

Telecommunications, security and
multimedia solutions for hospitals,
clinics and health centres



Solutions for **HOSPITALS**





ALCAD Facility

SOLUTIONS FOR NON-RESIDENTIAL BUILDINGS

We can draw on:



30 years of
experience



A team of
the first rank



Design and production
processes that are fully
European



Our
diversification



Personalised
customer service



Our own laboratory:
quality assurance
and reliability

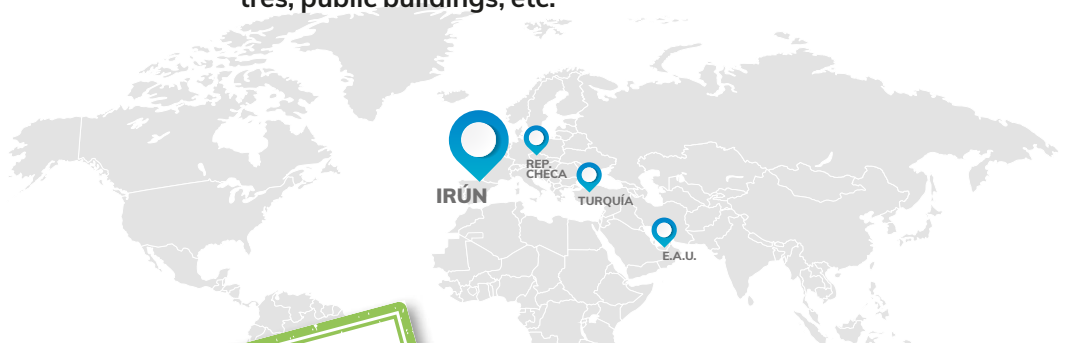


A wide
sales network



With 30 years of experience, we continue our **'Made in Europe'** production, with **AENOR certification** and under the **ISO9001 standard**.

ALCAD Facility is the business unit aimed at the design and manufacture of **telecommunications, security and multimedia solutions for non-residential buildings: hospitals, hotels, nursing homes, shopping centres, public buildings, etc.**



We are an international company with headquarters and factory in Irún (Spain), as well as own subsidiaries in Czech Republic, Turkey and the United Arab Emirates, which exports to more than 60 countries worldwide.

ROBUST AND RELIABLE SOLUTIONS, WITHOUT TRIAL-AND-ERROR

From our factory in Irún and through our extensive sales network, we provide reliable, agile, robust and innovative solutions to the international market in a demanding and constantly evolving sector.

We contribute to the improvement of user well-being, capturing vitally important signals through ACCURO and LIVERO, our **100% IP-based professional telecommunications and security platforms**, as well as through ATTENDO, our low-cost warning solution, and our IPTV multimedia system.

All our systems contain functions that make them the **ideal solution for hospitals, clinics, health centres**, etc. These are robust and reliable platforms, without experiments, expensive maintenance or eternal installations.



Want to know more?
You can use this
QR code to access our
ALCAD Facility
digital catalogue.

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Our solutions:

■ **ACCURO** represents a **100% IP-based** telecommunications and security platform **for health centres** that can be integrated into third party systems: HIS, alarms, SIP terminals, etc.

■ **LIVERO** is a **100% IP-based** communications and security platform **for non-residential buildings** that can be integrated into third-party systems: PSIM, alarms, SIP terminals, etc.

■ **ATTENDO** is a low-cost warning solution that complies with standards regarding security against the risk of being trapped in enclosures.

■ **IPTV** is a **complete solution for TV over IP networks**, 100% ALCAD from start to finish, with powerful, agile software that's easy to use, intuitive, fast and very reliable.



No costly maintenance or endless installation processes



We provide a 100% IP-based router to capture important signals



The heart of
the system



Nurse call
system



ACCURO
access

Access control
with traceability

ACCURO
by ALCAD



ACCURO
refugium

Intercommunication
in areas of refuge

ACCURO

100% IP TELECOMMUNICATIONS AND SECURITY PLATFORM FOR HOSPITALS

ACCURO houses functionalities ranging from nurse call system to access control and emergency calls from areas of refuge, as well as receipt of alarms raised from adapted restrooms and/or changing rooms. In addition, it is ready for integration into third-party systems: HIS, alarms, SIP terminals, etc.



Optimises
timings



Records
actions



Calms
the patient



Reduces
costs

ACCURO is ALCAD's telecommunications and security platform that goes beyond a simple call to the nurse from the room. It is a **powerful, 100% IP-based brain that handles warning and alert management.**

All are benefits

ACCURO allows you to **enhance the experience of the patient** and facilitate the work of health-care professionals. It is **adaptable to all types of hospitals, clinics, etc.**, whose daily needs require constant development and adaptation, an effort aimed at improving the patient's experience and the quality of work of the health professional. It is thus possible to create a less chaotic and more orderly environment.

100% IP



Boxes, outpatient consultations, operating theatres

Easily identifiable alert calls



Bathrooms and common areas

Modular architecture

■ VERSATILE. EXPANDABLE. INTEGRABLE.

Being based on IP technology, it allows greater reliability and versatility since it can interact with other IP systems through any data network, whether new or pre-existing on the premises.

■ 100% IP ADAPTABLE.

SIMPLE. Its architecture is modular, so **modules can easily be added to the platform** in those installations that require it.

Centralised management

■ **A POWERFUL TOOL.** The nurse call system is the **heart of ACCURO**, with which it is also possible to maintain access control, manage emergency calls from areas of refuge or receive alarms raised from bathrooms and/or adapted changing rooms.

■ WEB-BASED, NO INSTALLABLES.

ACCUROviewer and ACCUROmanager are management and control packages based on Web technology with no installation required, **thereby avoiding incompatibilities and ensuring the future of the system.**

■ **SAFE.** System based on local server with remote access possibilities. There is the option to set the servers and system to **high availability** (redundant servers).

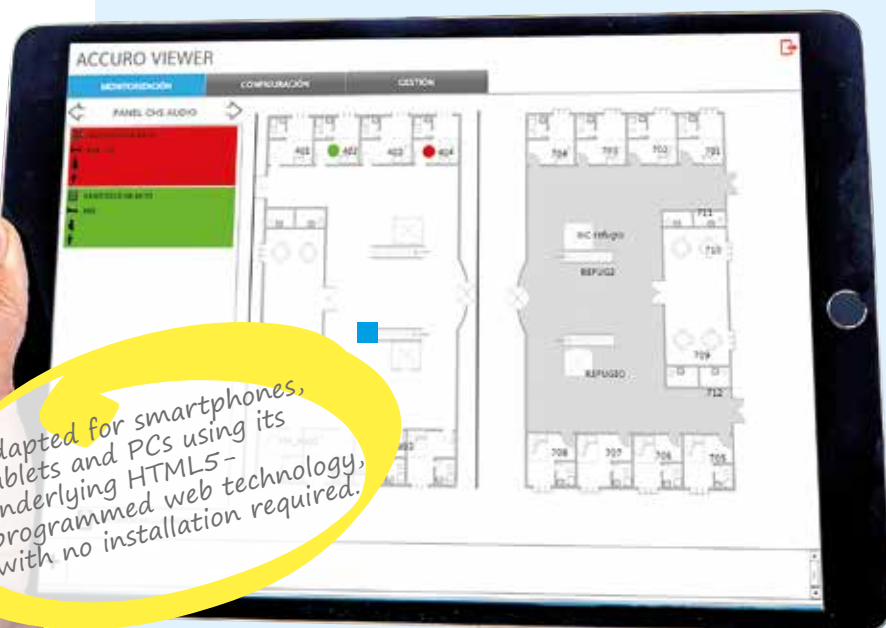
■ **COMPATIBLE.** With SIP terminals.

■ **INTEGRABLE.** With Ethernet, PoE and GPON networks.

■ **TRACEABLE.** ACCUROviewer is responsible for the **monitoring and management of patients** by healthcare personnel. Among other features, thanks to its traceability it is possible to obtain reports / statistics on patient monitoring and flow and workload management (identifying the health staff if RFID readers are included).

■ **INTELLIGENT.** ACCUROmanager is a tool for **maintenance and management of the system** by the technical team, allowing, for example, its connection with hospital management systems through XML files, analysis of all elements of the system, customisable notification of errors, and so on.

Adapted for smartphones, tablets and PCs using its underlying HTML5-programmed web technology, with no installation required.



Example of display of calls and alarms in blueprint format via ACCUROviewer, with indication of alarm levels and patient presence in the room.

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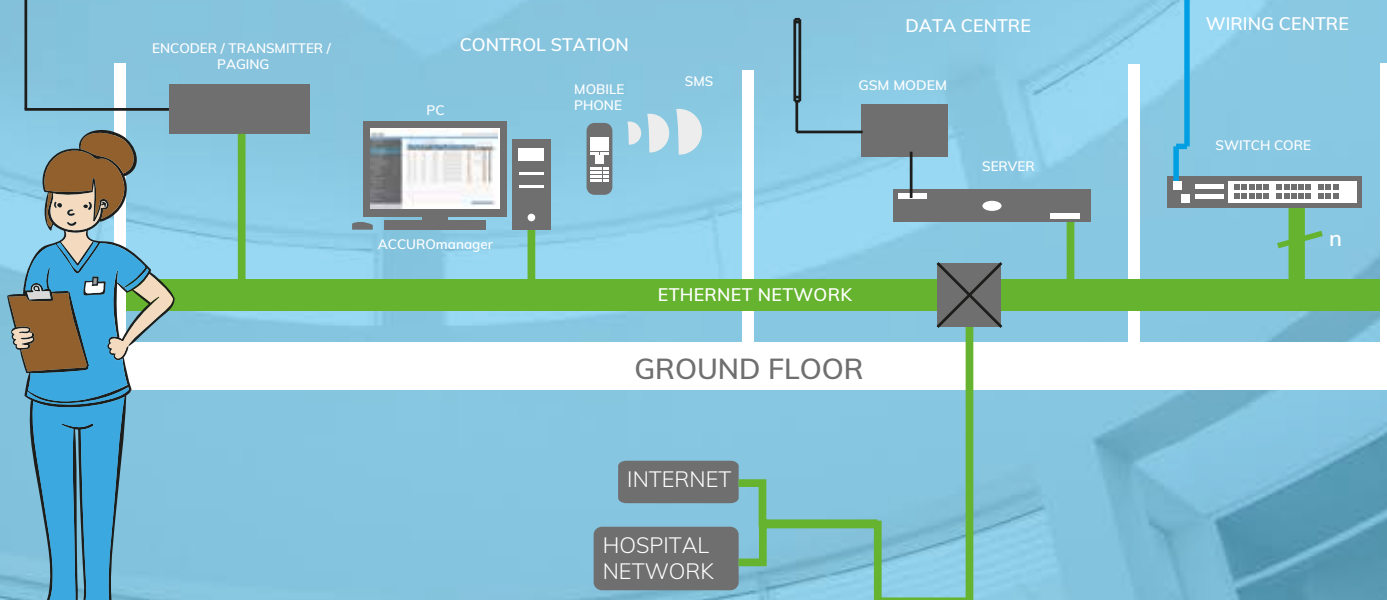
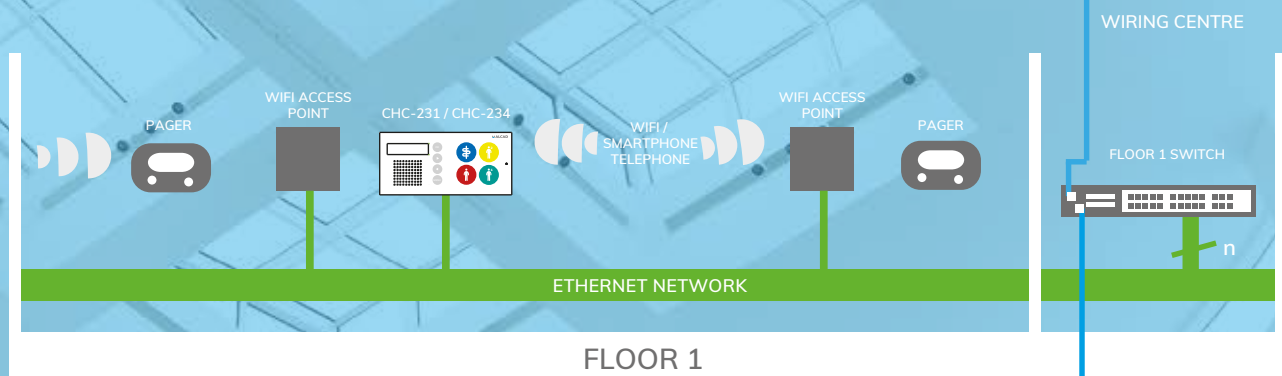
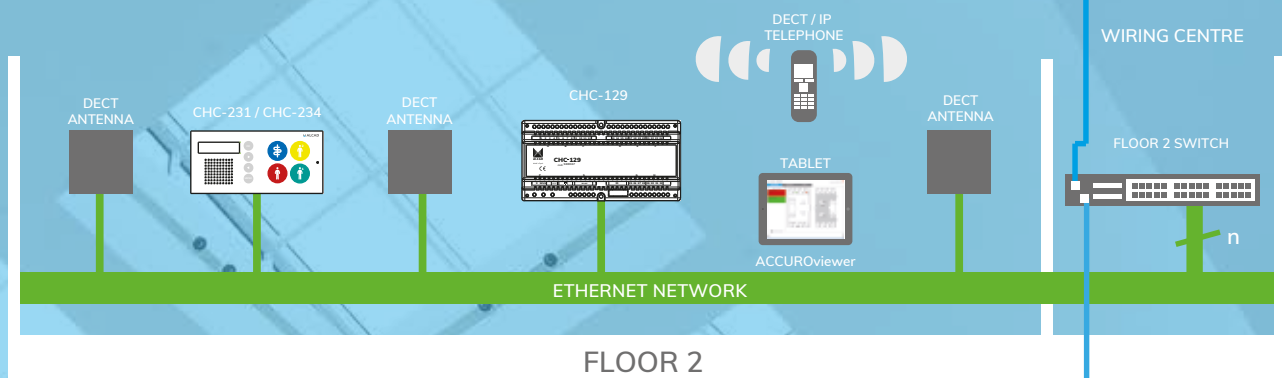
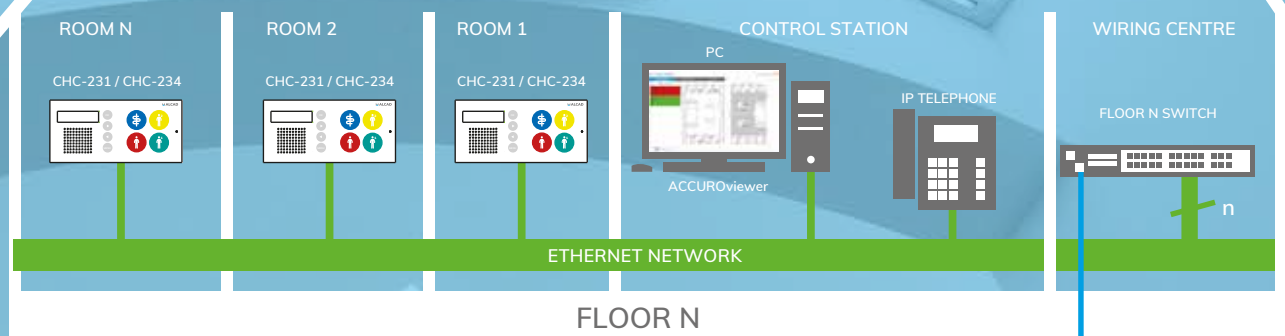
A pregnant woman with blonde hair is lying in a hospital bed, smiling broadly. She is wearing a patterned hospital gown. A doctor in a white coat is standing by her side, holding her hand. The doctor is also smiling. In the background, there is a medical monitor on the wall.

© 2006 The Authors

It's configuration **guarantees the transmission of warnings to the healthcare team**, whether they come from a patient's request (by pressing a button) or from other types of sensors: windows, doors, thermostats, presence, intrusion, etc., as well as from sensors adapted for people with reduced mobility.



Elements and architecture:



THE WIDEST CATALOGUE

ALCAD manufactures the entire range of room terminals and peripherals from its Healthcare catalogue in Spain. This allows you to benefit from the most extensive and complete range of room elements on the market. (*)

Elements of a room:

ROOM TERMINALS.

They are notable for their high-quality, flat capacitive keypads which facilitate their cleaning. They control multiple types of room peripherals and handle different types of calls. Other features:

- Wireless connection via cable or via WiFi (CIC models).
- **Room terminals with audio:** full duplex two-way hands-free voice communication.
- **Room terminals without audio** (CHC-129).
- Room terminals with antimicrobial treatment (CHC-234)
- Direct peripheral connection via terminals.
- Connection with intelligent peripherals via RS-485 bus.
- Optional PoE in CHC-23x.

PERIPHERALS.

This refers to all those components that are connected to the room terminal to assess or act on signals captured in the room: **wall buttons, nurse call handsets, bathroom handles, luminous or signalling Mifare RFID readers, sensors, wireless buttons and receivers and wired sensors.** One of its great advantages is the possibility of combining them in the same room.

Passive peripherals are notable for their simplicity and for the wide range that ALCAD offers to the market: square, rectangular, anti-vandal, sensors and wireless push-buttons.

Bus peripherals are notable for their easy installation and intelligence, saving up to 50% in labour time.

(*) See terms

Sensors (wired)

- Robust and reliable.
- They identify events that take place inside the room.



Sensors (wireless)

- Tough, ergonomic and resistant to water.
- Programmable radio channel.
- Indicator displaying low battery.

RFID reader

- Mifare RFID reader.
- Peripheral bus with RJ45 connector.



Call pedal

- Initiates a call by tilting or pressing the pedal.



Nurse call handset and light control

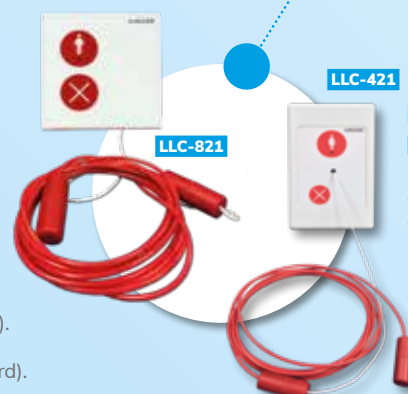
- Controls up to 2 room lights.
- Braille included.
- Antimicrobial treatment (optional).

Nurse call handset (antimicrobial)

- With antimicrobial treatment.
- Consult with us regarding your requirements.

Bathroom pull-cords (square)

- Robust.
- Anti-strangulation mechanism. Up to 8kg of pressure.
- IP65.
- Passive+bus (RJ45).
- Antimicrobial treatment (standard).



Bathroom pull-cords (rectangular)

- Robust.
- Anti-strangulation mechanism. Up to 8kg pressure.
- Passive.



Cutting-edge technology:

ALCAD's new generation of square peripherals is designed to guarantee the highest standards of **quality and resistance in sensitive environments**, both in bedrooms and in bathrooms/dressing rooms.

■ ANTIMICROBIAL COATING AS STANDARD.

For models LLC-8xx and LLC-9xx. Its tactile, flat keypad allows easy cleaning and its antimicrobial coating **prevents transmission of bacteria and microbes**.

■ CLASSIFICATION IP65.

On bathroom handles (models LLC-8xx).

This implies its **total protection against dust**, and its ability to also **withstand jets of low-power water**.

100% customisable

The image shows an example of room terminal personalisation prepared for Doctor Mañero's Aesthetic Surgery Clinics.

Square warning-lamps

- Passive+bus (RJ45).
- Multi-colour / mono-colour.
- Acoustic signal.



SEN-424



SEN-724

Rectangular warning-lamps (passive)

- Multi-colour.



LLC-821



CHC-231

LLC-642



Vandal-proof push-buttons

- AISI-316L stainless steel.
- Thickness of 2.5mm



LLC-409



LLC-803



LLC-809

Square and rectangular push-buttons

- Tactile.
- Antimicrobial treatment (standard in the square range).
- Installable on a surface, or flush to a wall.
- Passive+bus (RJ45), in the square range.
- Passive in the rectangular range.

TFI-361



TFI-4xx



TFD-421



TFD-422

Telephones (wireless) DECT

- Allows the identification of the calling number, type and origin of the call.
- TFD-422 model with antimicrobial treatment.

Telephony:

■ FIXED AND MOBILE.

At each **control point**, calls and alerts may be received from rooms, areas of refuge or adapted restrooms/dressing rooms. The elements that make up these control points can be fixed or mobile: IP phones, DECT phones or smartphones.

■ COMPATIBLE SYSTEM.

The system is compatible with other **SIP** and **PBX** terminals, and may be integrated with the same.



Antimicrobial treatment

SPECIFIC TO STERILE ENVIRONMENTS

Boxes, operating rooms, emergency rooms, etc. are some of the most sensitive areas of hospitals and clinics. **ALCAD's solutions, with their antimicrobial treatments, make it possible to maintain a sterile environment** and are therefore an indispensable ally when it comes to guaranteeing patient safety.

At ALCAD we are aware of the **specific hygiene needs that arise, on a daily basis, in work environments as sensitive** as those of hospitals and clinics. This applies especially to boxes, operating rooms and emergency rooms, critical points in which a sterile environment must be guaranteed. To address these needs, we have developed a series of products that make it easier for healthcare professionals to work without putting patients' health at risk.

Complete antimicrobial range

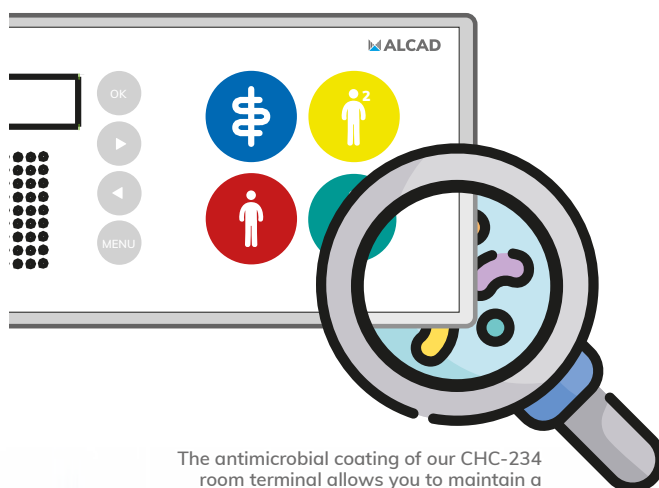
Our CHC-234 room terminal sends information about various events detected in the room, **allows voice communication in hands-free mode** and facilitates identification through sensors and RFID readers. The device has an ultra-slim, robust mechanical design and thanks to its **capacitive flat keypad** it is easy to clean, while its antimicrobial coating prevents transmission of bacteria and microbes.

At the same time, the **new range of LLC-8xx and LLC-9xx square touch mechanisms**, with antimicrobial treatment included as standard, **exponentially increases the capacity** of the CHC-234 room terminal, adding functions such as nurse calls, presence buttons, second-presence, code blue... In this way, the patient and healthcare personnel are offered an extra communication tool in, for example, boxes and emergency rooms, points where **reliability and speed of communication are vital**. Consult with us if you need a nurse call handset with antimicrobial treatment.

The surfaces of these devices, whether they are room terminals or peripherals, are **compatible with cleaning products used to disinfect** equipment in hospitals.

Pedal: immediate communication with a simple tilt

Our call pedal LLC-046 offers a **alternative for healthcare workers** when, for example, it is not possible to access a nurse call handset. Allows a call to be initiated by tilting or applying pressure, as an alternative to the LLC-21x nurse call handset.



The antimicrobial coating of our CHC-234 room terminal allows you to maintain a sterile environment free of microbes.



Software

MANAGE IN A SIMPLE AND COMPLETE MANNER THE ENTIRE SYSTEM

ACCUROviewer and ACCUROmanager are management and control packages based on Web technology (using a browser) with no installation required, thereby avoiding incompatibilities and ensuring the future of the system.

Completely developed by ALCAD, ACCUROviewer and ACCUROmanager are **the key to the flexibility and robustness of the system**, notable for being fully configurable. ACCUROviewer is responsible for the **monitoring and management of patients** by healthcare personnel, while ACCUROmanager is a **system maintenance and management tool** for use by the technical team.

The maintenance and configuration of the system can be monitored through the local network or even, if necessary, remotely via the Internet, allowing the same location to **control several centres**.



ACCUROmanager

Main functions:

■ **ACCUROviewer.** Among other features, its **traceability** makes it possible to obtain reports / statistics on patient monitoring and workflow / workload management (in a personalised manner if RFID readers are included).

It also offers the option to display calls and alarms in **'map' format**, indicating alarm levels and the presence of the patient in the room, or automatic and configurable call scaling depending on the areas and shift changes defined.

■ **ACCUROmanager.** Integrable with the centre's HIS, it allows, for example, for connection with hospital management systems by means of XML files, analysis of all system elements, customisable error notification, configuration and customisation of the system to suit the characteristics of the centre, etc. In addition, it is possible to know the status of all elements of the system or make backups and conduct software updates.

Optionally and to increase security, it is possible to configure the servers and system to **high availability (redundant servers)**.

Adapted for smartphones, tablets and PCs using its underlying HTML5-programmed web technology, with no installation required.

ACCUROviewer

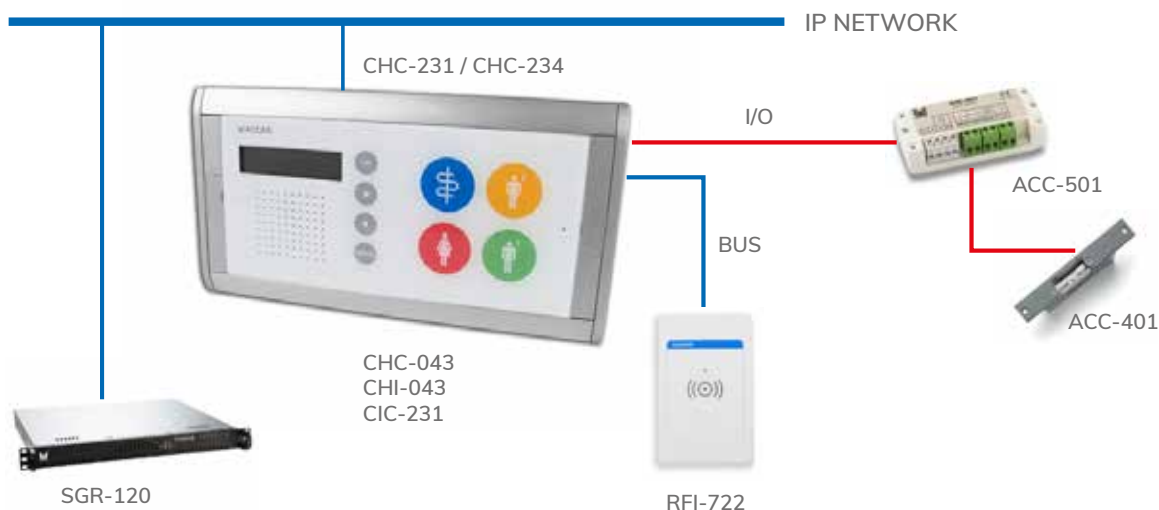
ACCUROaccess

IP ACCESS CONTROL SYSTEM

It has all the advantages of an IP access control centre with traceability, offering the option to register and generate reports, various queries, etc.

Thanks to the ACCUROaccess access control module, **for each intercommunication point connected** (CHC-23X / CHC-04X / CIC-231) **you will be able to integrate an IP access control system** within your installation. Its compatibility with RFID cards allows healthcare personnel to access each room, opening the door and confirming presence, as well as common rooms with restricted access.

General outline:



ACCUROrefugium

THE INTERCOMMUNICATION ROOM TERMINAL SYSTEM FOR AREAS OF REFUGE, EMERGENCY CALL POINTS AND ALERTS FOR TOILETS AND ADAPTED CHANGING ROOMS

ACCUROrefugium is the first complete solution on the market that complies with international regulations concerning fire evacuation procedures in non-residential buildings, as regards intercom systems with a local room terminal.



Ultra-slim
and robust
design



Centralised
alarms
and warnings



Compatible
with ACCURO
viewer



Communication
with other room
terminals

CIC-231, ACCURO's tactile intercommunication centre

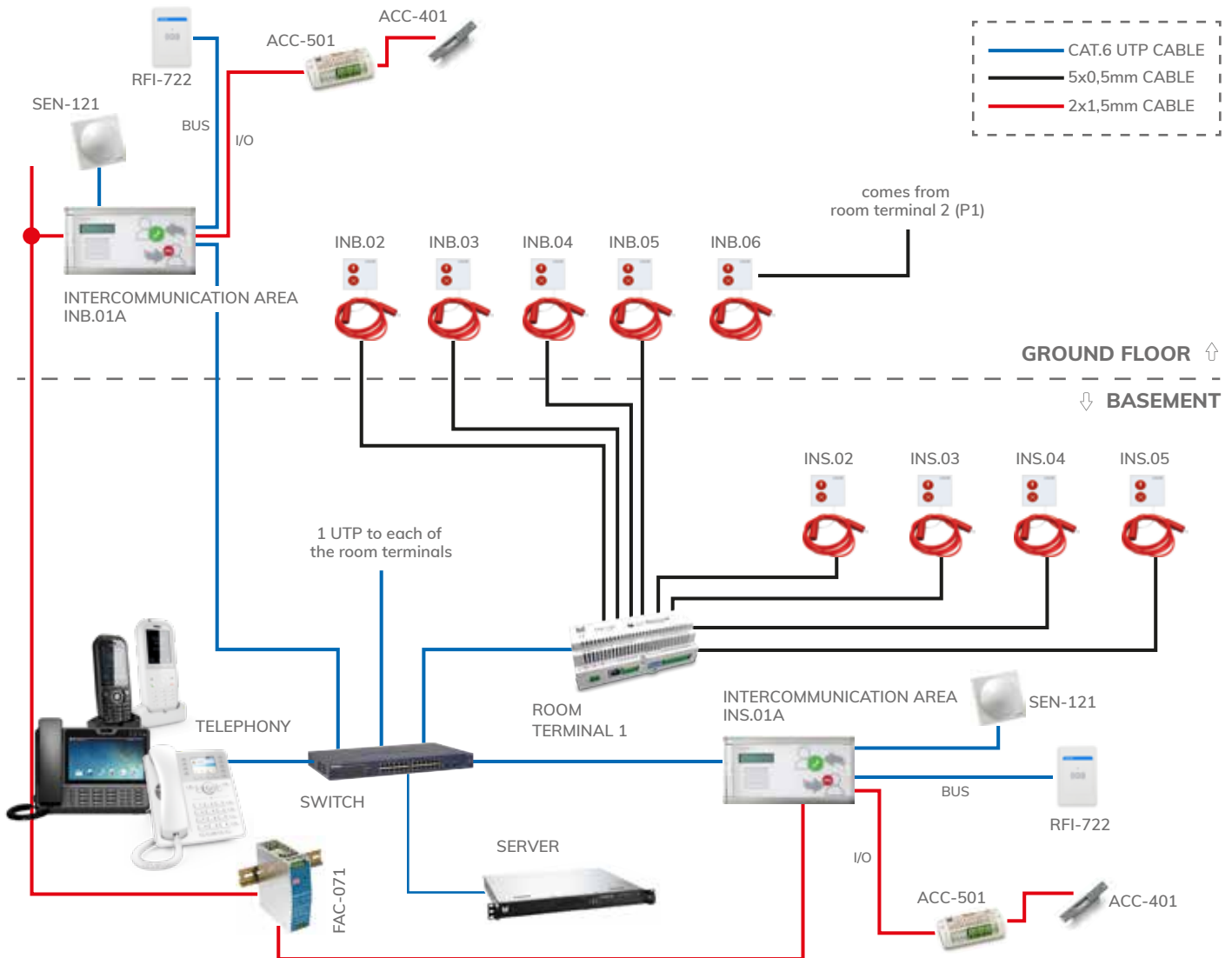
100% IP-based, this is the main element of ACCUROrefugium. It **allows the connection of a luminous component that warns of a call in progress**, which may be placed in an area where it is visible to the security personnel, as well as the option to install a button that cancels the call.

Uses:

- It is designed to be installed in areas of refuge that will allow people with reduced mobility **to communicate via hands-free audio** using a control station (in the event of an emergency where there is a fire and the need to use ladders), to assist in their evacuation.
- It can also integrate the **bathroom / changing room pull-cords, push buttons or sensors** that can be installed in public bathrooms, changing rooms and common areas of non-residential buildings, without additional development or configuration.



General outline:



Example of a standard installation with intercom points, public restrooms / changing rooms and door openers on two floors of the same building.

The ACCUROrefugium system is an extension of the 100% IP ACCURO communication system, which includes an intercom point in each CIC-231 area of refuge (100% IP) and a software package (installed on a server / PC) compatible with the ACCUROviewer software.

The system also allows the installation of bathroom warning pull-cords as well as door-top warning-lamps for communal areas or bathrooms. All

of this is centralised and managed from one or more control points, which may be assigned by area as needed.

If required, the system allows the addition of DECT-type wireless phones or IP phones or even smartphones, to increase the mobility of security personnel. From these terminals, the source of the call can be identified and it will be possible to conduct two-way communication in real time with persons requesting help.



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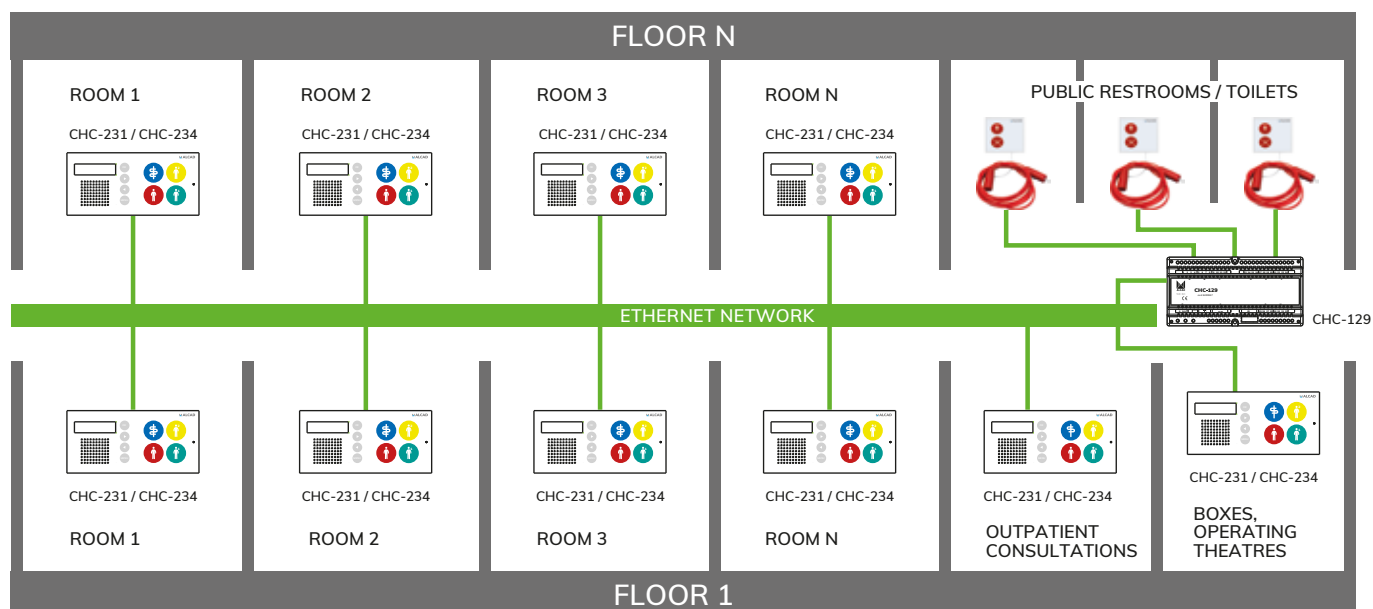
Bathrooms and common areas

COMPLETE COMMUNICATION THROUGHOUT THE CENTRE

Thanks to its modular architecture, ACCURO makes it simple to add rooms, guaranteeing complete communication between all critical points of the same complex: from bathrooms to external consultations, boxes, operating rooms, emergency rooms, etc.

The **ACCURO** nurse call system is not limited only to the rooms. The possibility of integrating both bathroom pull-cords and push-buttons without audio, as well as room terminal audio, allows you to easily add other common rooms to the platform, such as public toilets, external offices, emergency rooms, boxes, operating rooms, etc. which are vital day-to-day in the centre and need guaranteed, complete and constant communication with a control point.

General outline:





IPTV Healthcare

THE SIMPLEST AND MOST COST-EFFECTIVE TV SOLUTION

ALCAD draws on more than 30 years of experience in the multimedia sector to offer health centres the most profitable IPTV solution on the market, 100% Made-in-ALCAD.



30 years facilitating your entertainment



No costly maintenance or endless installation processes

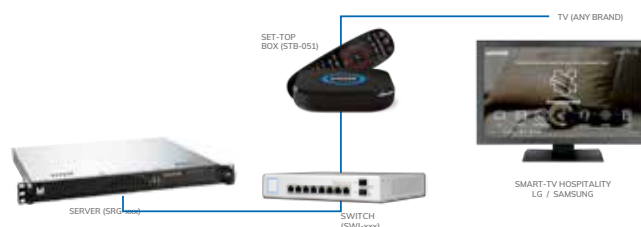


A complete solution, from receipt of the TV signal to the room or common area



Compatible over networks such as Ethernet and GPON

Want to know more?
You can use this QR code
to access our
IPTV digital catalogue.



ALCAD offers health centres **a complete solution for TV over IP networks**: from the capture of the TV signal via terrestrial antenna, satellite or fibre, through the processing head to the room or common areas of the centre, such as the entrance or waiting rooms. Thanks to its powerful and agile middleware or software, it is easy to use, intuitive, fast and very reliable. And 100% Made-in-ALCAD.

IPTV Healthcare, in its Basic and Premium modes, allows an agile and fast installation of the entire system by assigning an IP address to each room or common area automatically, without the need to configure it room-by-room. In addition, **the upgrade from Basic to Premium may be done with a simple software upgrade.**

Basic

For **installations with simple and basic entertainment needs**. The contracted and installed TV channels may be displayed, and it is possible to both configure the language and automatically reorganise the channels.

Premium

This is a complete solution *par excellence*, designed for all types of installations and **FULLY INCLUSIVE**, allowing **very agile interaction with the user**.

The management of the contents is done in a centralised manner, with the option to add as many channels as necessary with **proprietary content**, such as advertising, rehabilitation videos, etc.

ALCAD DS: the simplest way to show your message

The **ALCAD DS** (Digital Signage) option is integrable with both IPTV Premium and IPTV Basic. This is a **centralised web management tool** that provides dynamic, effective and well-adapted communication and is very simple to use; the management software creates and distributes the contents and enables the creation of sequences and schedules.

Its advantage compared to printing is clear: in addition to being more cost-effective, **the content is displayed more attractively and offers greater market segmentation**, ultimately achieving better results.

Where? It is ideal for visiting areas or common rest rooms.

CASE STUDIES

THE RESULT OF WORKING AS A TEAM

We like to **call each project by its name**, understanding the particular needs of each case and offering the best of ourselves.

We like to sit down and debate ideas, proposals and alternatives; to work as a group, to **share our 30+ years of experience until we arrive at the solution** that best suits the characteristics of the client.

We like to see the final result, to know that we have covered a **need** in a professional and efficient way. We like things **well done**.

Your success is ours; that's why we like to work as a team.

A few examples follow of **some of our most notable case studies**.

More than
10,000 beds
connected

Present on
all **5**
continents



■ **Álvaro Cunqueiro Hospital**

Vigo (Pontevedra, Spain)

- This public hospital, owned by the Regional Government of Galicia, managed privately and built in 2015, is without a doubt one of the largest benchmarks in hospital care.
- It provides 845 beds, with 24 operating rooms and 12 Radiation Protection Technical Units. ACCURO is present through CHC-231 touch room terminals and bathroom pull-cords with IP65-level watertightness.



■ **HUA Txagorritxu**

Vitoria-Gasteiz (Álava, Spain)

- The hospital is part of the Osakidetza health network and serves about 40,000 admissions and 16,500 annual stays.
- The most updated version of ACCURO, in active mechanisms, provides enhanced technical support to the system, improving installations in the Emergency Department and surgical block.



■ **Hospital Universitario**

Torrejón de Ardoz (Madrid)

- Public hospital with 250 beds.
- ALCAD has implemented its IPTV kiosk solution, integrated with NEC PBX prepaid systems.



■ Los Ceibos Hospital

Guayaquil (Ecuador)

- The Los Ceibos Hospital is the largest hospital built in Ecuador to date, with 350 beds and 182 rooms.
- ALCAD's solution comprises CHC-230 touch room terminals embedded in the wall in each room, with built-in bathrooms and door-top warning-lamps. These room terminal monitoring systems can also be found in operating theatres.



■ Hospital Punta Pacifica

Panama City (Panama)

- Pacifica Salud is the first hospital in Latin America and the Caribbean to be affiliated with Johns Hopkins Medicine International. The doctors, surgeons and other colleagues are leaders in their respective areas.
- A total of 125 rooms feature our antimicrobial CHC-233 room terminal. The common areas are equipped with the CHC-120 room terminal.



■ Pauls Stradiņš Univ. Hospital

Riga (Latvia)

- The Pauls Stradiņš Clinical University Hospital, founded in 1910, is the largest and most important in Latvia. It currently serves victims of radiation from the Chernobyl nuclear power plant.
- It provides treatment and care in 26 specialist areas and is the only hospital in the country that performs transplants.



■ Pichincha South Hospital

Quito (Ecuador)

- Hospital south of Quito. It has 152 rooms and 264 beds.
- It has CHC-234 antimicrobial touch room terminals embedded in the wall in each room and operating room, with incorporated bathrooms and door-top warning-lamps.



■ Lösevi Hospital

Ankara (Turkey)

- Specialised in oncology treatment, it has 300 rooms. It was built in 2015.
- ACCURO is present in this hospital with a total of 212 personalised CHC-234 touch room terminals embedded in the wall in each room, with built-in bathrooms and door-top warning-lamps.



■ Hiwot Fana Hospital

Harar (Ethiopia)

- This is one of the main hospitals in the country, with 1,015 beds.
- ALCAD has fully equipped the centre with 520 CHC-043 room terminals with code-blue capability in rooms, boxes and common areas.

ACCURO

100% IP
Nurse call system

LIVERO

100% IP security
intercom system

IPTV

Multimedia solutions for
hospitals/nursing homes

ATTENDO

Emergency call system
for public toilets