The Princess Grace Hospital Centre is an evolved hospital in the west part of Monaco and first opened in 1902. Today the hospital serves as a general hospital, providing general clinical care, as well as specialty treatments. As a first-rate hospital, Princess Grace Hospital Centre responds to rapid changes in the medical environment at its central facility by continually improving processes, medical resources, and technologies. The hospital had been using a hospital multimedia solution which presented inconveniences: messy cables, cleaning issues, inaccurate touch screens, etc. In addition, hospital staff identified the need to add diagnostic displays inside patient rooms as new services to enhance the patient long-stay in hospital. The scope of the new project required durable and medical-grade devices for the hospital staff terms of monitoring, diagnosis, and connectivity to hospital dedicated softwares. Moreover, it was important to bring new value added services to the patients: television, internet, multimedia, room automation, phone, music, radio, USB player, etc.

Solution

Hospital administrators were looking for a new hardware/software solution to replace the old one which was starting to show its limits. The solution they chose for their patient rooms was based on Advantech's PIT-1702 integrated with easyOne's mediaBox® Healthcare solution. PIT-1702 is a Patient Infotainment Terminal with a 17” display, and fanless, lightweight design. The mediaBox® Healthcare solution was implemented to provide connectivity to the Hospital’s Information System (HIS) as well as devices like handsets, RFID and smartcard readers to increase efficiency, improve accuracy, ensure safety as well as replace paper based records. On the other hand, the mediaBox® Healthcare provides many services for patient entertainment as room automation, television with individual access, phone, multimedia, internet, as well as HIS for medical staff. The mediaBox® Healthcare brings hospitality services to the healthcare world, making all the add-value functionalities billable by the hospital to the patients.

Advantech’s PIT-1702 Patient Infotainment Terminal is quiet and mounts unobtrusively via its VESA swivel-arm mounting. It helps staff with monitoring, recording patient information, and retrieving vital data from hospital information systems. A LED alert is able to signal staff when attention is needed, improving response and care to the patient. The mediaBox® Healthcare solution allow the patient to make the difference between a Nurse call, an auxiliary call and a room service call. Each of them can be a help call using the existent device in the hospital or a phone call.

MediaBox® Software by easyOne

EasyOne developed their mediaBox® Healthcare software to meet the expectations of the hospital staff and patients alike. With mediaBox®, patients can access the web and emails, and also receive TV channels, music, radio, news, and the ability to phone and manage the automation of their room through the user-friendly touch screen interface on PIT-1702.

The On Demand Customization package of mediaBox® Healthcare provides an innovative concept in rendering an easy-to-use and intuitive interface for patients and hospital staff. Each clinical service uses its own customized interface following to their own graphical chart and the 3D rendering of the room.

System Requirements

PIT-1702 is medically certified (UL60601-1/EN60601-1), with an IP05 rated front panel. Cable management for the nursing care system is convenient and effective. The swivel arm allows easy access and viewing, and the display can be stowed out of the way when not in use. Built-in WiFi provides connectivity to the hospital’s systems and other information systems, delivering real-time information to medical staff allowing them to work smarter, and positive identification via RFID prevents unauthorized access.

Benefits

CHPG's IT partners implemented mediaBox® with PIT-1702. Both hardware and software systems have been very well received by staff and patients alike. The next phase of the project will expand use of the systems in patient rooms at
bedside for staff use for meal ordering and medical data access. Key benefits to the hospital are:

- Easy-to-use interface for patients and hospital staff
- Accurate touchscreen
- On Demand Customization for each clinical service
- Automation system connected to all devices in the room
- Wide range of electrical input: 12VDC-90VDC
- Cable management and swivel arm mounts
- Medical-grade rating and fanless operation for reliable and quiet use
- Anti-dust design that is easy to clean
- Can be cleaned with anti-bacterial cleansers.
- Improved hospital hygiene with anti-bacterial materials that reduce the risk of germs and infections by 98%
- Waterproof IP65-rated front panel and 10G anti-vibration rating
- Smartcard authentication of medical personnel
- Increased efficiency for hospital staff

EasyOne website: [http://www.easyone.mc](http://www.easyone.mc)

PIT-1702 is a Patient Infotainment Terminal based on a power-efficient Intel® embedded processor. The advantages of using a long life embedded processor means that Advantech can supply the PIT-1702 for a product life cycle of up to 7 years. Intel processor platforms are also standards-based which greatly simplifies the task of integrating the latest networking, communications, wireless and security technologies. In addition Intel Architecture allows Advantech to lower their development costs and gives them the ability to choose the right processor to reach specific price performance targets across a family of terminals. Advantech are then able to deliver cost effective healthcare solutions to the medical market.