting IP V4/V6.
- ▶ 1/8<sup>th</sup> rack format.

#### 2 NTP server modules - NT023

- ▶ 2 NTP server modules
- ▶ NTP (Network Time Protocol) output (RFC-1305 & RFC-5905).
- ▶ Remote Supervision and configuration via a WEB browser (http + http(s)).
- ▶ LED alarm indicator on front panel.
- ▶ Compatible with GT NTP Client software CDG 021.
- ▶ Ethernet 10/100 base T. Supporting NTP v4 / IPv6
- ▶ Consumption 2.1W. Accuracy of 50µs to 1ms.
- ▶ 1/8<sup>th</sup> rack format.

#### AFNOR NFS 87500 Time code output module – NT600

- ▶ Modulated code frequency 1000Hz and DCLS
- ▶ 2 AFNOR NFS 87500/IRIG B outputs or IEEE 1344.
- ▶ Consumption 0.5W.

## 12. RAILWAY STATIONS

### CLOCK FOR PASSENGER BUILDINGS – TICKET OFFICE



 [Download datasheet](#)

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### PASSENGER WAITING ROOM



 [Download datasheet](#)

#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### CONCOURSE, TRAFFIC AREAS



 [Download datasheet](#)

#### LEDI® 10 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (110 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 50m.
- ▶ Anodised matt aluminium casing: 500x210x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### PLATFORMS



#### LEDI® 12/S platforms digital clock

- ▶ Double-row ULTRA BRIGHT LED display showing hours and minutes (120 mm).
- ▶ Mono-colour yellow display (to comply with railway safety requirements).
- ▶ Distance of legibility: max. 60m.
- ▶ Satin-finish black painted casing: 500x210x62mm (LxHxD) IP54.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### PLATFORMS



 [Download datasheet](#)



 [Download datasheet](#)

#### HANDI® TGV 93-700

##### Round analogue clock for outdoor installation

- ▶ Diameter 700 mm.
- ▶ Design approved by SNCF Planning Directorate
- ▶ Black dial.
- ▶ Black silk-screened glass with hour and minute markers in yellow.
- ▶ Hour, minute and second hands in yellow.
- ▶ Stepper motor ensuring continuous movement of the second hand.
- ▶ No skip every minute.
- ▶ Black waterproof casing supplied with 4 wall-mounting spacers.
- ▶ IP53. Safety glass.
- ▶ Long-life LED lighting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

#### HANDI® TGV 94-500

##### Round analogue clock for outdoor installation

- ▶ Diameter 500 mm.
- ▶ Design approved by the SNCF Planning Directorate.
- ▶ Black dial.
- ▶ Black silk-screened glass with hour and minute markers in yellow.
- ▶ Hour, minute and second hands in yellow.
- ▶ Stepper motor ensuring continuous movement of the second hand.
- ▶ No skip every minute.
- ▶ Black waterproof casing supplied with 4 wall-mounting spacers.
- ▶ IP53. Safety glass.
- ▶ Long-life LED lighting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



### MONUMENTAL CLOCKS

- ▶ Mechanism adapted to suit existing dials or according to specification
- ▶ Diameters ranging from 1 to 10 meters.

#### Gorgy Timing recommends:

##### ▶ RT4000 Time center including:

- |            |           |
|------------|-----------|
| ▶ 1 NTRK02 | ▶ 1 NT815 |
| ▶ 1 NT102  | ▶ 1 NT022 |
| ▶ 1 NT148  | ▶ 2 NT023 |
| ▶ 1 NT829  | ▶ 2 NT600 |

##### ▶ LEDICA ALPHA® SQUARE - Part No.: N306/81170

- ▶ LEDI® 7 WHITE DIODES - Part No.: N360/85170
- ▶ LEDI® 7 - Part No.: N360/81170
- ▶ LEDI® 10 - Part No.: N390/81170
- ▶ LEDI® 12/S waterproof "TOP DÉPART" (STARTING SIGNAL) 3868/670A0

##### ▶ HANDI® 94500: 2058/380

- ▶ HANDI® 93700: 2078/380
- ▶ Mounting fixtures for 94500 and 93700 not included
- ▶ MONUMENTAL CLOCK AVAILABLE ON REQUEST
- ▶ Switches not supplied by Gorgy Timing



## 13. AIRPORTS







**13.1. TIME DISTRIBUTION IN REGIONAL AIRPORTS USING THE AFNOR NFS 87500 CODE AND NTP**

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time to the clocks in the entire passenger building.</li> <li>▶ Synchronization of all of the VDI networks (voice, data, images), IT networks, automated machines, access control, safety equipment, scanners, check-in machines, FIDS and BIDS.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Instant time setting without manual intervention.</li> <li>▶ Standardised AFNOR NFS 87500 code.</li> <li>▶ Reduced installation cost while allowing to use a pair available in a telephone or fibre optic cable.</li> <li>▶ Ability to transmit the time over long distances of more than 20 km and to have 200 clocks.</li> <li>▶ No interferences with telephone lines or IT environments.</li> <li>▶ Synchronization of the IT networks using the NTP RFC5905 protocol or other specific codes.</li> </ul>

**Preamble: Time distribution using the AFNOR NFS 87500 encryption + NTP**

Gorgy Timing recommends this type of time distribution in airports, instead of pulse or DHW 869MHz installations.

This code, with a standardised time message and amplitude modulation frequency can distribute the time to more than 200 clocks within a distance of up to 20 km, via a simple telephone cable.

This code has the advantage that it does not interfere with surrounding lines and is not susceptible to industrial interference.

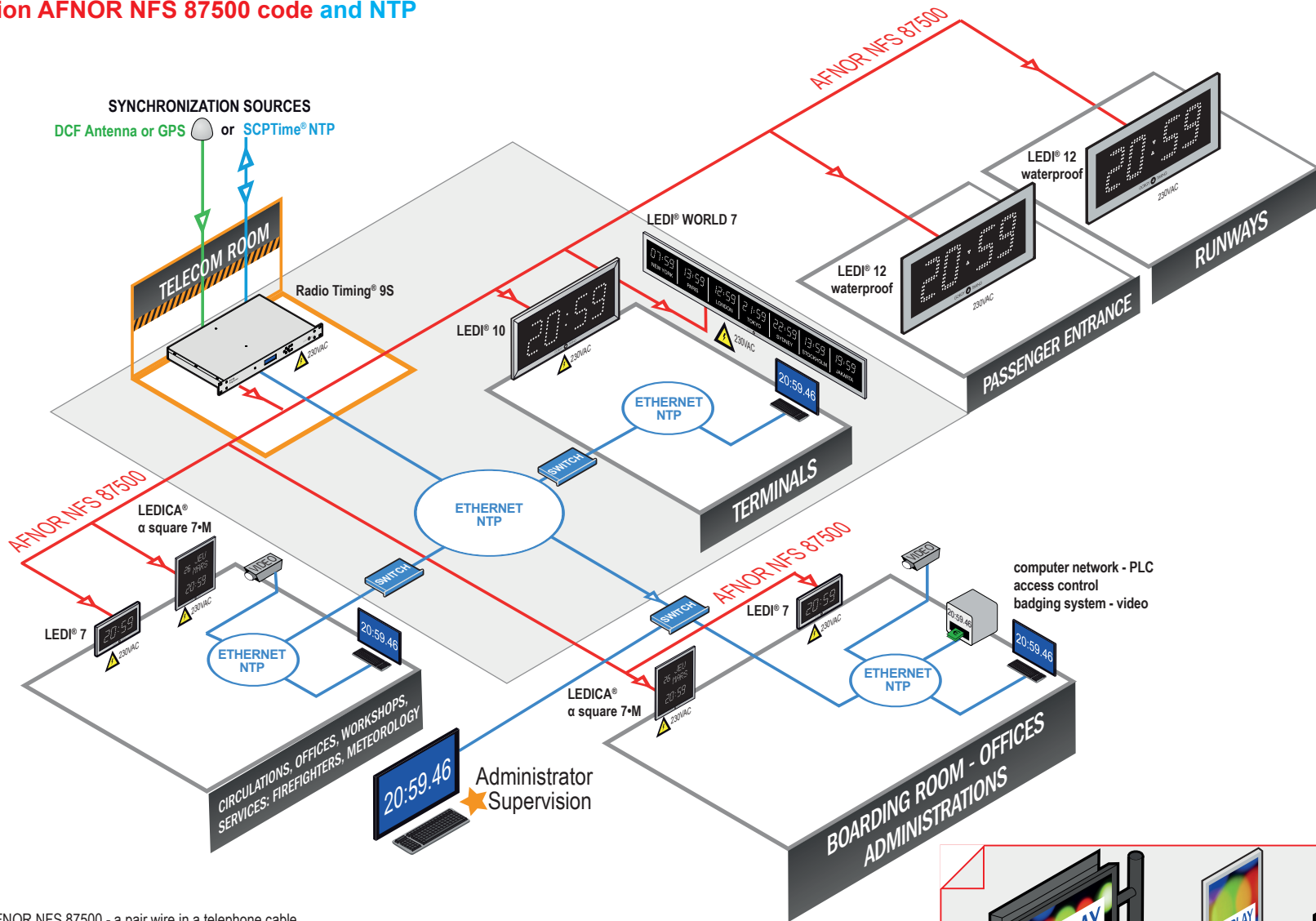
In the case of time distribution using the AFNOR NFS 87500 code, the master clock transmits a time message on a pair wire in a telephone cable using a 1000 Hz frequency, to analogue or digital clocks.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

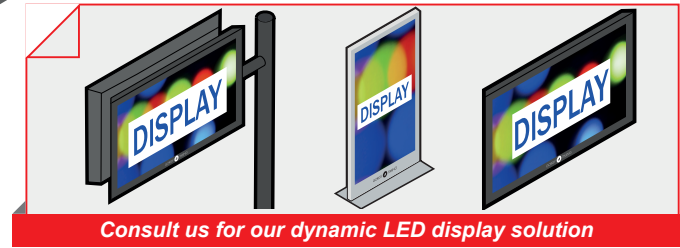
# 13. AIRPORTS

## Time distribution AFNOR NFS 87500 code and NTP

### 1<sup>ST</sup> SOLUTION



- AFNOR NFS 87500 - a pair wire in a telephone cable
- ↔ Ethernet bidirectional communication using an RJ45 plug
- One pair shielded cable 9/10<sup>th</sup> type SYT1 (antenna)



## TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

### RADIO TIMING® 9S time server

- ▶ 19"1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or SCPTIME®.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ AFNOR NFS 87500 output synchronises the clocks.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

## BOARDING ROOM, OFFICES, ADMINISTRATIONS



 [Download datasheet](#)

### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## CIRCULATIONS, OFFICES, WORKSHOPS, SERVICES: FIREFIGHTERS, METEOROLOGY



 [Download datasheet](#)

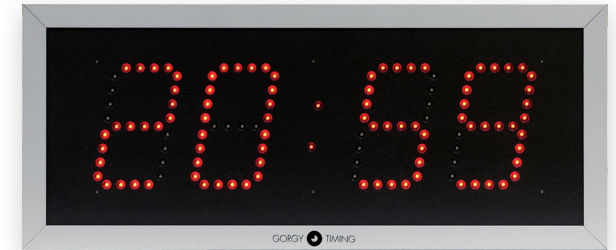
### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## TERMINALS



 [Download datasheet](#)

### LEDI® 10 digital clock

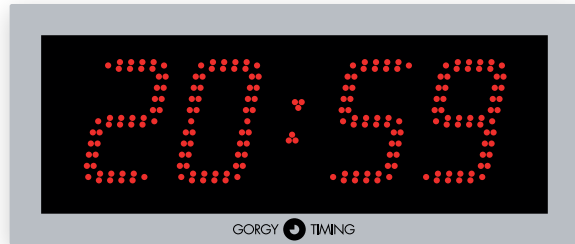
- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (110 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 50m.
- ▶ Anodised matt aluminium casing: 500x210x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 13. AIRPORTS

### OUTDOOR CLOCK FOR PASSENGER ENTRANCE AND RUNWAYS



 [Download datasheet](#)

### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing: 506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### TERMINALS



 [Download datasheet](#)

### LEDI® WORLD multizone digital clock

Clock panel consisting of 2 to 7 LEDI clocks, each indicating the local time of a chosen city

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Names of cities marked in white adhesive letters.
- ▶ Anodised matt aluminium casing: IP20.
- ▶ AFNOR NFS 87500 synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

### OPTION

- ▶ Marking of cities in white adhesive letters replaced by a dynamic display controlled via TCP/IP, enabling the remote changing of the city names.
- ▶ 10 characters (40mm height) dot matrix digital zone label.

### Gorgy Timing recommends:

- ▶ RT 9S rack-mounted time server - Part No.: 4570/3G00N8
  - ▶ AFNOR NFS 87500 output
  - ▶ NTP SNMP 10/100 Base T output
- ▶ LEDICA ALPHA® SQUARE - Part No.: N306/81170
- ▶ LEDI® 7 - Part No.: N360/81170
- ▶ LEDI® 10 - Part No.: N390/81170
- ▶ LEDI® 12 waterproof - Part No.: ND390E/184170
- ▶ LEDI® WORLD - Part No.: N577/81170
- ▶ Switches not supplied by Gorgy Timing





13.2. TIME SYNCHRONIZATION IN AIRPORTS USING NTP 230 VAC OR POE

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time to the clocks in the entire passenger building.</li> <li>▶ Synchronization of all of the VDI networks (voice, data, images), IT networks, automated machines, access control, safety equipment, scanners, check-in machines, FIDS and BIDS.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Use of existing cables and IT networks.</li> <li>▶ Standardised NTP protocol RFC 5905.</li> <li>▶ All clocks can be powered with a 230 VAC power supply or PoE (Power over Ethernet - PoE 802.3 standard).</li> <li>▶ Synchronization of the IT network and connected devices (clocks available in NTP version).</li> <li>▶ Reliability of the system and simple installation.</li> <li>▶ A large number of clocks and IT equipment can be connected.</li> <li>▶ Monitoring of connected products on the network by SNMP.</li> <li>▶ MD5 encryption.</li> </ul>

Preamble: NTP protocol Time synchronization using 230 VAC or PoE power supply

Gorgy Timing recommends this innovative solution for new installation with an Ethernet network.

This solution uses the transmission of NTP time code compliant with RFC 5905 standard in unicast mode via a TCP/IP network. This use of this time distribution mode is particularly **economical as it uses the existing TCP/IP Ethernet network.**

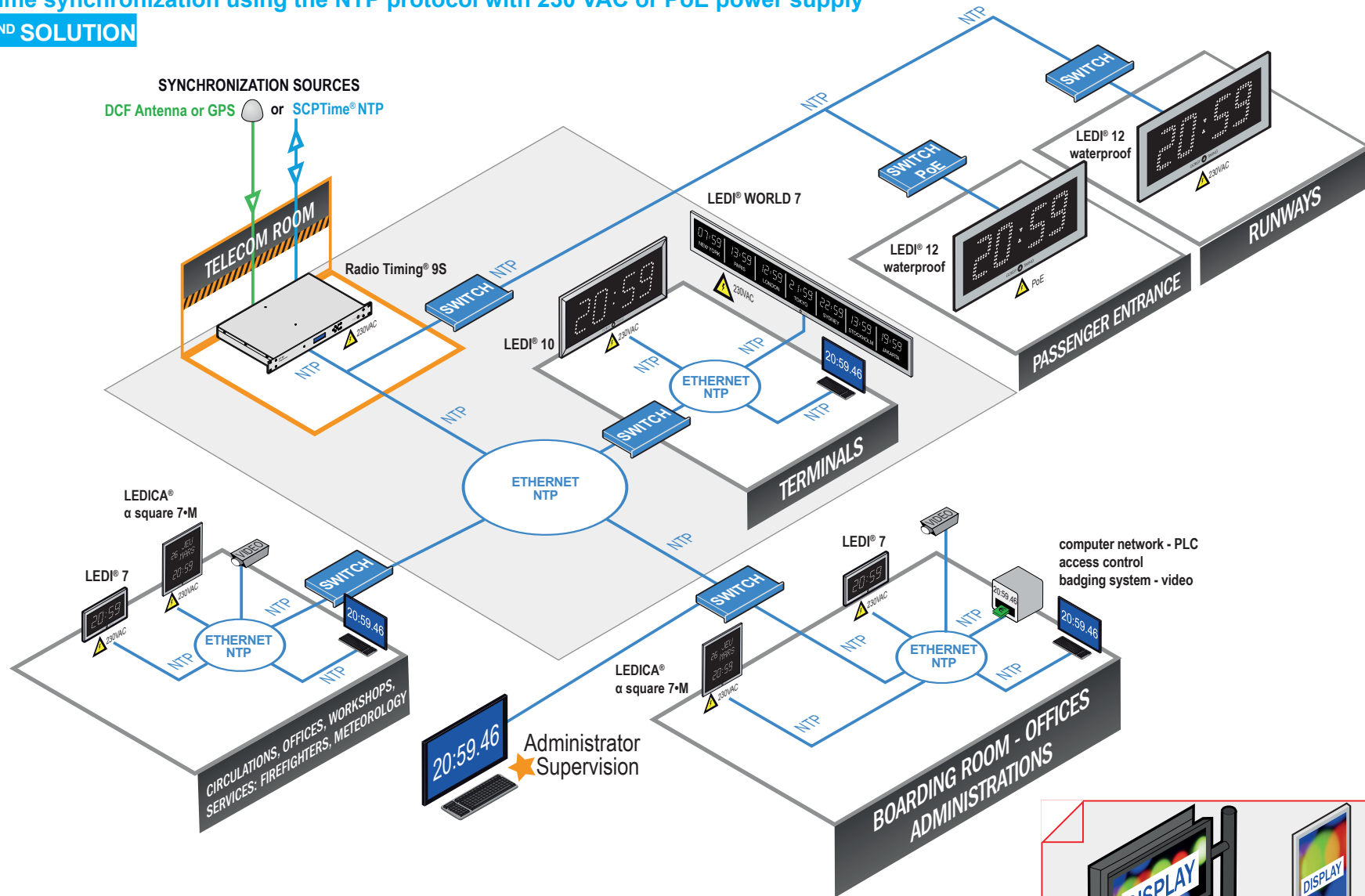
The receiver clocks are powered by 230 VAC or via the PoE switch located in VDI cabinets.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

# 13. AIRPORTS

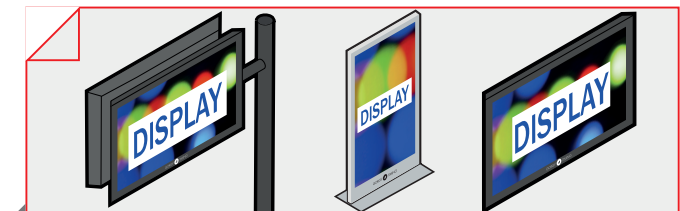
## Time synchronization using the NTP protocol with 230 VAC or PoE power supply

### 2<sup>ND</sup> SOLUTION



↔ Ethernet bidirectional communication using an RJ45 plug

→ One pair shielded cable 9/10<sup>th</sup> type SYT1 (antenna)



Consult us for our dynamic LED display solution

## TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

### RADIO TIMING® 9S time server

- ▶ 19" 1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCPTIME®**.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC.*

### 4 relay programming module.

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

## BOARDING ROOM, OFFICES, ADMINISTRATIONS



 [Download datasheet](#)

### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## CIRCULATIONS, OFFICES, WORKSHOPS, SERVICES: FIREFIGHTERS, METEOROLOGY



 [Download datasheet](#)

### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## TERMINALS



 [Download datasheet](#)

### LEDI® 10 digital clock

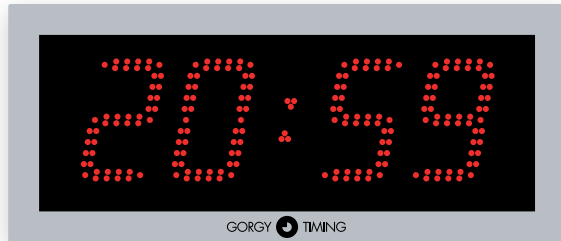
- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (110 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 50m.
- ▶ Anodised matt aluminium casing: 500x210x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## 13. AIRPORTS

### OUTDOOR CLOCK FOR PASSENGER ENTRANCE AND FOR RUNWAYS



 [Download datasheet](#)

#### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing: 506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### TERMINALS



 [Download datasheet](#)

#### LEDI® WORLD multizone digital clock

Clock panel consisting of 2 to 7 LEDI clocks, each indicating the local time of a chosen city

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Names of cities marked in white adhesive letters.
- ▶ Anodised matt aluminium casing: IP20.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

#### OPTION

- ▶ Marking of cities in white adhesive letters replaced by a dynamic display controlled via TCP/IP, enabling the remote changing of the city names.
- ▶ 10 characters (40mm height) dot matrix digital zone label.

#### Gorgy Timing recommends:

- ▶ RT 9S rack-mounted time server - Part No.: 4570/3G00N
  - ▶ NTP SNMP 10/100 Base T output
- ▶ LEDICA ALPHA® SQUARE - Part No.: N306/N1170 (230VAC power) or N306/N1177 (PoE power)
- ▶ LEDI® 7 - Part No.: N360/N1170 (230VAC power) or N360/N1177 (PoE power)
- ▶ LEDI® 10 - Part No.: N390/N1170 (230VAC power) or N390/N1177 (PoE power)
- ▶ LEDI® 12 waterproof - Part No.: ND390E/1N4170 (230VAC power) or ND390E/1N4177 (PoE power)
- ▶ LEDI® WORLD - Part No.: N577/N1170 (230VAC power) or N577/N1178 (PoE power)
- ▶ Switches not supplied by Gorgy Timing





13.3. TIME SYNCHRONIZATION IN AIRPORTS USING WI-FI / NTP

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time to the clocks in the entire passenger building.</li> <li>▶ Synchronization of all of the VDI networks (voice, data, images), IT networks, automated machines, access control, safety equipment, scanners, check-in machines, FIDS and BIDS.</li> </ul>	<p><b>This solution uses the Wi-Fi transmission (IEEE 802.11 B/G/N standard) available in a building. The use of this international standard is particularly economical, as it does not require any specific terminal nor a wired connection with receiver clocks.</b></p> <ul style="list-style-type: none"> <li>▶ No distance limit for clocks, nor with regard to the number of clocks connected.</li> <li>▶ Use of Gorgy Timing configuration and supervision software.</li> <li>▶ Instant setting of clocks and reduction of commissioning time for the clock installation using the integrated software on an Android tablet.</li> <li>▶ No additional electromagnetic pollution in the buildings.</li> <li>▶ The coverage can be easily expanded: all Wi-Fi terminals are compatible.</li> <li>▶ Clocks can be easily relocated from one position to another.</li> <li>▶ Monitoring of connected products on the network by SNMP.</li> <li>▶ MD5 encryption.</li> <li>▶ Reduction of installation costs.</li> </ul>

**Time synchronization using Gorgy Timing Wi-Fi/NTP**

Gorgy Timing recommends the new Wi-Fi/NTP secure and traceable wireless time synchronization for time installations, instead of DHW 869 MHz radio time distribution. Gorgy Timing, a strong defender of standardised norms, has aimed to bring together two international protocols: NTP protocol (RFC5905) and the wireless Wi-Fi communication protocol (IEEE 802.11 B/G/N), thus enabling exceptional transparency and increasing user satisfaction.

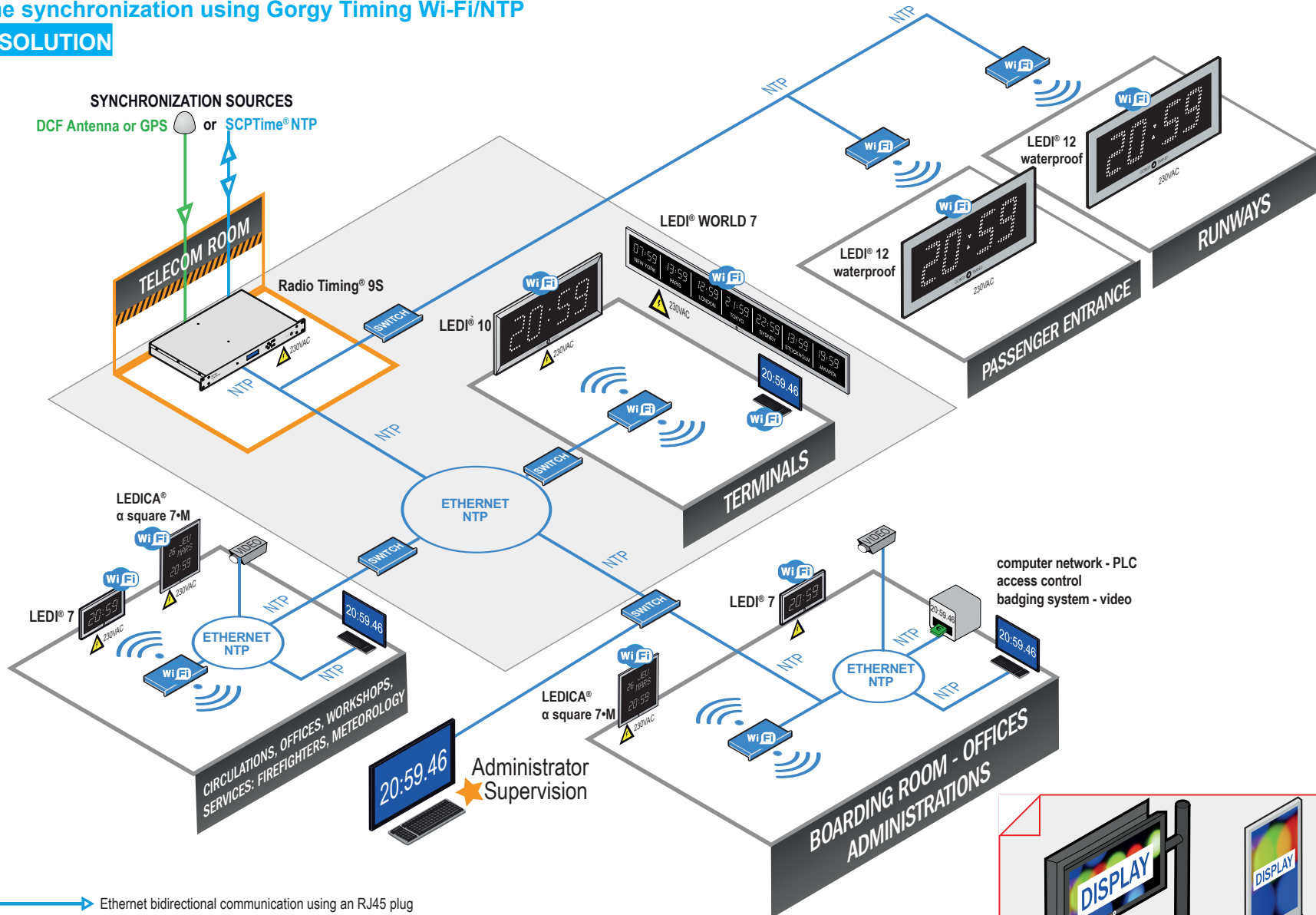
This new means of time distribution is particularly interesting for a building that is already equipped with a Wi-Fi network, to avoid additional electromagnetic pollution.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

# 13. AIRPORTS

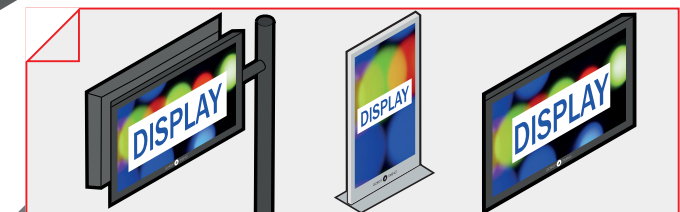
## Time synchronization using Gorgy Timing Wi-Fi/NTP

### 3<sup>RD</sup> SOLUTION



↔ Ethernet bidirectional communication using an RJ45 plug

→ One pair shielded cable 9/10<sup>th</sup> type SYT1 (antenna)



Consult us for our dynamic LED display solution

TELECOMMUNICATIONS ROOM



 [Download datasheet rack version](#)

**RADIO TIMING® 9S time server**

- ▶ 19"1U rack.
- ▶ Front LCD display indicates hours, minutes, seconds and date.
- ▶ The high-precision TCXO quartz time base is synchronized by DCF (Europe) time signals or GPS satellites, avoiding manual time-setting and ensuring automatic Daylight Saving Time change or **SCPTIME®**.
- ▶ 1 NTP time protocol output synchronises the clocks and the IT network.
- ▶ Backup power for time-keeping of time base.
- ▶ Operating temperature -20°C to 60°C.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...)* CE/EMC.

**4 relay programming module.**

- ▶ Wall-mounted case, or in DIN rail.
- ▶ Simple programming remotely by PC.
- ▶ Backup power for time-keeping of time base.

BOARDING ROOM, OFFICES, ADMINISTRATIONS



 [Download datasheet](#)

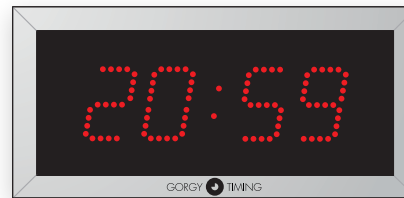
**LEDICA® ALPHA SQUARE 7M digital calendar clock**

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...)* CE/EMC

**OPTION:** double-sided model with ceiling or side mount bracket.

CIRCULATIONS, OFFICES, WORKSHOPS,  
SERVICES: FIREFIGHTERS, METEOROLOGY



 [Download datasheet](#)

**LEDI® 7 digital clock**

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...)* CE/EMC

**OPTION:** double-sided model with ceiling or side mount bracket.

TERMINALS



 [Download datasheet](#)

**LEDI® 10 digital clock**

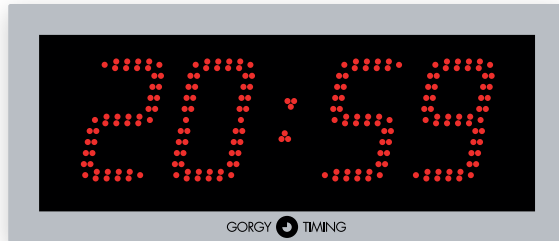
- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (110 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 50m.
- ▶ Anodised matt aluminium casing: 500x210x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...)* CE/EMC

**OPTION:** double-sided model with ceiling or side mount bracket.

## 13. AIRPORTS

### OUTDOOR CLOCK FOR PASSENGER ENTRANCE AND FOR RUNWAYS



 [Download datasheet](#)

#### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing: 506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### TERMINALS



 [Download datasheet](#)

#### LEDI® WORLD multizone digital clock

Clock panel consisting of 2 to 7 LEDI clocks, each indicating the local time of a chosen city

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Names of cities marked in white adhesive letters.
- ▶ Anodised matt aluminium casing: IP20.
- ▶ Wi-Fi 802.11 B/G/N synchronization input.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

#### OPTION

- ▶ Marking of cities in white adhesive letters replaced by a dynamic display controlled via TCP/IP, enabling the remote changing of the city names.
- ▶ 10 characters (40mm height) dot matrix digital zone label.

- ▶ **Option: configuration tool**  
**Nexus touch screen configuration tablet: for rapid and simple setup**

- ▶ Use of a touch screen tablet, preconfigured in the factory.
- ▶ Includs:
  - GT Wi-Fi Manager (application mobile).
- ▶ Included: User manuals + documentation for Gorgy Timing products.
- ▶ Includs:
  - Vidéos (didacticiels).
- ▶ Can be used for other purposes (monitoring, web, email...).

*CE/CEM product. Anti-fire standard.*



#### **Gorgy Timing recommends:**

- ▶ **RT 9S rack-mounted time server - Part No.: 4570/3G00N**
  - ▶ **NTP SNMP 10/100 Base T output**
- ▶ **LEDICA ALPHA® SQUARE - Part No.: N306/W1170**
- ▶ **LEDI® 7 - Part No.: N360/W1170**
- ▶ **LEDI® 10 - Part No.: N390/W1170**
- ▶ **LEDI® 12 waterproof - Part No.: ND390E/1W4170**
- ▶ **LEDI® WORLD - Part No.: N577/W1170**
- ▶ **Switches not supplied by Gorgy Timing**
- ▶ **Nexus touch screen tablet option - Part No.: INF0005A**





13.4. TIME SYNCHRONIZATION IN INTERNATIONAL AIRPORTS USING NTP 230 VAC OR POE

REQUIREMENTS	ADVANTAGES
<ul style="list-style-type: none"> <li>▶ Transmission of an identical time to the clocks in the entire passenger building.</li> <li>▶ Synchronization of all of the VDI networks (voice, data, images), IT networks, automated machines, access control, safety equipment, scanners, check-in machines, FIDS and BIDS..</li> </ul>	<p><b>The solutions developed by Gorgy Timing technical services are based on 40 years of experience in this area of activity. Today a large number of airports in France and abroad are equipped with our time synchronization systems.</b></p> <p><b>The synchronization requirements in airports are multiple:</b></p> <ul style="list-style-type: none"> <li>▶ Reliable time information, redundant timing equipment.</li> <li>▶ Rapid and simple maintenance of our time centres thanks to the hot-plug modular system.</li> <li>▶ Warranty of product continuity for more than 10 years.</li> <li>▶ Transmission of a UTC and a local time on IT networks.</li> <li>▶ Entirely redundant "hot-plug" time centre.</li> <li>▶ Instant time setting without manual intervention.</li> <li>▶ Synchronization of the IT networks using the NTP RFC5905 protocol.</li> </ul>

**Preamble: NTP protocol Time synchronization using 230 VAC or PoE power supply**

Gorgy Timing recommends this innovative solution for new installation with an Ethernet network.

This solution uses the transmission of an NTP time code compliant with the RFC 5905 standard in unicast mode via a TCP/IP network. The NTP products concerned comply with the RFC1 305 standard. This time distribution is particularly economical as it uses the existing TCP/IP Ethernet network.

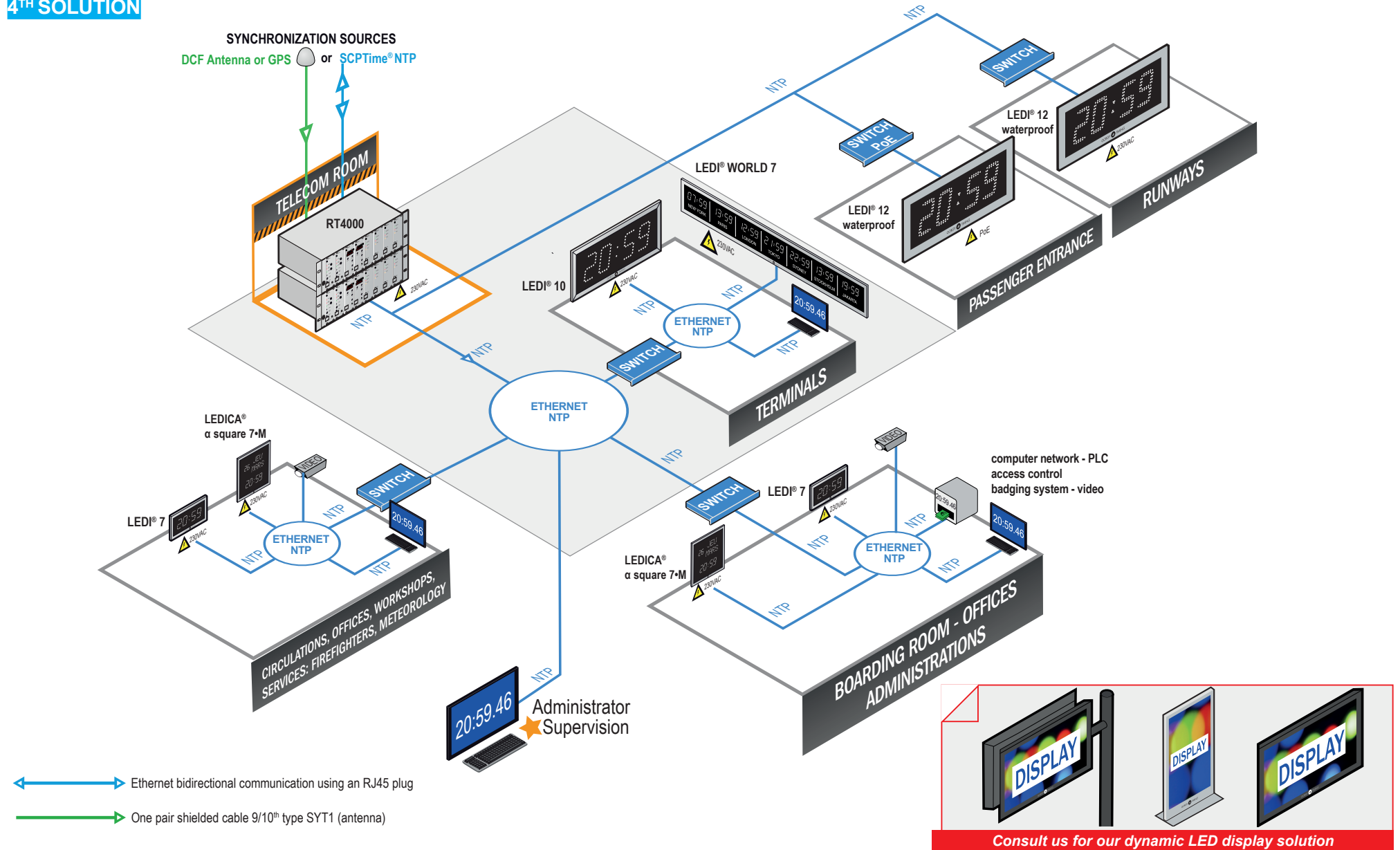
The power supply to the receiver clocks is 230 VAC or via PoE switch integrated into the VDI racks.

This equipment shall be compliant with the CE standard and shall come from a recognised and ISO 9001 certified manufacturer.

# 13. AIRPORTS

## Time synchronization using the NTP protocol with 230 VAC or PoE power supply

### 4<sup>TH</sup> SOLUTION



## TELECOM ROOM

### RT4000 Time Center

To unify all equipment in technical room, the time center shall be rack mountable in a cabinet (international standard 19" rack).

- ▶ Modular design.
- ▶ 19"3U rack equipped with an inter-modules bus, a backplane with connectors and terminals. Guiding system of modules. Connection and switching system between racks.
- ▶ 1 to 4 stackable racks.

#### Key features

- ▶ Allows a specific composition and perfectly adapted to each use.
- ▶ Remote supervision over Ethernet (SNMP, HTTP), supporting NTP/SNTP.
- ▶ Protection filter against overvoltage and industrial noise.
- ▶ Replacement of module « hot plug », without shutdown.

#### Security

- ▶ Automatic or manual module redundancy.
- ▶ Power backup in case of main power supply cutting off.
- ▶ Led indicators for battery and power failure.
- ▶ Key control lock.

#### Supervision

- ▶ Supervision via HTTP, SNMP, Telnet, "GT Network Manager", "GT Ethernet Supervision" operating on Windows® NT/XP/2000/2003/Vista (32 bits)/Windows 7.

#### Power supply module – NT102

- ▶ Battery and power failure alarm indicators.
- ▶ 1/8<sup>th</sup> rack format.
- ▶ 230VAC input. Ni-mh 2.1AH Batteries.

#### Power supply module – NT124

- ▶ Battery and power failure alarm indicators.
- ▶ 1/8<sup>th</sup> rack format.
- ▶ 24VDC input. Ni-mh 2.1AH Batteries.



#### OCXO Time base module – NT825

- ▶ OCXO high accuracy oscillator
- ▶ Frequency stability  $1.10^{-8}$  (0° to 60°C)
- ▶ Temperature range -20° to 70°C
- ▶ Ageing  $2.10^{-10}$ /day
- ▶ Redundancy: up to 8 time base modules
- ▶ Alphanumerical LED front display, 4 program buttons.
- ▶ AFNOR NFS 87500/IRIG-b 1000Hz output, 10 MHz output,
- ▶ PPS (TTL)output
- ▶ 1/8<sup>th</sup> rack format
- ▶ GPS antenna with coaxial cable + surge protector.

#### TCXO Time base module – NT825

- ▶ NTP input. Consumption 3.5W.
- ▶ TCXO high accuracy oscillator.
- ▶ Frequency stability  $1.10^{-6}$  (0° to 60°C)
- ▶ Temperature range -20° to 70°C
- ▶ Ageing  $5.10^{-9}$ /day
- ▶ Redundancy: up to 8 time base modules
- ▶ Alphanumerical LED front display, 4 program buttons.
- ▶ AFNOR NFS 87500/IRIG-b 1000Hz output, 10 MHz output,
- ▶ PPS (TTL)output
- ▶ 1/8<sup>th</sup> rack format.

#### SNMP Supervision module – NT022

- ▶ SNMP V1/ V2c/V3, alarm management on 5 different SNMP supervisors.
- ▶ Configuration via web browser (http et http(s)) and/or Telnet by Ethernet 10/100 Base T.
- ▶ One dry contact alarm, LED alarm indicator on front panel.
- ▶ Consumption 3W.
- ▶ Supporting IP V4/V6.
- ▶ 1/8<sup>th</sup> rack format.

#### 2 NTP server modules - NT023

- ▶ 2 NTP server modules
- ▶ NTP (Network Time Protocol) output (RFC-1305 & RFC-5905).
- ▶ Remote Supervision and configuration via a WEB browser (http + http(s)).
- ▶ LED alarm indicator on front panel.
- ▶ Compatible with GT NTP Client software CDG 021.
- ▶ Ethernet 10/100 base T. Supporting NTP v4 / IPv6
- ▶ Consumption 2.1W. Accuracy of 50µs to 1ms.
- ▶ 1/8<sup>th</sup> rack format.

#### AFNOR NFS 87500 Time code output module – NT600

- ▶ Modulated code frequency 1000Hz and DCLS
- ▶ 2 AFNOR NFS 87500/IRIG B outputs or IEEE 1344.
- ▶ Consumption 0.5W.

## 13. AIRPORTS

### BOARDING ROOM, OFFICES, ADMINISTRATIONS



 [Download datasheet](#)

#### LEDICA® ALPHA SQUARE 7M digital calendar clock

- ▶ Digital display of hours and minutes (70mm).
- ▶ Calendar display: date display in digits, alphanumerical display for month and day.
- ▶ Bi-colour LED technology (SMD technology) enabling the user to change the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 390x390x62mm (LxHxP) IP30.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### CIRCULATIONS, OFFICES, WORKSHOPS, SERVICES: FIREFIGHTERS, METEOROLOGY



 [Download datasheet](#)

#### LEDI® 7 digital clock

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Anodised matt aluminium casing: 350x165x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

### TERMINALS



 [Download datasheet](#)

#### LEDI® 10 digital clock

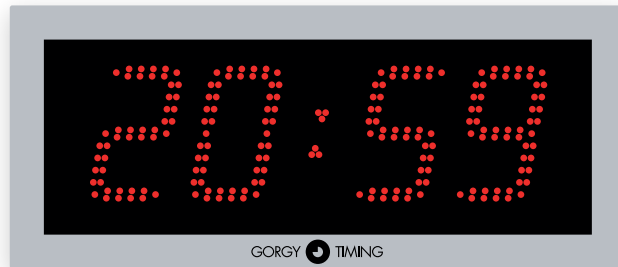
- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (110 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 50m.
- ▶ Anodised matt aluminium casing: 500x210x62mm (LxHxP) IP30
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.



## OUTDOOR CLOCK FOR PASSENGER ENTRANCE AND FOR RUNWAYS



 [Download datasheet](#)

### LEDI® 12 waterproof digital clock

- ▶ Double-row ultra-bright bi-colour LED display (SMD technology) showing hours and minutes (120 mm) enabling the user to adjust the colour (red, green, yellow).
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Front face in safety glass for good legibility outdoor.
- ▶ Distance of legibility: max. 60m.
- ▶ Anodised matt aluminium casing: 506x216x75mm (LxHxD), waterproof IP66 front panel and IP54 rear face.
- ▶ Single-sided model for wall mount, ceiling or side mounting.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

**OPTION:** double-sided model with ceiling or side mount bracket.

## TERMINALS



 [Download datasheet](#)

### LEDI® WORLD multizone digital clock

Clock panel consisting of 2 to 7 LEDI clocks, each indicating the local time of a chosen city

- ▶ Bi-colour LED display (SMD technology) showing hours and minutes (70 mm) enabling the user to modify the colour (red, green, yellow).
- ▶ Front panel with antiglare and anti-scratch treatment.
- ▶ Light guide for a 160° reading angle (patented).
- ▶ Distance of legibility: max. 30m.
- ▶ Names of cities marked in white adhesive letters.
- ▶ Anodised matt aluminium casing: IP20.
- ▶ NTP synchronization input on RJ45 plug.
- ▶ Backup power for time-keeping of time base.

*Electrical device compliant with the EN60950 standard (electrical hazards, fire...) CE/EMC*

### OPTION

- ▶ Marking of cities in white adhesive letters replaced by a dynamic display controlled via TCP/IP, enabling the remote changing of the city names.
- ▶ 10 characters (40mm height) dot matrix digital zone label.

### Gorgy Timing recommends:

#### RT4000 Time Center

- |            |           |           |
|------------|-----------|-----------|
| ▶ 1 NTRK02 | ▶ 1 NT829 | ▶ 2 NT023 |
| ▶ 1 NT102  | ▶ 1 NT815 | ▶ 2 NT600 |
| ▶ 1 NT148  | ▶ 1 NT022 |           |

- ▶ LEDICA ALPHA® SQUARE - Part No.: N306/N1170 (230VAC power) or N306/N1177 (PoE power)
- ▶ LEDI® 7 - Part No.: N360/N1170 (230VAC power) or N360/N1177 (PoE power)
- ▶ LEDI® 10 - Part No.: N390/N1170 (230VAC power) or N390/N1177 (PoE power)
- ▶ LEDI® 12 waterproof - Part No.: ND390E/1N4170 (230VAC power) or ND390E/1N4177 (PoE power)
- ▶ LEDI® WORLD - Part No.: N577/N1170 (230VAC power) or N577/N1178 (PoE power)
- ▶ Switches not supplied by Gorgy Timing

# GORGY TIMING

L A M A R Q U E D U T E M P S

MADE IN FRANCE



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