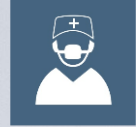




LM MEDICAL
DIVISION

ENGLISH

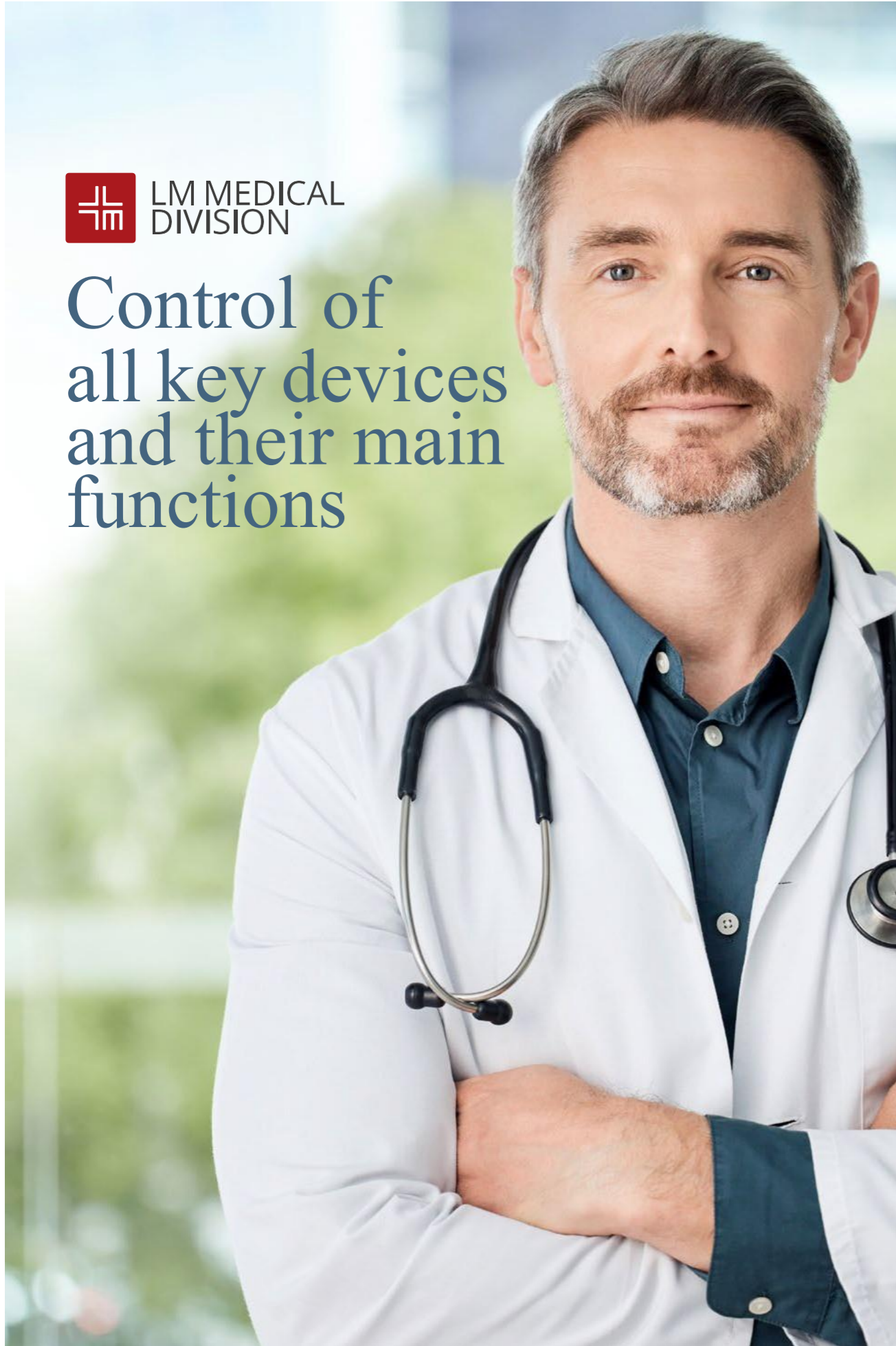


Operating
room



Video
Management





Control of all key devices and their main functions

Why choose I CONTROL PLUS?

Efficient and immediate control

I Control Plus is a system of automations and management of surgical procedures and integrated management of surgical devices in the operating room. The device manager plugin allows the operator to control all key devices and their main functions.

Easy and intuitive

The plugin has been designed to make its use easy and intuitive and the interfaces design allows an effective and immediate interaction between the operator and the system.

Design

Attractive and modern solution with high image and video resolution, thanks to which it is possible to make video conferences to underline and clarify specific contents. The system also allows the control of environmental cameras and the ability to record videos and images.

Hygiene

The wall monitors and workstations can be cleaned easily and hygienically.

Operation room integration

PACS is an ergonomic solution suitable for both wards and operating theatres for the management of electronic clinical data and for various electronic and IT applications. The points of care can be placed inside or outside the operating theatre for the consultation of data coming from the company information system. The PACS is an IP65 grade aluminium enclosure with a glass cover and is perfect for wall mounting.

Options

PACS turns any operating theater into a digital service center. Available in various sizes, easy to clean and fitted with multiple connections, the PACS is the ideal system for constant use in state-of-the-art operating theaters.



Available in various sizes



Optimized picture quality



Certified medical device



Variable housing technology



Wide range of connections



Easy to clean

Always closer to the needs of clinical staff and operating room



Wall-mounted screen



Wall-mounted screen, equipped with keyboard



Arm equipped screen

Introduction

I Control Plus is a system of automation and management of surgical procedures and integrated management of surgical devices in the operating room. Integrated management includes management of video / audio signals, room lights, environment data, electromedical devices and integration with the Health Information System through a single control touchscreen panel.

Trough the I Control Plus, by a touchscreen display is possible to:

- Manage all video signals derived from video sources (X-Ray C-Arc, laparoscopic column, arthroscopic camera), sending them to the monitors inside OR and to the entire hospital allowing live stream and conferences
- Manage room's lights (brightness, color, intensity, etc.)
- Control surgical lamps (focus, intensity, brightness, colour temperature)
- Control the operating table movements (tilt angles, degrees of freedom, etc.)
- Control electromedical devices (pump, light source, etc.)
- Control the audio system
- Archive videos and images, allowing compilation of surgical report with attached images
- Monitor and control all the environment parameters in the operating room.

Manage video signals in the operating room

The I Control Plus system is a platform made of several plugins: the video routing plugin, by means of which you can manage all video sources present in the operating room; the device manager plugin, by means of which you can control electromedical devices in a surgical environment; the connection plugin to get electronic patient records directly on the OR's monitor; the worklist plugin that shows the list of surgical procedure.

The video routing plugin, by means of an

intuitive touchscreen interface, allows for the control all the video routing unit functions: from the multiplication of a video signal to be sent simultaneously to several monitors, to the routing of the video inputs to the recording or streaming units. The plugin manages all the video signals in the OR. Each device will be connected to the video routing unit through optical fiber cables keeping the highest quality of the signals.

The architecture

In the operating room, some touchscreen displays will regulate the interaction between the medical / nursing staff and all system's functions. Everything is done through the control of simple software interfaces.

Medical devices will be connected to a rack cabinet, placed inside a technical room, to optimize space, a key resource in the surgical environment. The system also allows the

control of the environment cameras that will allow the facilitator, usually the manager of the patient's reception in the ward during postoperative phase, to monitor the time schedule of the operating room and organize the department in a way that facilitates patients' reception. Environmental cameras allow to have further framings of the operating area during video conferences

Video conference and video streaming

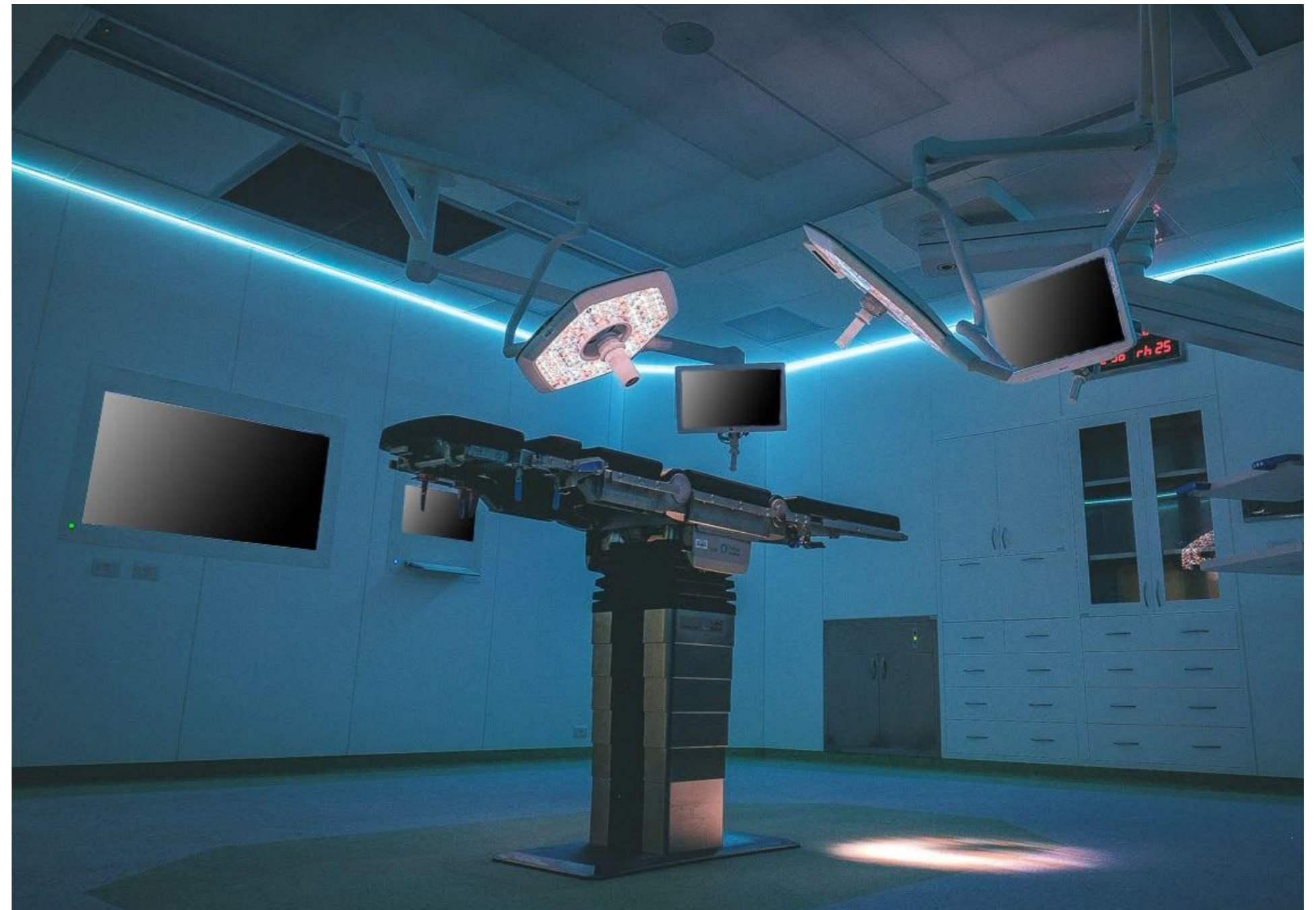
I Control Plus allows to make video conferences. It is possible to direct video sources to the hospital's LAN, and it is possible to view the live of the surgical or diagnostic procedure from any computer or mobile device. Thanks to the use of microphones and sound diffusion devices, it is possible to create a conference room to which other conference rooms can be connected and can interact

with the operating room. Using complex video elaborations, it is possible to have high quality video streaming with low bandwidth occupation.

Moreover, I Control Plus system through the Dual View allows to mix in a unique signal two video signals simultaneously. Choosing different layouts, 4 2 different video sources will be visible in a single image.

Operating report with images

I Control Plus system allows to record videos and images. All the video tools (microscopes, endoscopes, laparoscopic columns, cameras in the operating room, ECG, PACS, etc.) can be acquired through touch controls on screen and images can be recorded in digital format and attached to the patient's electronic record. Using compression without loss of quality, images can be retrieved intact for the clinical and scientific purposes. Each multimedia data can be saved in DICOM format on the PACS. The entire procedure (clinical data, video and images) can be backed up both on file system, or on external HDD or on optical support.



Highlights

Some of the benefits related to the use of the I Control Plus system in the operating environment:

- Control of environment parameters in a single display for a constant monitoring of working conditions in the operating room;
- Immediate access to the patient's electronic record in a standard and readable format, enriched by images and videos, in order to have a unique reporting language, easy and immediate to read, and to reduce clinical risk;
- Management of the operating room's lighting, of its colour and brightness, to create different sceneries and adapt the environment to the different surgical procedures.
- Make video routing in the operating room through a touchscreen with simple controls allowing an improvement in comfort and ergonomics for the medical / nursing staff

27"



TECHNICAL DATA	
Exterior dimensions (mm)	Display area (mm)
1055x970x124	620,93x341,28

50"



TECHNICAL DATA	
Exterior dimensions (mm)	Display area (mm)
1318x970x124	1098,84x616,41

32"



TECHNICAL DATA	
Exterior dimensions (mm)	Display area (mm)
1055x970x124	698,4x392,85

55"



TECHNICAL DATA	
Exterior dimensions (mm)	Display area (mm)
1454x970x124	1209,6x680,4

43"



TECHNICAL DATA	
Exterior dimensions (mm)	Display area (mm)
1186x970x124	941,18x529,416

65"



TECHNICAL DATA	
Exterior dimensions (mm)	Display area (mm)
1673x970x124	1428,48x803,52



Description

OR Control System is a hardware and software modular system for video and audio management as routing, streaming, recording and equipment control in the operating theaters.

It consists of Touch screen monitors, located in the control panel, wall or on monitor arm.

The base unit with switch, matrix, recorder and the control unit are located

OR control system can be combined also with the PLC Room control to control the following parameters.

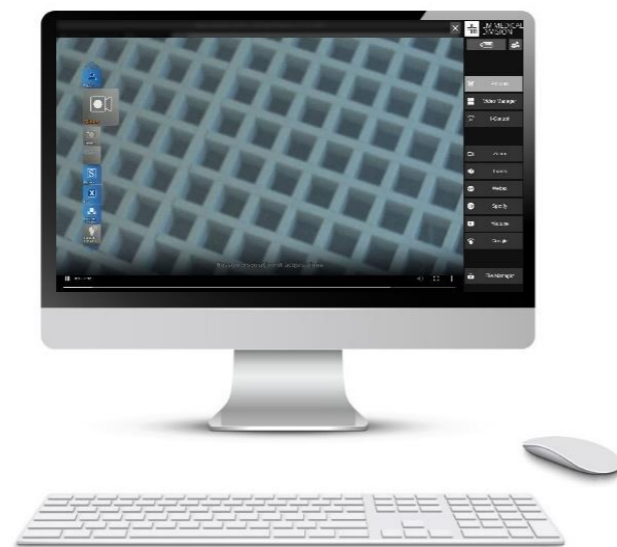
OR Control System has the following control modules:

- Routing up to 6 monitors and 8 video inputs
- Streaming Video and Audio signal via Intranet or Internet
- Recording the captures still images or records extended sessions from live video signals to HDD, USB or network server
- Recording in DICOM format
- PACS PC Remote access
- HL 7, HIS, RIS compatibility
- Room Camera control (Pan/Tilt/Zoom)
- OR light cameras control
- OR Lights control
- Audio control, Internet radio application, Bluetooth audio receiver

Edit video matrix



Stored record



Routing

Routing up to 6 monitors and 8 video inputs

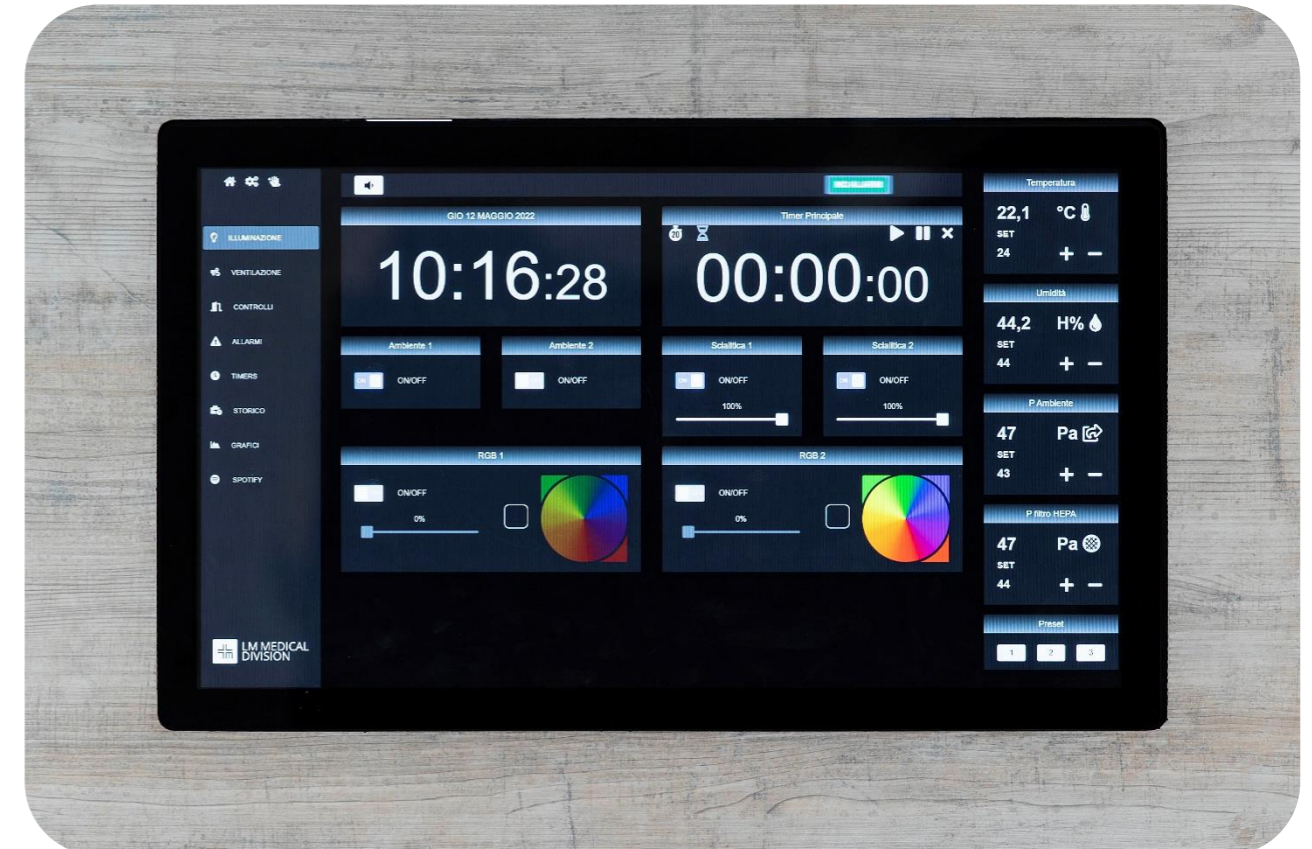
Streaming

Streaming extended sessions from live video signals and audio signals from microphones via Intranet or Internet (zoom and teams)

Recording

Recording the captures still images or records extended sessions from live video signals and signals from microphones. Recording can be storage on HDD, USB, Network Server or PACS server.

Environment control and monitoring



Camera control

Room camera control (Pan/Tilt/Zoom)
OR Light camera control (Zoom)



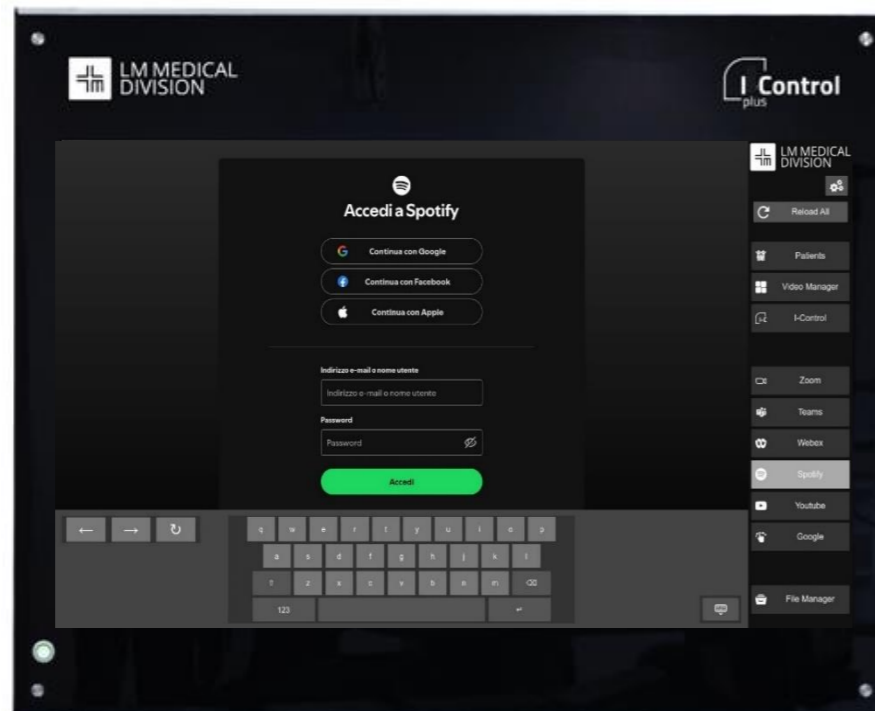
Video manager



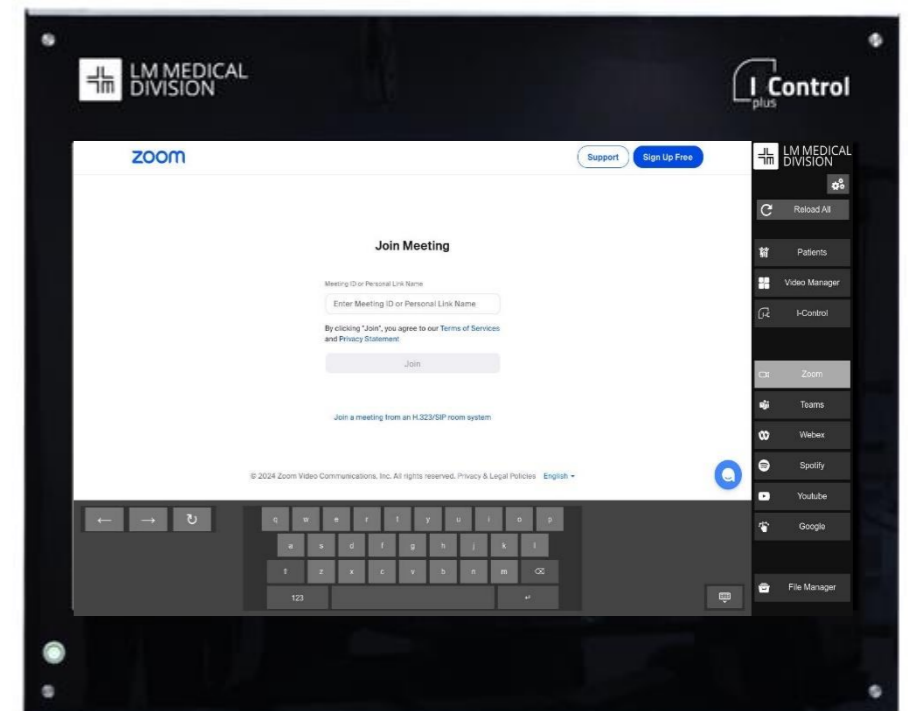
Audio control

We can integrate and control the following audio modules:

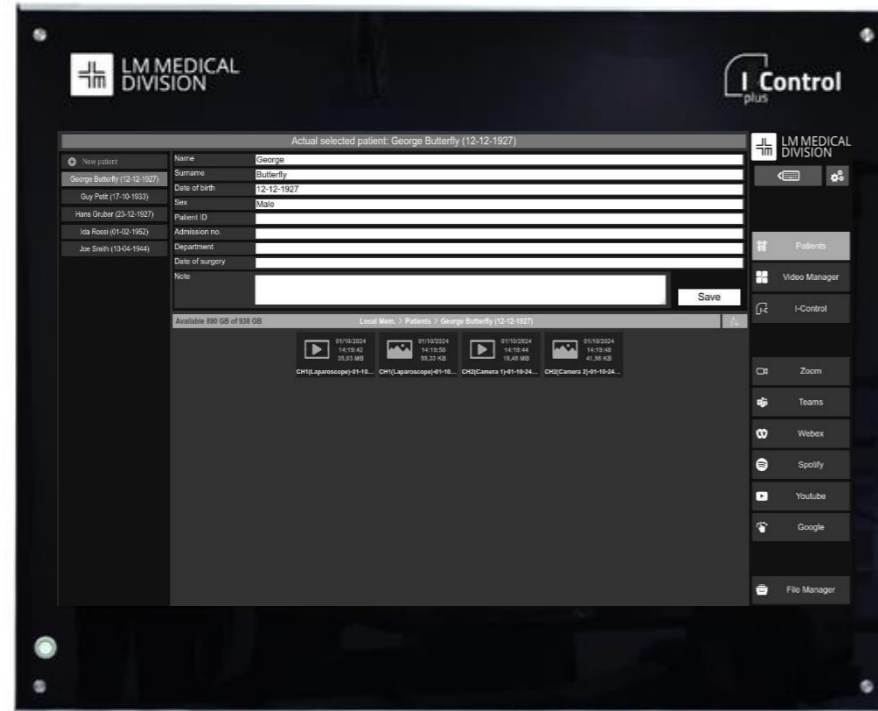
- Internet radio
- MP3 players
- Bluetooth modules



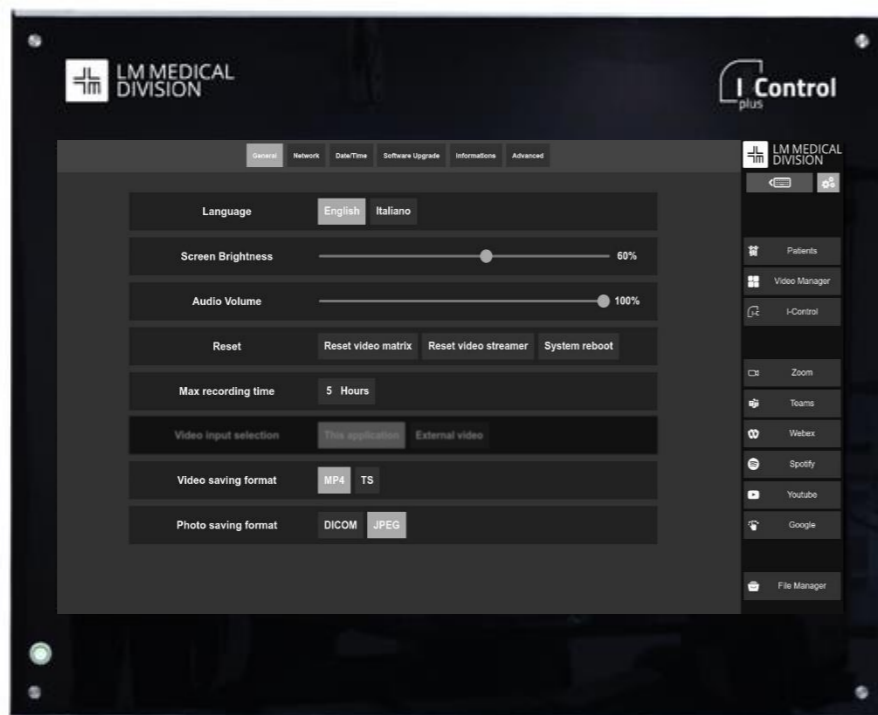
Video conference



Patients information



General settings



PACS PC

Remote access We can integrate remote access to any PACS PC in the hospital network

HL7, HIS, RIS compatibility

We can integrate SW module for integration with existing hospital system like HL7, HIS, RIS to import or export data

Technical data

Picture in picture HW and SW module offers you a wide range of preset Duo, Triple and Quadro combinations.

Matrix:

8 HDMI OR SDI INPUT 4K
6 HDMI OR SDI OUTPUT 4K

Streaming:

Video Stream up to 3840x2160

Archiving:

Recording resolution: 480P60, 720P60,
1080P60, 2160P30

Video format: TS

Video codec: H.264

Capture image resolution: 480P, 720P,
1080P

Capture image format: BMP, JPEG,
DICOM

Internal SSD: 2TB standard





www.lmmmedicaldivision.com

LM MEDICAL DIVISION S.r.l.

Via Brigade Alpine, 9 - 25036 Palazzolo sull'Oglio - Brescia - Italy

Tel. +39 030 7453357 - Fax +39 030 7453105 - info@lmmmedicaldivision.com



MADE IN ITALY

