TECHNICAL SPECIFICATIONS IP NURSE CALL SYSTEM AND ACCESS CONTROL

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1. TECHNICAL SPECIFICATIONS

This document describes the technical specifications of IP nurse call system.

The solution to be implemented must be based on native IP SIP standard and to support PoE capable of powering all the devices in the room.

IP system, incorporating standards of VoIP, based on SIP protocol, with the possibility of PoE power. Compatible with IP phones stations.

FEATURES

- Terminal VoIP/SIP in each room.
- Supervision and scheduling of all devices in the system over the LAN from the centre.
- It improves the care delivery processes, allowing an improvement in **patient satisfaction.**
- Wireless communication and fixed checkpoints.
- Centralization of communication and information of activities at the Hospital, staff, administrative and accounting.
- It improves the healthcare process.
- **Open architecture**. Standard database with possibility of interconnection with the majority of voice and data standards, TCP/IP, TAPI, SIP, ODBC, HL7.

- Domotics features relay input to slope light control, presence sensor, solenoid value, inlet for detectors (smoke, gas…).
- Optional temperature sensor.

ADVANTAGES

- **Maximum reliability:** The software monitors and auto checks the system in real time, thus, guarantees the receipt of alarms in mobile and fixed devices, increasing the safety and comfort of patients.
- **Control and security assistances:** All alarm calls are stored in a database, it is a fault-tolerant system, in case of communication error, the information is stored locally in the IP terminals until, and it recovers the connection, facilitating the management of human resources.
- **Modularity and scalability:** Modular system, with the ability to grow gradually and adaptable to each centre. Scalability without affecting the service available.
- **Simplicity of use:** Aesthetic, modern and intuitive looks. Easy to use for patients and healthcare staff, which ensures a quick and rapid response.
- **Compatibility:** Compatible with any communication system, fixed and wireless (DECT, DECT's wrist and pagers). It also allows receiving alarms on IP phones, or under Wi-Fi technology on Smartphones and tablets.
- **Easy implementation:** Total integration between calls and hospital management system from the centre (patient's information, health personnel, alarm…). So it's necessary to have a single computer system that can extract alarms and reports.
- **Energy saving:** Monitoring the temperature, air-conditioning, shut on/off lights management, using a system of home automation.
- **Customizable settings:** Which a modular system that allows to install and programming, via remote, the terminal individually in each room, optimizing costs. In addition, the alarms can be configured individually.
- **Optimization installation costs:** The use of multifunction devices allows a cost-saving installation.

- **Cost savings in wiring:** It allows the connection between the network and the room over IP, no need of converters.
- **Optimization of procedures and workflows:** The solution alerts the healthcare staff of any needs of the patients regardless of their location, facilitating the communication between patients and the healthcare staff, optimizing the nurse work.
- **Versatility:** Variety to suit the needs of the Hospitals.

MAIN KEYS

- Possibility of integration in headboards
- IP System (SIP) IPv4 and IPv6 supports
- Codec wide band 16 kHz. Communication Encryption: AES 256
- Supply by PoE all elements of the room
- Call point to point board room and IP checkpoint without requiring software is ripped (Peer to Peer). It's very SAFE
- Possibility Test mode for checking the system with a speech interface without installed software. Vocal Auto checking
- Possibility Control Room telephone analogy or IP from the IP Terminal of Ibernex.
- Ethernet wiring can be reduced due to have two RJ45 sockets on the board. One socket to the plate and other one, for example IP phone in the room
- Inputs and outputs number of the board
- RS-485 bus communication with peripherals
- Dining room light corridor from plate using RS485 bus
- **FOLLOW ME function:** Nurses are notifying the system in the room which they are, passing their card through the reader and the system diverts them alarm calls automatically from other rooms to the room where you are with a different notification and the ability to speak hands free.
- Possibility to adjust from nursing checkpoint levels of the speaker and the microphone
- Possibility of silent listening to the rooms from checkpoint to certain patients

- Different types of RFID reader: with display, without display, with 2 keys, with 3 keys and 12 keys.
- Paging to send notice to rooms, hallways, areas
- Independent audio joystick in rooms for public addresses using the same speaker like the call system (listening music, send mass messages…)
- Display lighting for corridors served by outstanding alarm indicating IP, source and type
- Light four-color LED technology and it has an area with RGB colours to differentiate: a medical alert maintenance other than an action
- Multi software. You only need to purchase 1 license server can be virtualized. The software application for the profile contains all modules.
- Tasks management function: the system lets you create tasks and alert staff that there are pending tasks.

1.1. Nurse call system

1.1.1. Generals specifications

The nurses' call system allows to the patients and heath personnel to request help of other employees of the hospital, with visual and/or audible signs, to cover the routine or emergency needs.

This system can also require the emergency resuscitation equipment.

The system consists of different elements:

- Modernisation and Management Software.
- Nurse calls console and remote display.
- Nurse Call Module.

Monitoring and Management **Software** will allow health personnel follow-up the alarm display in real time, the management and production of historical and reports, to sectorize the alarms for floors and halls, to perform monitoring made and

answered calls, the time until a call is cancelled (call was realized and completed). It will perform the switching of communication.

Nurse Call Console is usually located at the nursing station, which is often out of sight and earshot patient's rooms. In addition to prioritizing calls, allowing dual and uninterrupted communication, the central console shows the number of the room and the condition of the call, also it can realise a follow-up and show the time that the call was in the system, from the time the call is initiated to a response in shown. A feature is the reminder call, it's normally scheduled by the hospital, which alerts guard when the patient hasn't received the attention within a predetermined period of time.

The system will have to include audiovisual signs indicating the communication with the room. Signals can be initiated by the patient or health personnel from any place with a room station, as headboards, baths and showers of the patients.

The station must incorporate the buttons required for the call by the patient. In case a push-button is disconnected, or both, it'll be an audiovisual sign at the nurses' station indicating this fact. The station should be able to connect to a RFID card for recording the attention in the room and, bus port for control and power devices as hall lights.

The system must be able to opt for a solution of superficial type, embedded and integrated in appropriate headboards to the needs of the project.

The **bath pull** mechanism will be installed in the toilet room and it'll allow the call when the patient pulls the halter; when the call is active, this will be indicated by a light on the bath pull mechanism, in the same way, the hall light on the door will turn on, allowing establish a dual and uninterrupted communication with the call console.

The **hall light** will be installed on top of the entrance of the room, has four coloured lights. These will assist is a nurse is moving through the corridor to identify through colour lamp requirement called for the room.

The bed alarm is considered normal and it will keep the red light on. The bath pull will keep red light on, and white light is flashing. The presence of nurse in corridor is marked with green light. The four lights (red, white, green and blue) will flash on health alarm.

As additional functionality, the light could signal the presence of a task in progress by personnel not associated with nursing (cleaning, maintenance…).

The signal is relayed to the centre console, it produces an audible tone and it shows the number of the room that it's calling. The bath and shower alarms activate tone and luminous signs (in general pulsatile), that they are different from those beds alarms, because they can need more immediate attention.

1.1.2. Solution characteristics

1.1.2.1. Architecture

The nurse call system should have decentralized infrastructure hardware, to avoid a single point of failure. As a result the IP nodes will have to be smart and act as autonomous IP modules on the LAN. In addition, to be able to incorporate other IP services, as IPTV, the room terminal must have an integrated switch to avoid duplication of wiring and network electronics.

Room Terminal Plate, inside headboard

The **room terminal** must be powered by PoE and to be capable of powering all computers in room call system without having to use external power supplies.

The system must be compatible with decentralized decision-making logic. As a result, IP modules are taking decisions at local level and they are able to communicate among themselves to share and to distribute the information.

The solution must have a centralized management system, to ensure full transparency and not charge users with the decentralized structure system.

In case of failure of the centralized server, nurse call modules should continue reporting their warnings to the nurse call consoles, and when the central system recovers, the alarms that have happened during its stop should tip to the centralized server. In addition, the communication between the call console and nurse call module is also available.

Nurses' call system must provide security and autonomy in its functioning. If the network fails the basic functions of nurse call must be available.

The following functions have to be fully operational, even in the case of a network failure:

- Signs of local room.
- Signs of hall light.
- Record of actions in the local room.
- Enabling functions nurse.
- When the network connection is restored, the information stored in the terminal room will download the software.

1.1.2.2. Network

Nurses Call System must be compatible with network standards:

- 10/100 Base-T, auto negotiation support.
- Power over Ethernet, Power Ethernet (802.3af and 802.3 a).
- UDP Support for performance and safety aspects handled by the application.
- Support static and automatic IP address assignment DHCP server.
- The encryption of all data, using a 128 bits algorithm.

1.1.2.3. Nurse Call

Nurse's Call System must support at least 2 levels of nurse presence, led by push-buttons that act independently. The first activation must cancel pending calls in the room.

To avoid cancellations beyond nursing staff will be required the nurse identification in the room device, by **RFID card,** that it allows to track the actions carried out.

The solution must be able to signal room calls through a hall light. This must be compatible with 4 sections that can have different colors. Hall lights have to be LED technology and it's freely programmable.

The system must be compatible with the forwarding calls. It's a "mechanism" that acoustically announces a call in a room which is located in the state of nurse presence.

The solution must record all generated calls, failures and other events (log), including the cancellation. All records must have the time and date of completion. It must have a simple user interface for the management of records and monitoring of incidents. The log file data record must be protected from unauthorized users.

Nurse Call System must be able to assign places, or other points of call, nurses or other responsible members. A simple **use interface** must be available to make changes and modify assignments. It must present a standard assignment. The changes should only be performed by authorized workers.

The Nurse' Call System must also have a system of monitoring services, a tool for diagnosis and maintenance of the solution. This function should be available to authorized personnel.

The system must have a vision of all nodes on the LAN and peripherals. When a module is not connected the nursing staff must be notified.

1.1.2.4. Special Features

1.1.2.4.1. Voice

The Nurse Call System allows communication (voice transmission) between the patient and the health personnel. Communication is controlled by the caregiver at all time. When health personnel initiates a call with the patient in private mode, and he can only listen to the patient when he answers the call.

Microphone

Typical functions of voice that the system must support are:

- Direct voice on the phone.
- Call on hold.
- Communication between the patient and the health personnel.
- General and group advertisements.
- Fits volume.
- Communication between rooms. Allowing a nurse, previously identified, which lends a room service, to communicate with another room and to attend calls new.

1.1.2.4.2. Listening

Nurse's Call System has to admit the hearing monitoring in a special room. This application must provide to health personnel the ability to monitor special patients for the listening room.

The system must be integrated with IP paging centre, so that the general messages reach all the rooms using the same speaker that the health care system.

Speaker

1.1.2.4.3. Configuration

The Nurse's Call System must have a flexible configuration tool.

The configuration nurse call module will have to be downloaded from the central server, to avoid having to make room by room configuration.

1.1.2.4.4. Other considerations

The Nurse's Call System should have an open architecture by nature. Support open standards that facilitate the interface with other systems, to control or to exchange data.

The system has to be configured at different levels of user according to the level of authorization or function.

1.1.3. Minimum Technical Specifications

The Nurse's Call System should have a **management module** that it's used to manage the system. This module must be compatible with a web server or a client software, in order to allow users to perform their tasks of monitoring from anywhere network (PC). Only the health and authorized personnel can Access the management module.

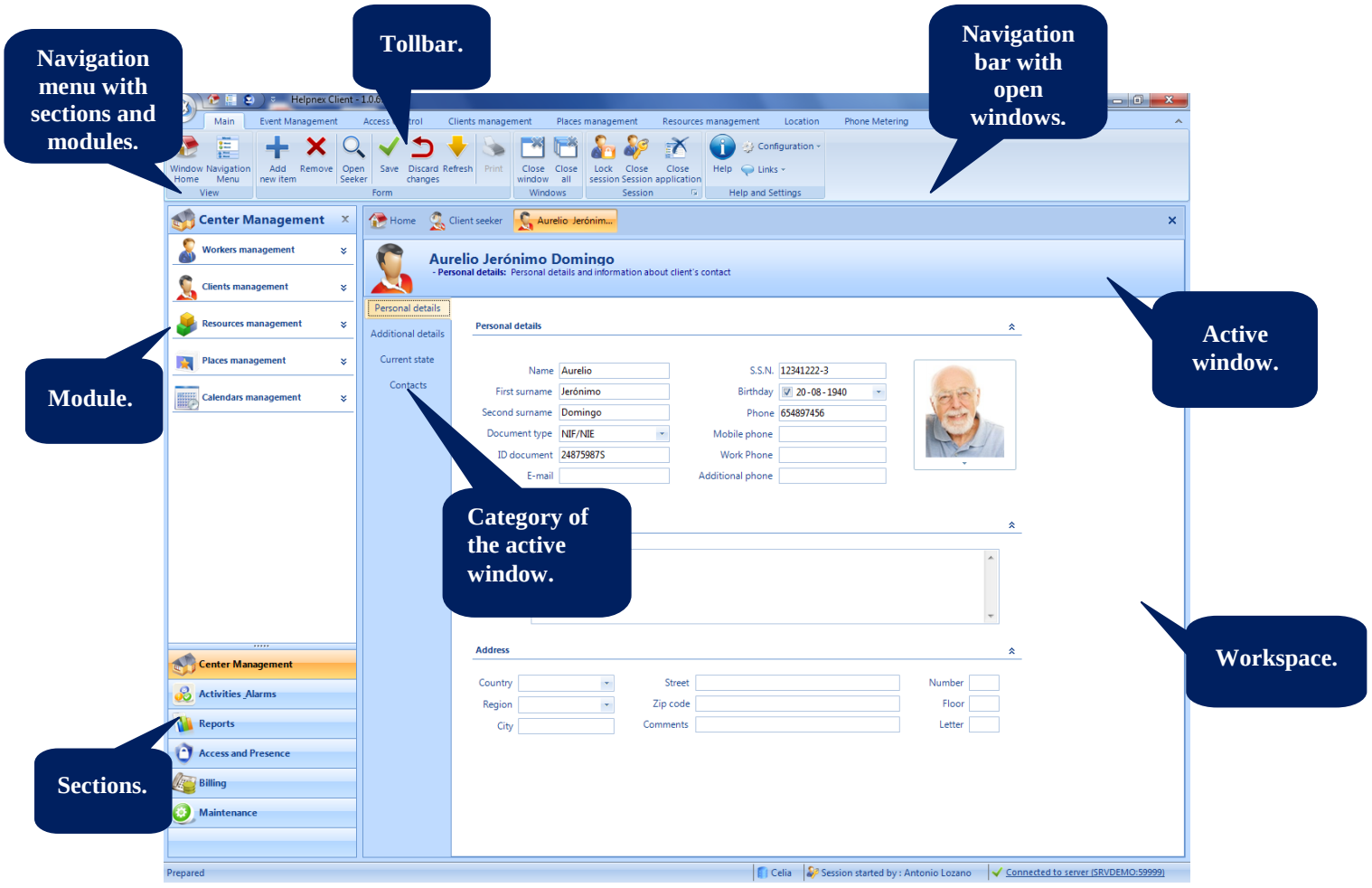
The management module must be solid state, without moving parts. It must have a stable operating system and tools of Support of network, for an easy integration to the LAN network.

The HELPNEX IP software is defined as a modular system, built on a single and unique software platform. It allows developing new modules covering the market needs with the possibility of integrating them easily in the software platform.

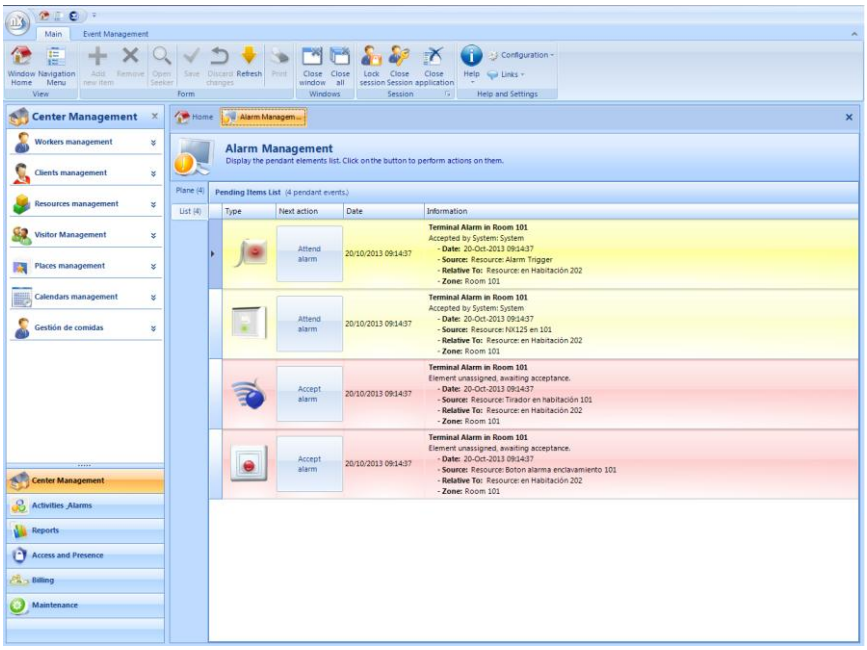
HELPNEX IP **FEATURES**

- Based on the latest version of Microsoft.
- Database on Microsoft SQL Server 2005 or newer version
- Easy and simple installation
- Similar visual aspect to Microsoft Office 2007
- Automatic update of new software versions

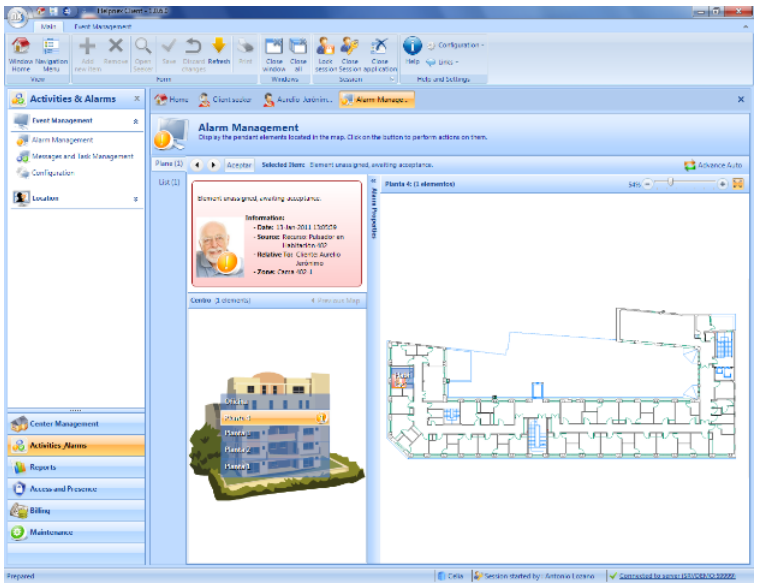
- A modular and configurable solution
- Management of the access for different user levels
- Automatic correction, improvements and updating of the software
- Available in several languages
- Possibility of integrating existing software programs
- Communication management VoIP/SIP



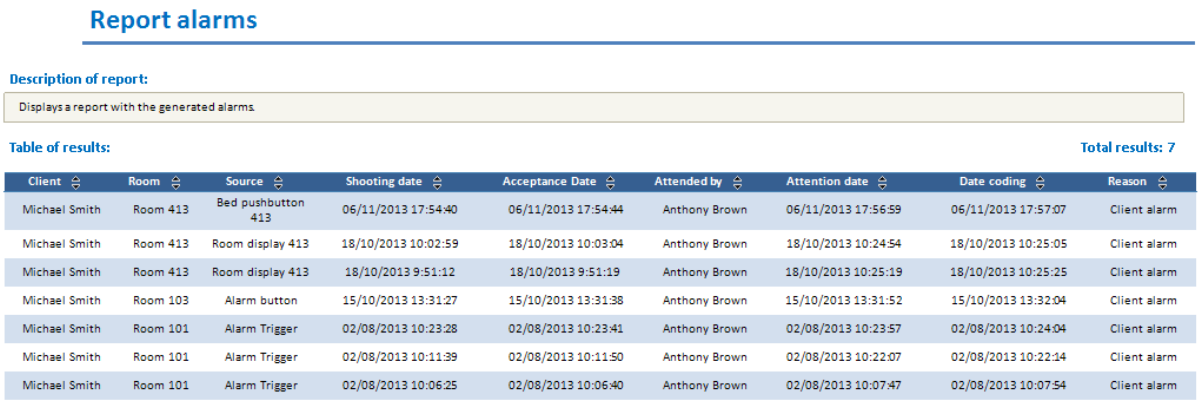
- **Alarm module: Alarms views:** It allows to visualize and attend to the alarms generated by the installed devices. It is possible to detail the motive of the alarm and add all kinds of comments. All alarms are recorded in the database.



- **Alarm module: Display at the level:** Visualization of the alarms, in real time, on map or plane, facilitating the knowledge of the resident's position. Custom interface for each medical centre.



- **Reports module:** From Helpnex platform you can export reports in which all information about the happened in the centre appears. The risk in care is reduced; therefore, the costs are reduced too. There is a tool for designing custom reports.



Report alarms

Description of report:

Displays a report with the generated alarms.

Table of results: Total results: 7

Client	Room	Source	Shooting date	Acceptance Date	Attended by	Attention date	Date coding	Reason
Michael Smith	Room 413	Bed pushbutton 413	06/11/2013 17:54:40	06/11/2013 17:54:44	Anthony Brown	06/11/2013 17:56:59	06/11/2013 17:57:07	Client alarm
Michael Smith	Room 413	Room display 413	18/10/2013 10:02:59	18/10/2013 10:03:04	Anthony Brown	18/10/2013 10:24:54	18/10/2013 10:25:05	Client alarm
Michael Smith	Room 413	Room display 413	18/10/2013 9:51:12	18/10/2013 9:51:19	Anthony Brown	18/10/2013 10:25:19	18/10/2013 10:25:25	Client alarm
Michael Smith	Room 103	Alarm button	15/10/2013 13:31:27	15/10/2013 13:31:38	Anthony Brown	15/10/2013 13:31:52	15/10/2013 13:32:04	Client alarm
Michael Smith	Room 101	Alarm Trigger	02/08/2013 10:23:28	02/08/2013 10:23:41	Anthony Brown	02/08/2013 10:23:57	02/08/2013 10:24:04	Client alarm
Michael Smith	Room 101	Alarm Trigger	02/08/2013 10:11:39	02/08/2013 10:11:50	Anthony Brown	02/08/2013 10:22:07	02/08/2013 10:22:14	Client alarm
Michael Smith	Room 101	Alarm Trigger	02/08/2013 10:06:25	02/08/2013 10:06:40	Anthony Brown	02/08/2013 10:07:47	02/08/2013 10:07:54	Client alarm

1.1.3.1. Server (s) of Administration, control and database.

The solution should provide the necessary equipment (server or servers) to store and operate the database, perform the switching of communications, deploy the monitoring and management Software that are part of the system.

All equipment issued must meet the following minimum requirements:

Server Hardware

- 1 RU Server rackeable.
- Memory 4GB DDR3 or higher.
- Hard Drive (minimum) 500 GB hot plug Sata.
- 2 ports RJ-45 10/100/1000 Mbps.
- DVD burner or higher.
- Interfaces necessary for the functioning of the solution to be implemented.

Other Software

- Linux Operating systems or Windows Server with resent and upgradeable versions.
- Antivirus upgradeable Software, license equal to the warranty period for the server.

- Other software required for proper system operation.

Database

- Support standard database MySQL or OpenSource, or other required system.

1.1.3.2. Server Management and Monitoring Software

Architecture

- Client – server.
- Multiuser.

Functions

- The system automatically identifies the origin of the call (bed, bath…) with prioritization.
- The alarms and events are displayed in real time, in an optical and sonorous way.
- Functionality inventory of resources installed, to know all the devices in the centre.
- It should allow the creation of regular and planned task with the reminder task using led hall light.
- In memorizes events by type of information (calls, presence, acknowledgment…).
- It indicates time of the events.
- The system should be integrated with IPTV hospital, so that nurses can use each bed terminal screen for coding attentions and activities, prior identification using RFID technology.
- Tool of creation of customer reports.
- Management and development of historical reports, export to XLS, PDF formats.
- It allows filter reports based on staff information.
- Visualisation of multiple places at the same time.

- Subdividing of alarms by plants, sectors and corridors.
- Planning of messaging, reminder and planned actions.
- Unlimited growth of devices (nurse's call system, patient's call station, consoles…).
- It must supervise the fortuitous or meaningful disconnection of one or two call push-buttons of a patient's room.
- It will allow the configuration and allocation of groups of patients by nurse stations.
- It users cellulars with wifi for the receipt of alarms, as a nurse portable console. Possibility of communication with the rooms in free hands.
- Integration and interaction with hospital information system.
- Adaptation to the needs and requirements of the health staff.
- Audiovisual indicator of nurses' presence in the rooms.
- It must have a WEB platform.

Language

- Spanish, English, French, Portuguese

1.1.3.3. Client Management and Monitoring Software

- Language: Spanish.
- Platform compatible with standard PCs.
- Compatible with XP, Vista, server 2003, server 2008, 7 or higher operating systems.
- It must allow perform various tasks on the PC, multitasking. When an alarm occurred will place in the first plane the system or window of monitoring, if this one was minimized.
- It's integrated with the nurse's call console. Alerts must be simultaneous. That is, it will appear on the screen and on the nurse console.
- Intuitive graphical user interface.

- Configure nurse's call terminals without having to go to the rooms, so much individual as massively.
- Provide the mechanism to update the firmware of the nurse call terminal without having to go to the rooms.

1.1.3.4. Nurses' Call Console

Hardware

- It must have a touch screen for the deployment of information technology of low consumption.

LAN communication interface

- Ethernet interface TCP/IP (PoE) built-in.
- Support fixed IP assignment, optionally DHCP.

Supply

- Power over Ethernet (PoE).
- Power supply AC/DC.

Functions

- Communication audiovisual indicator from room calls station.
- Audiovisual indicator of call from a certain room and from a certain bed to the nurses' station console.
- Audiovisual nurses presence indicator in the room.
- Minimum capacity of 100 beds.
- Double route telephone.
- Volume control for speakers and room microphone from the console.
- It must allow a dual and uninterrupted communication.

- Built-in Hands-Free communication.

1.1.3.5. Remote adviser

TCP/IP communication interface. It allows visualize attention pending alarms in an electronic red display of 80X7 mm, 659x96x34mm. Luminous, electronic sign based on LEDs technology.

1.1.3.6. Nurse Call Module

Hardware

- Not allergenic material, antibacterial.
- Low power technology.
- Made of resistant and unbreakable plastic material.
- It will allow connection of an analogy phone in room.

LAN communication interface

- TCP/IP (PoE) Ethernet interface built-in computer power and all devices in the health care system of the room.
- It supports IPv4 and IPv6.
- Support fixed IP assigning, optionally DHCP.
- Making data available Ethernet nurse call module to connect an IP computer.
- Possibility to configure two IP inlets as two VLAN different.
- Native SIP (IP) protocol with compressor codec wide band 16 Khz.
- Security based encryption algorithm AES256.

Supply

- Built-in PoE computer power and all devices in the health care system of the room.

- Power supply.

Functions

- It must allow dual uninterrupted communication with the nurses' station.
- Possibility of test mode for checking of the entire system with a vocal interface without software is installed.
- Built-in speakers for communication of each patient room with the nurse station.
- Card reader integrated for the identification of the personnel responsible for performing the attentions.
- With built-in microphone which allows dual communication from anywhere.
- Luminous built-in indicator which helps to identify the patient who realized the call.

Notice and cancellation device

Call station must include features to allow recording the attention of caregivers.

- Presence and cancel call button built-in.
- RFID card reader for nurses
- Normal call button, nurse's presence and doctor's urgent call.
- It will have to allow entry and/or selection of the performed task.

Nurse's Call Mechanisms

- Three buttons peripherals, each mechanism should have a bigger button to indicate the main function of the mechanism. The buttons should be labelled with Braille dots, for use by blind people.

- **Push button** for patient's call type pear. It will possess an electrical cord of two meters of length, zero halogen. It will be the size of the palm of a hand, call button, easy to hold, made of unbreakable material, shock resistant, easy to clean and disinfect.

- **Push button** with audio control for patient's call type pear. It will possess an electrical cord of two meters of length, zero halogen. It will be the size of the palm of a hand, call button, easy to hold, made of unbreakable material, shock resistant, easy to clean and disinfect. With this push button patients can speak hads-free to nurses

- The disconnection of a button should generate an audiovisual sign in a call console which alert nurses' station.

Bath Pushbutton Mechanism

- The call LED indicator, when the call is activated this will be indicated by a light signal in the bath pushbutton mechanism.

- Module with plastic cord and pear. Waterproof. As security mechanism, this cord will incorporate a clasp, which it will open when a higher voltage to 10 Kg, was applied, to prevent the wall module is apparent (unbreakable plastic material).

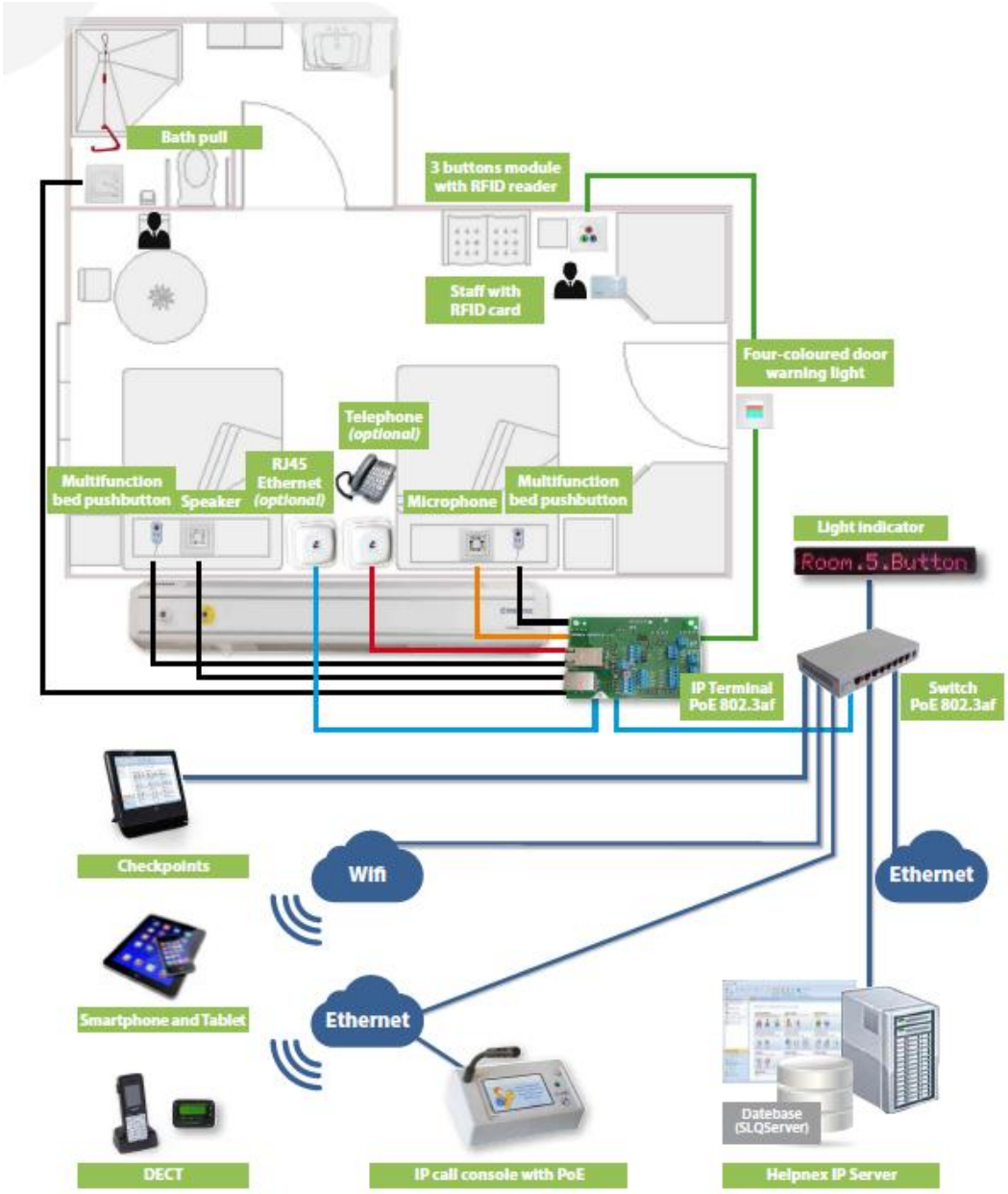
Corridor Indicative Mechanism (Zoned corridor lamp)

- It will be placed at the entrance to each room of the hospital.
- Standard installation (recessed or surface) in corridor areas.
- Visible at a minimum distance of 15 meters during the day.
- Acrylic cover of four fields of different warning colours of the nature of the patient's call, lighting continues or blinks.

- Low consumption Led technology.
- The alarm status will be displayed in real time.
- Baths and showers signals activate visual and audible signals (usually pulsed), which are different from calls if the beds, because they can required more immediate attention. This alarm is marked with solid red signal and flashing white LED.
- The nurse presence is marked with green light.
- The doctor alarm is marked by flashing of the four lights.
- Made of durable and unbreakable plastic.

1.1.4. Technical diagram

1.1.4.1. Technical installation: Wiring diagram



2. ACCESS CONTROL SYSTEM

This control includes one of the most important systems of everything that comprises Electronic Engineering Weak Currents; through this system the access of unauthorized staff is restricted to hospital areas and critical areas such as Neonatology, Central Surgical, Obstetric Ceter, Sterilization and Intensive Care Unit.

The system in general consists of an entry control, when someone is registered with a proximity card or with its fingerprint is authorized to enter, the card controllers disabled electromagnetic locks allowing them entry.

The control is performed using **card readers and biometric readers.** The card readers are proximity readers and they use encrypted codes in card, they operate at 125 Mhz.

The *RFID card reader* (radio frequency identification) includes 3 inputs and 1 output. It behaves as a peripheral of a controller. It includes acoustic and visual signalling (bicolour LED) to provide information to the user.

It connects to the RS845 bus to power, to report card readers and changes in inputs and receives control over the output and signs.

The assembly is built; the reader has an output of relay type.

Biometric readers work equally with IP interface, but they take a fingerprint and encrypted them for recognition of the person.

The controller continuously collects information on events generated by the system, until it downloads to the database of access software. Upon receiving information read by any of the readers connected to RS485 bus, the internal database is queried and decides whether it is enables the appropriate access or not.

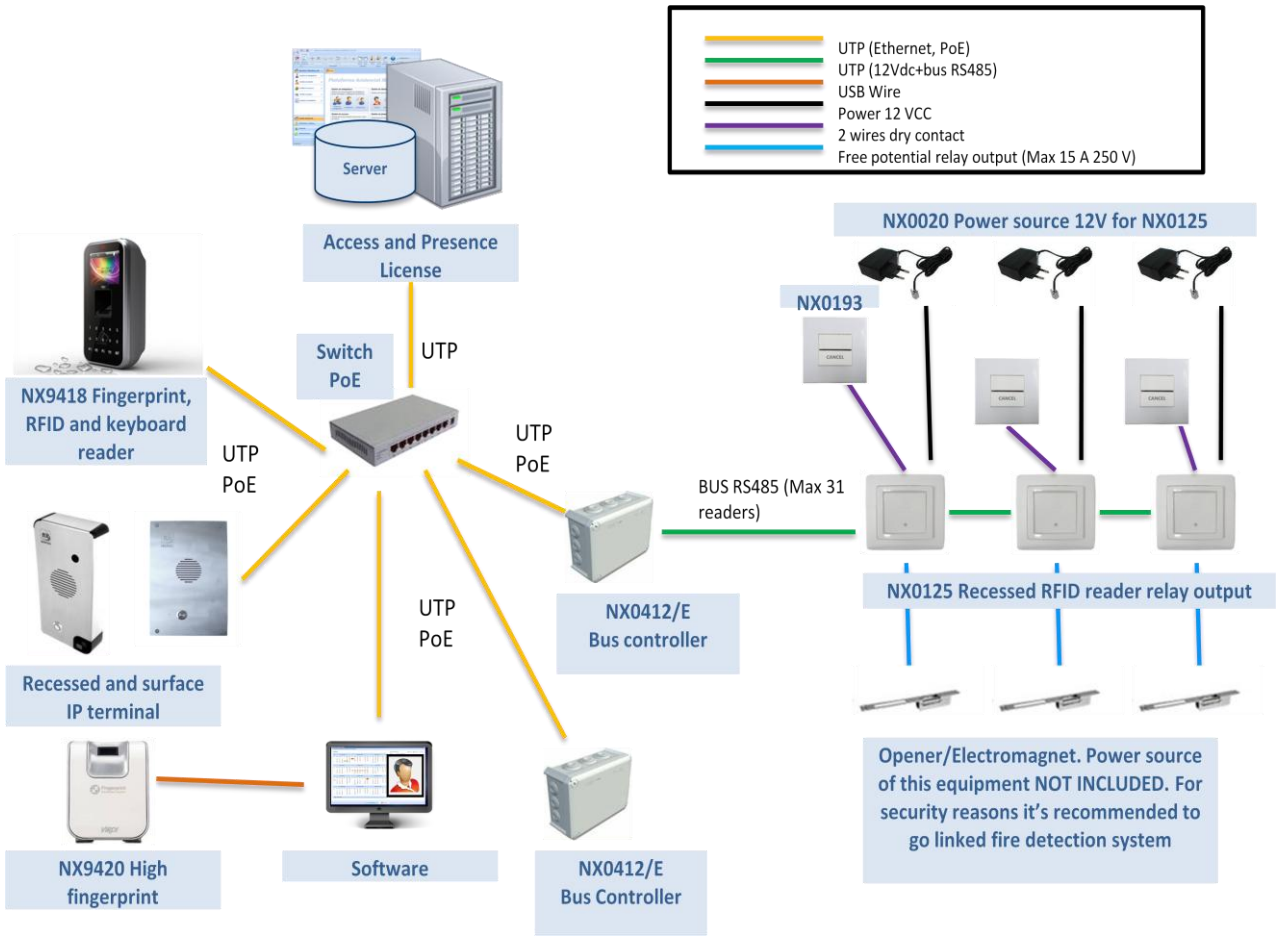
The controller maintains the operating of the access and presence control system although the software is turned off or not available (Offline mode).

In addition to the RS485 bus, which allows the communication with the devices of the Access and Presence control system, the controller provides IP connection which is kept updated automatically the information about permits and all information generated for subsequent use from the software is downloaded. The IP connection is presented in 2 Ethernet RJ45 connectors with integrated Ethernet switch function.

The controller can be powered from a 2Vdc source or through the same Ethernet wire (PoE, Power-over-Ethernet).

Card readers have a digital input to connect to a button and open the door and, besides, they are also communicated via rs-485 bus with a main controller. In this controller are stored all cards and permits schedules.

Each control door has an electromagnetic lock of 600 pounds of force; the electromagnetic lock has to protect a spark arrester, a relay to protect the activation or deactivation and a voltage source with a battery backup.



Administration and Security staff will be responsible of programming different Users, Schedules, Access Levels, Visiting cards, Temporary cards, etc, for a proper operation of the system.

Just as in the system described above, all ductwork and technical specifications shall be indicated on the drawings and technical details. We want to emphasize that to avoid noise problems on the network Access, you must use and EMT tubing type.

The Access control **software** must be integrated with the nurse–patient call system, so that a single RFID card and personal profile data are used. The software must have a client-server, developed in .net and with MySQL database.

A central database on the server, capable of supporting up to 600,000 cards at most. Unlimited access groups, routes, profiles, antipasback.

It will allow to exist workstations connected to the server via Ethernet TCP/IP network. Central storage of data online of 50.000 transactions, expandable, with local storage in control panels with a capacity of up to 50.000 events.

The application will have management workers, who belong to groups of workers that make up what parts (personal information, reports) or actions (edit, create, delete...), are allowed to access or perform.

Further resources with objects that can be assigned to workers (RFID identification cards) via RFID readers will be managed.

Calendars Management: It manages the creation and edition of schedules. It allows the creation of different types of personalized calendars by employee or group of employees, identifying different types of day.

The application provides reports that can be viewed through the report viewer. With the report designer can create new reports from the default.

Access Report: It displays the Access recorded in the system. Administration routes, profiles, schedules, anti-passback system.

3. ACCESS CONTROL WITH INTERCM

For external access is proposed as a solution for Access control, a hands free intercom system for Access control. These **intercoms** WITH **IP** connectivity allows pressing the button, generate a call to a predetermined IP SIP destination. You can maintain two-way communication with the door and open it anytime by simply pressing a code opening.

There is also the option of opening by RFID card if you have the appropriate permissions. With this solution you get workers of the centre to access freely, is its access log and visits, suppliers can call by pressing the button.

IP Communication, with PoE

RFID cards reader (identification by radio frequency) integrated in the reader, to facilitate access to authorized employees and visitors.

Metal, anti vandal and illuminated button to facilitate its location in areas of low illumination. Speaker 2W and high sensitive microphone. Speaker volume configurable. Double wall for protection of speaker grille.

It has 2 relay outputs (up to 250V 15A) and 2 open collector outputs (DC loads up to 30Vdc 2A), to control door opener, magnetic suction cups, sirens, interface to other systems, etc. 4 digital inputs, for connecting door sensors, switches, etc, expansion bus for connecting peripherals (additional RFID readers, I/O modules etc.). Connections via plug terminals.

Downloading records, configuration, firmware update remotely via IP port

It’s able to play prerecorded messages. 12Vdc power or by PoE (Power source included)

Measures 242 x 117 x 38 mm. Surface or recessed mounted. For mounting outdoor. Degree of protection IP55.