IEI Smart Retail Solution

IEI smart retail solution combines PSI, kiosk and digital signage solutions to provide high quality customer service and experience. The PSI system, along with database and the unique web-based product status monitor interface, provides real-time status update and monitor by integrating the UHF RFID technology for reading RFID tags. Therefore, the PSI system can immediately monitor and update information in the database, and the system is able to analyze customers' behavior in order to provide better product and service to customers.

Procurement-Sales-Inventory System

Database

Terminal

Cloud Computing

Application Layer

Portable Data Collector and Display

Roll Data/ Command (IEI)

Procurement-Sales-Inventory

Data Integration (Database/Web Interface)

ERP

ERP

Service Layer

MODAT-532A   ICECARE-10W   ICEROCK 3   IVS-200   UHF RFID Antenna   RFID Tag

Sensor Layer

Procurement-Sales-Inventory System

Retail ERP System

- Product price system
- Logistic WMS database

Procurement-Sales-Inventory System

- Operates on QNAP NAS
- Supports IEI's portable devices
- Supports multiple languages
- Supports multiple databases
- Supports barcode and UHF RFID system
- Web-based technology

UHF Reading System

- Intel® Atom® E3826 1.46 GHz CPU
- Built-in GPS function
- Built-in VGA output and HDMI output
- Dual SIM slot
- Optional 3G/Wi-Fi/UHF reader modules
- Optional software compression video capture card

Tablet PC (IEI Cloud Mobile POS)

The IEI tablet PC is integrated with a barcode reader, a RFID reader, a smart card reader and a magnetic stripe card reader for IEI Cloud Mobile POS usage. It offers an all-in-one mobile solution for services that are looking for a stylish and durable device.
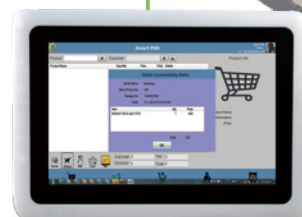
Handheld PDA (Invetory Management)

The MODAT series industrial PDA features a full range of wireless communication technologies and optimal suites of data capture technologies, including 1D/2D barcode and RFID readers, in one lightweight, versatile and robust package. It is especially suited to solutions in the retail, hospitality and logistics environment.

IPMI 2.0 Compliant

Digital Signage (Advertising)

- Fanless system with Intel® Celeron® N3160 processor
- Three HDMI ports
- Two full-size PCIe Mini slots for expansion
- Four USB 3.0 ports
- Two GbE LAN ports

Industrial Display (Advertising)

- Robust IP 65 aluminum front bezel
- Aesthetic ultra-thin bezel for seamless panel mount installation
- Wide range 9V~36V DC power input
- Wide range operating temperature

Industrial Panel PC (Information Kiosk)

IEI panel PC provides informaton kiosk feature in a retail shop. Customers can check the price, stock, new product information, other store's information, etc.

RISC based:
- 12V~36V wide range DC power input
- Robust IP 65 aluminum front bezel
- Android 4.2.2 OS
- Optional Wi-Fi + BT

X86 based:
- Light industrial interactive panel PC
- 9V~30V wide range DC power input
- -20°C~60°C wide range operating temperature
- IP 64 compliant front panel

IEI Smart Amusement Park

IEI smart amusement park builds internal coupon payment system with NFC wristband to replace cash transactions to enhance tourists' convenience. It can record tourist behaviors data for operating improvement. The parking system can use UHF RFID for employees and QR code for VIP customers. In the amusement park, the temporary baggage lockers for tourists can reduce the inconvenience.
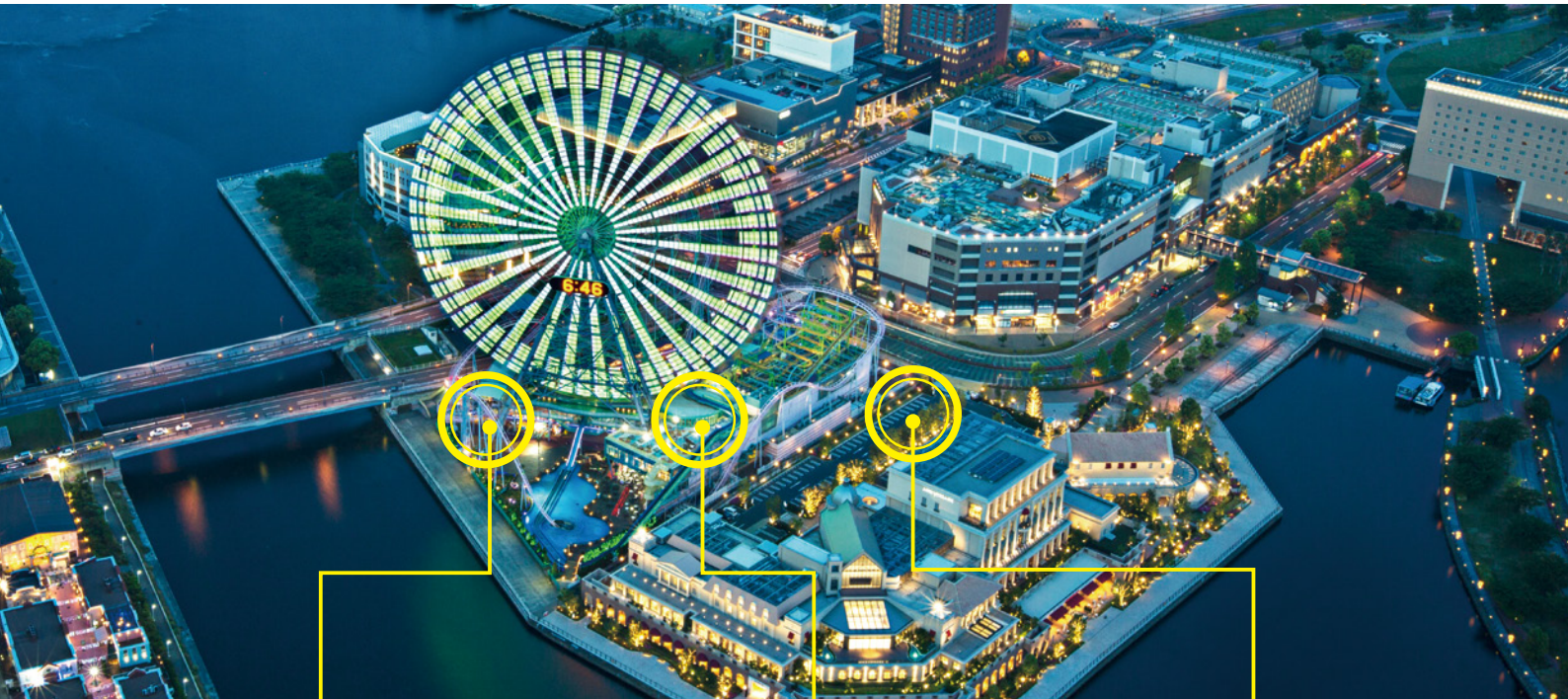
Locker System

IEI smart cabinet solution provides temporary baggage lockers for customers without any keys. This is also a new concept of parcel delivery. It can cave logistic cost, and customers won't need to wait at home for parcels.

Access Control

For indoor/outdoor play area, access control can be managed by the NFC/barcode wristbands and the IEI industrial panel PCs. Just scan the wristband before using facilities, and the usage status of every facility can be monitored as well. Payment ID can also be embedded in the wristband so that customers don't have to bring cash in the play area.

Parking System

IEI smart parking solution uses the UHF reading system to identify UHF tags which are stuck on the car windscreen. Just drive to the parking gate, and the system will automatically verify the tag ID to open the gate.

| AFL3 Series | IOVU Series | ICECARE Series | MODAT Series | IVS Series | UHF Reading System |

IEI Cloud Mobile POS

IEI cloud mobile POS is a total solution for retail shops and suits for any devices to use, such as smart phone, tablet, panel PC or POS devices. It can control and monitor real-time information through the Internet to the smart cloud account from everywhere.
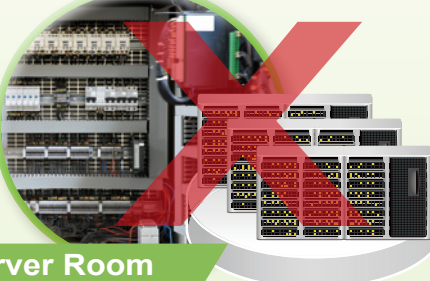
Data Maintenance

Sales Management

Procurement Management

Cost/Inventory Management

Supervisor

Could Server

VS

Server Room

Data analysis, automatic data backup, member account management, remote management

No need of server room construction and IT maintenance cost

Counter

Mobile Ordering

Outdoor Counter

| Panel PC		Tablet PC		PDA	Industrial Display	Digital Signage
AFL3-12A-BT	IOVU-17F-AD	ICECARE-10W	ICEROCK3	MODAT-532	DM-F Series	IDS-300

New

IEI Smart Healthcare Solution

Population aging is becoming a worldwide phenomenon, and the requirements of health-caring are increasing. The World Health Organization (WHO) reports that 90% of seniors (US population) have at least one chronic disease, and 77% have two or more chronic conditions. That means the medical resources for the aging people could be predictably rising. Moreover, for providing better caring quality and managing all the clinical information electronically, the stable and ruggedized industrial panel PC is widely used in the clinic environment these years. The booming IoT industry also makes the medical applications smarter.

The medical panel PC developed by IEI completely meets users' needs and ergonomics. Highly modular design provides flexible applications in various situations; the light and slim design changes people's perception of the medical panel PC which is usually bulky. IEI Remote Intelligent System (iRIS) makes the medical products featuring IoT function. With the iRIS module, IT personnel can greatly enhance management, monitoring and maintenance efficiency in hospitals.

Production
ISO 13485

Design Ability
DICOM
Isolation

Certification
ISO 14971
UL / EN 60601-1
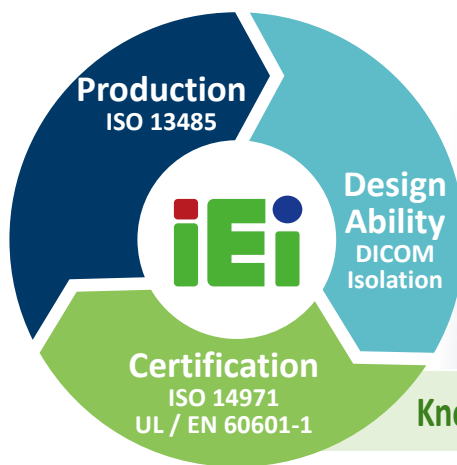
Know-How for Healthcare Solution

PDA
Highly integrated PDA with ruggedized IP 67 grade answers all data capturing needs on the field and promises to enhance productivity.

Tablet
Lightweight and compact mobile touch medical tablet PC facilitates working procedures so that doctors can directly get patient information and record patients' condition at any time.

Medical Embedded System
Preliminary

IEI provides high performance medical box computer with user friendly design. Its fan-less and cable-less concept not only ensures extended long-term usage but also brings more conveniences to the hospital personnel. Furthermore, rich I/O and expansion slots provide maximum flexibilities in the real-time situations.

Bedside Terminal

Preliminary

The all-in-one design which integrates smart card reader, RFID and high-brightness LED reading light facilitates nurses to streamline the working procedure.

Medical Cart Computer

High-performance and high-quality all-in-one medical computers provide maximum efficiency for the medical environment, and are designed to be maintained with ease.

2D Barcode Reader

For fulfilling the demands of remote monitoring on healthcare, IEI provides a hand-held 2D barcode reader to expand and enhance function of medical cart computer for monitoring patient status.

Medical Cart

Powered by *BriteMED*

The E-Nursing Cart helps nurses perform their nursing processes efficiently, reduce transcription errors and even facilitate the speed of daily nursing workflow to further improve the service quality in hospitals.

Power Station

Powered by *BriteMED*

The MBM series medical battery systems are designed with the protections of over charging, over discharging and short-circuit to ensure the maximum safety. Selected models are compliant with UL60601, EN60601 and UN 38.3 standards.
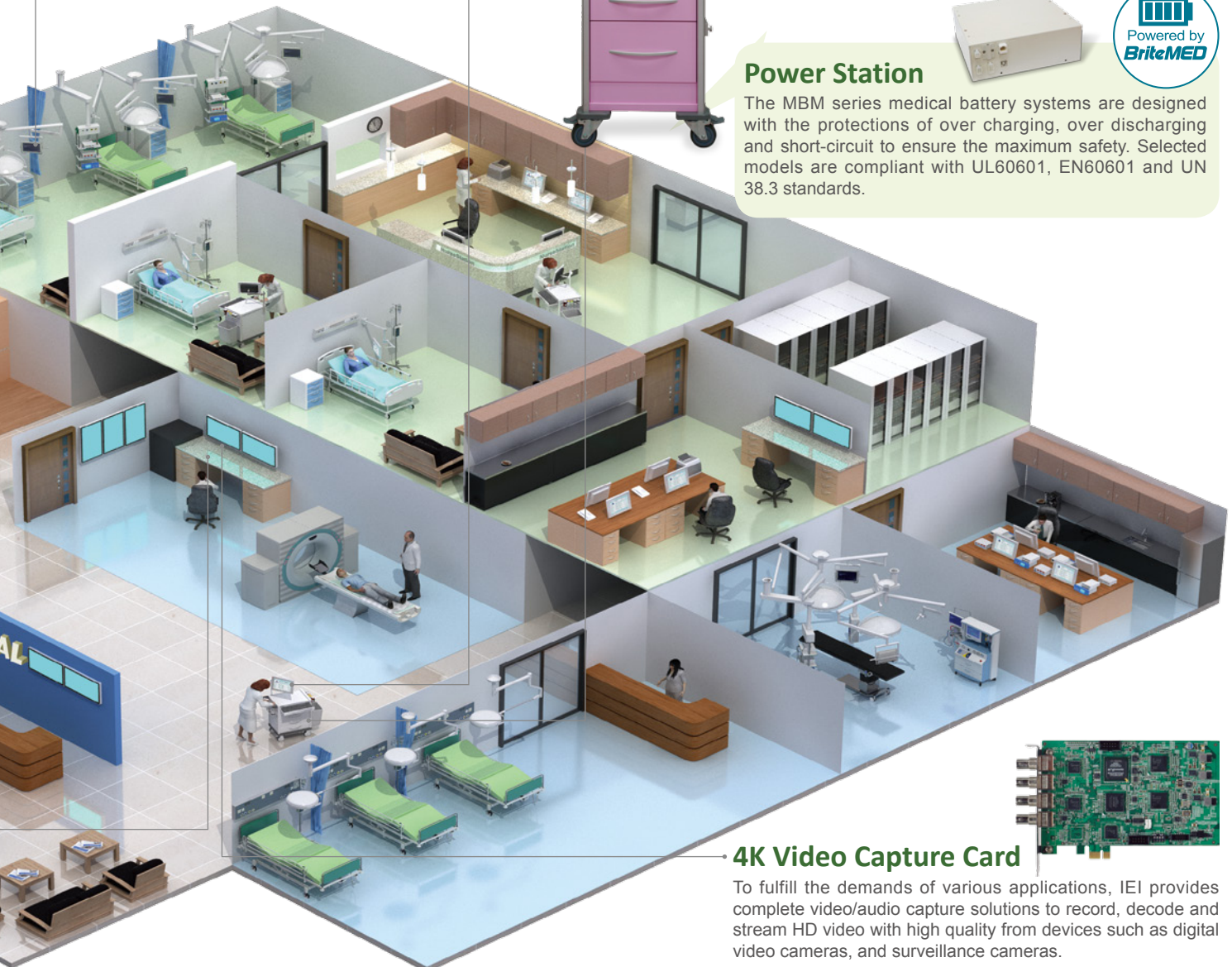
4K Video Capture Card

To fulfill the demands of various applications, IEI provides complete video/audio capture solutions to record, decode and stream HD video with high quality from devices such as digital video cameras, and surveillance cameras.
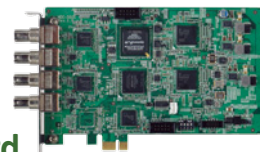
The Reasons for Choosing IEI Healthcare Solution

Conform to Medical Certificates

With many experiences in designing and developing medical products, IEI not only provides high quality products to our customers but also provides products compliant with ISO 13485, ISO 14971 and EN/UL 60601-1. The medical certifications ensure that the quality of the production process and the medical products meet medical device standards and medical electrical safety standards.

Support Flexible Cooperation Pattern

IEI has been developing and manufacturing industrial computers for almost two decades and medical devices for more than 10 years. The services we provide to our customers are with high quality and long-term support. Furthermore, the flexible OEM/ODM cooperation pattern is also the option for customers to choose products that are best fit to their requirements.

Provide Professional and Complete Solutions

Healthcare that was once given in hospitals is now provided in hospitals, homes or communities, and the healthcare providers could be doctors, nurses, care-givers or patients themselves. With extensive experiences in researching and developing medical devices, IEI can provide high quality services and professional suggestions to our customers for improving healthcare environment.

Solutions

All-in-one Medical Grade Panel PC

User-friendly-oriented design is always the core value of us. IEI all-in-one medical grade panel PC series offers three product lines to accommodate all heathcare needs. In addition, the products we designed support various communication functions, such as Bluetooth, 1D/2D barcode scanner, RFID, SCR and MSR. These units can provide clinician personnel conveniences and increase the working efficiency. The product lines we have as below:

● POC Series for point-of-care terminal
● BIS Series for bedside system

Medical Cart Computer
POC-W22A

Industrial Mobile Devices

IEI mobile series products help daily healthcare jobs become more flexible and convenient. The highly integrated mobile devices can be used in ward round, specimen tracking, medicine tracking, patient identification or ambulance application, etc. Both Windows and Android OS are supported in addition to Linux OS provided by our professional software team. The product lines we have are shown on the right.

PDA
MODAT

Tablet
ICECARE

Tablet
ICEFIRE 2

Medical Embedded System

As the leading embedded SBC provider, IEI continues to extend the product footprint from general purpose to vertical market. Our strong knowledge of market and technology innovation offers long-term support, high quality, reliable and flexibility for all of our products with choices of size, performance and feature for different applications. Our medical grade box PC can be used in operating room, nursing station, dialysis system or examination center, etc.

Medical Embedded System
HTB-100

Video Capture Solutions

IEI provides complete video/audio capture card solutions to fulfill the demands of various applications. The capture solutions can be used in endoscopy surgery, ultrasound scanner, microscope or thermography. We also provide complete software solutions such as software development kit (SDK), and flexible open, architecture allowing easy integration of camera, video signal processing, storage, and video management/security.

Security | Tracking | Face Recognition | Antiriot Monitor | Plate Recognition
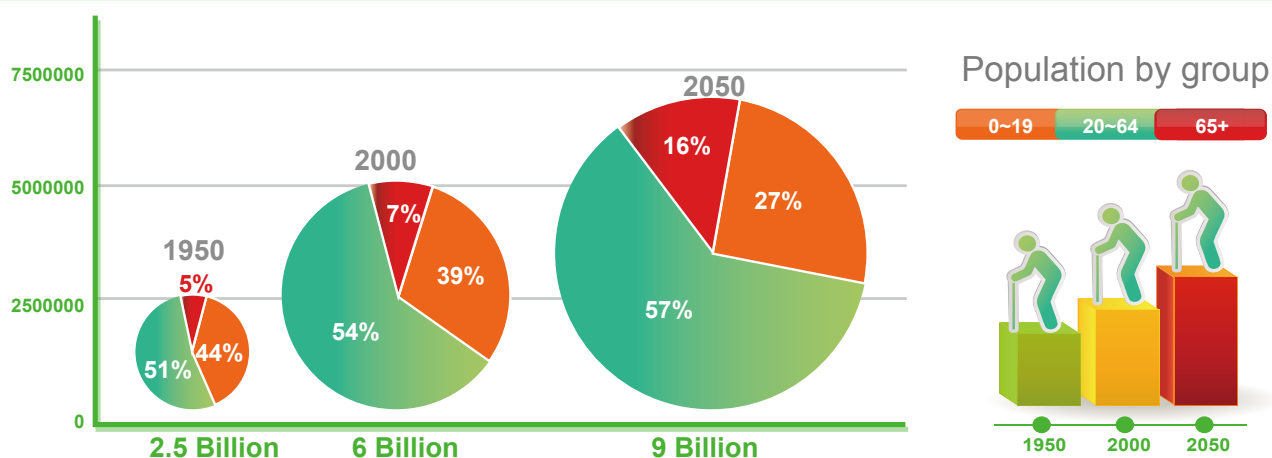
4K Video Capture Card
HSRC-302E

Other Solutions

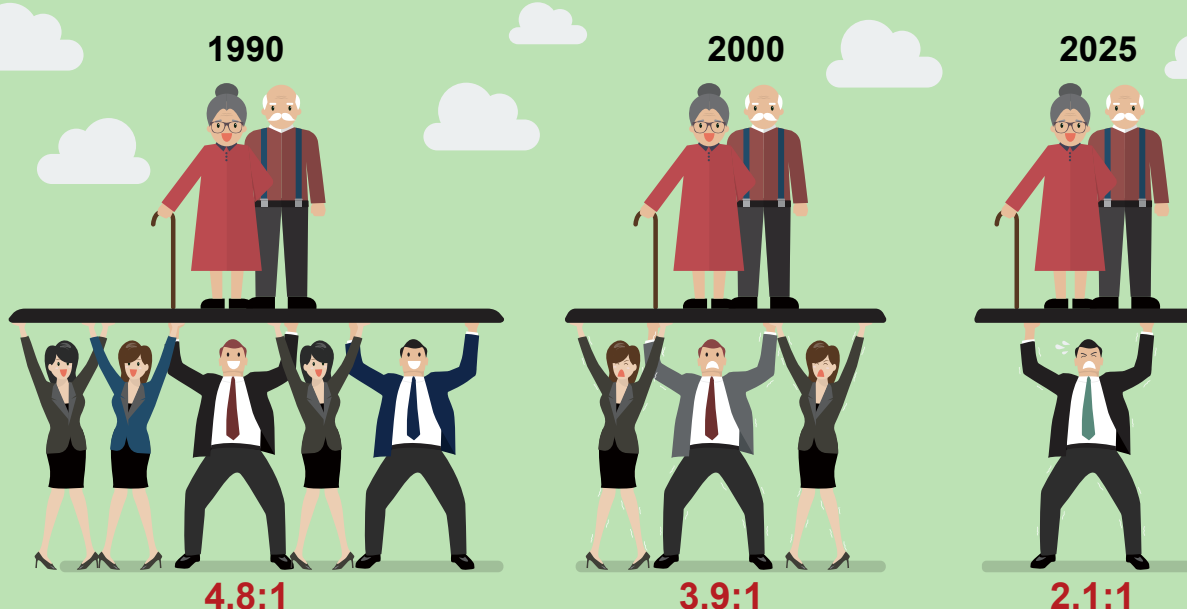### IEI is going to expanse the healthcare market to the population aging field!

"The world's population is ageing: virtually every country in the world is experiencing growth in the number and proportion of older persons in their population. " mentioned by World Population Aging 2015 edited by the Department of Economic and Social Affairs of the United Nations Secretariat. Population aging with implications for nearly all sectors of society, especially the healthcare from chronic diseases.

IEI provides the IoT Healthcare solutions for the aging society:

Smart devices help simplify the elderly's life on health management

Population by group

0~19 20~64 65+

1950 — 2.5 Billion
1950: 51%, 44%, 5%

2000 — 6 Billion
2000: 54%, 39%, 7%

2050 — 9 Billion
2050: 57%, 27%, 16%

Technical products help ease the society's burden caused by aging population and low fertility

1990 — 4.8:1
2000 — 3.9:1
2025 — 2.1:1

Telehealth/Telemedicine Solution (ODM Only)

Remind elders to take medicines and help reduce medicines waste

Upload / Download Message

Notify

Upload / Download Message

Setup

MODAT-532

Data collector

Smart gateway to collect health data
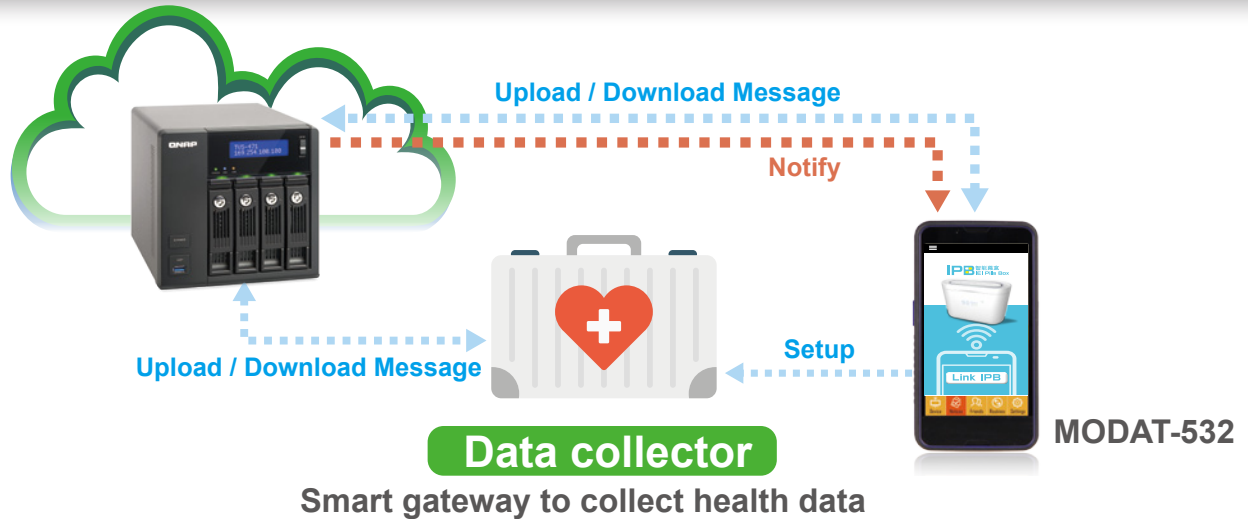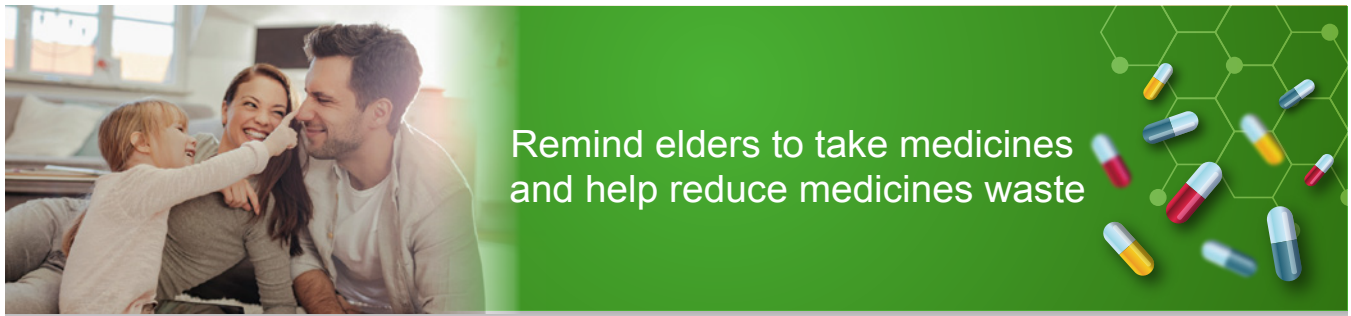
| Smart Hydration Bottles | Smart Watch | Smart Thermometer | Smart Scale | Blood Glucose | ECG | Blood Pressure Monitor |

For controlling health situations

As a result of changing our way of eating and living, and higher human expectancy, some chronic diseases are affecting people, such as heart disease, stroke, cancer, chronic respiratory diseases and diabetes. Thus, people may need to take medicines for controlling their health. Their health problems would become complicated if they forget to take the medicines. Patients need a reminder to simplify their health control process.

For maintaining health situations
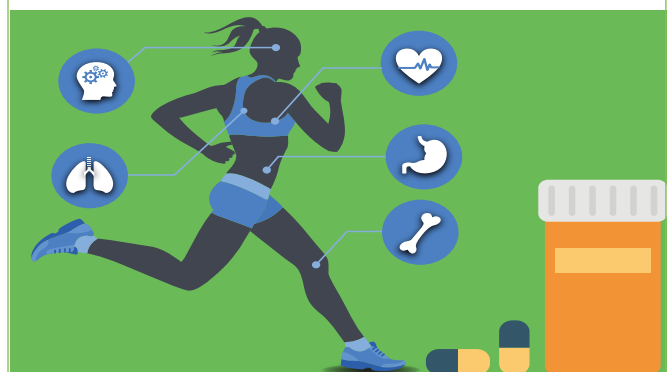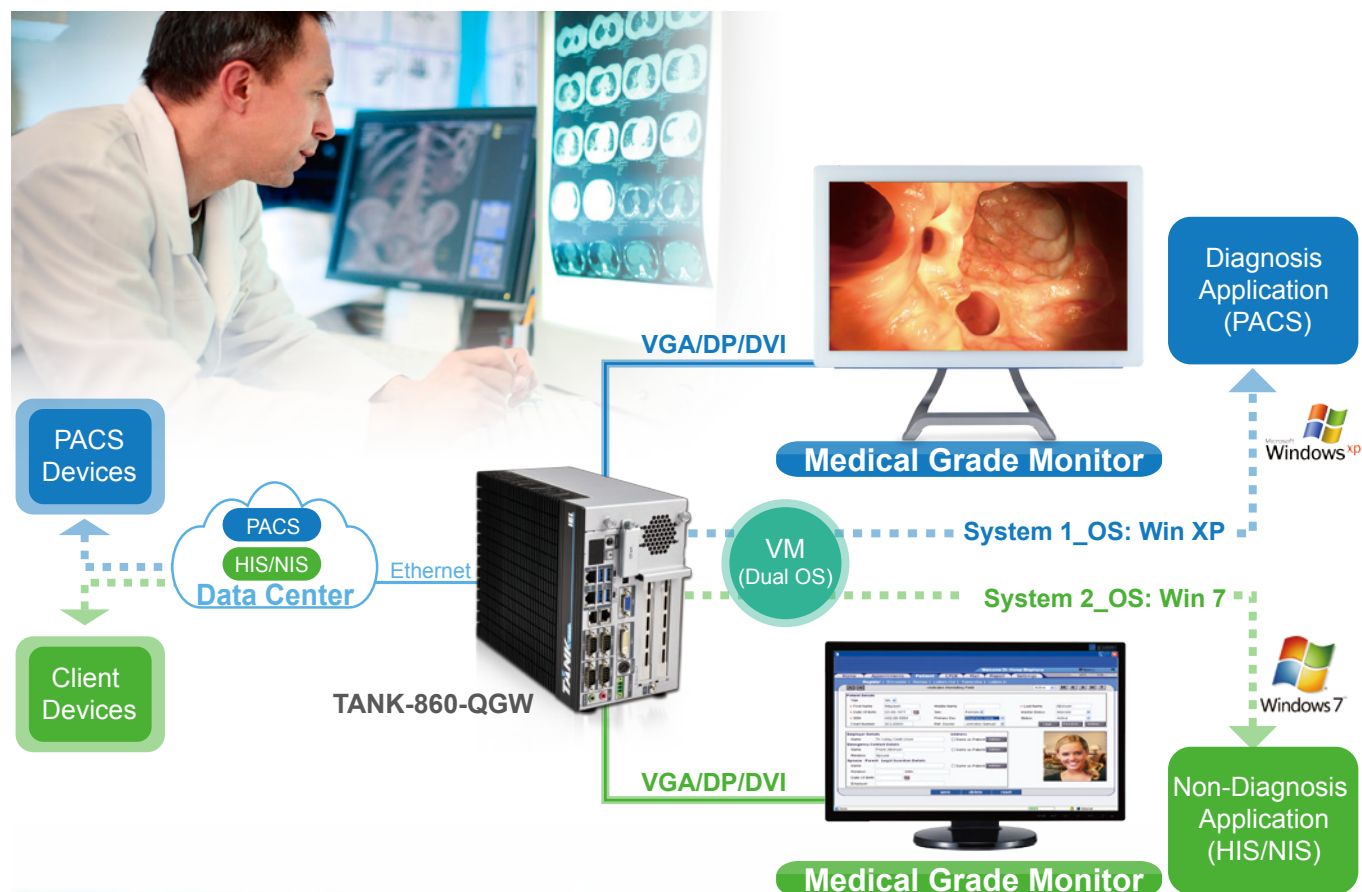
The health behaviors have changed. People in nowadays are taking more dietary supplements either every day or occasionally for gaining or maintaining their health. Today's dietary supplements include vitamins, minerals, herbals, botanicals, amino acids, enzymes, and many other products, the storage method and taking the various dietary supplements on time would be an issue to improve.

QTS Gateway in the Hospital

QTS Gateway Increases the Conveniences and Efficiencies for the Emergency Rooms!

Most of the nursing stations in the emergency rooms need at least dual systems to handle daily affairs: one is for HIS/NIS applications, the other is for diagnostic. It means a doctor needs two PCs which may occupy his/her working spaces.

VGA/DP/DVI

Diagnosis Application (PACS)

Medical Grade Monitor

Microsoft Windows xp

PACS Devices

PACS

HIS/NIS

Data Center

Ethernet

VM (Dual OS)

System 1_OS: Win XP

System 2_OS: Win 7

Windows 7

Client Devices

TANK-860-QGW

VGA/DP/DVI

Non-Diagnosis Application (HIS/NIS)

Medical Grade Monitor

Saving the working spaces

One PC with more than one OS

Optimize the working process
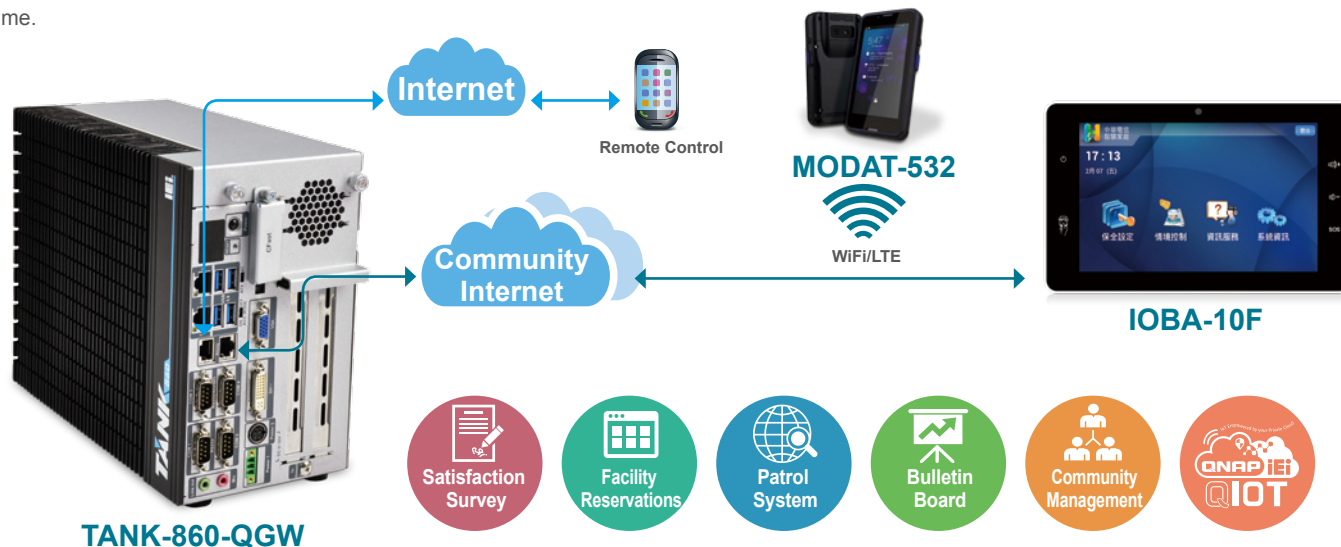
Building Automation

The demands on the intelligence of buildings have increased constantly in recent years, such that the energy efficiency as well as a good "return on investment" is the priority.

The idea of a "green building" based on sustainable, energy-efficient construction and building use can be realized with intelligent, integral building automation. IEI offers a universal, scalable building automation control system for logging all data points in buildings via TANK-600 & TANK-860-QGW.

Community Management

Home Automation

Remote Maintenance

IRIS™
IPMI 2.0 Compliant

Security & Surveillance
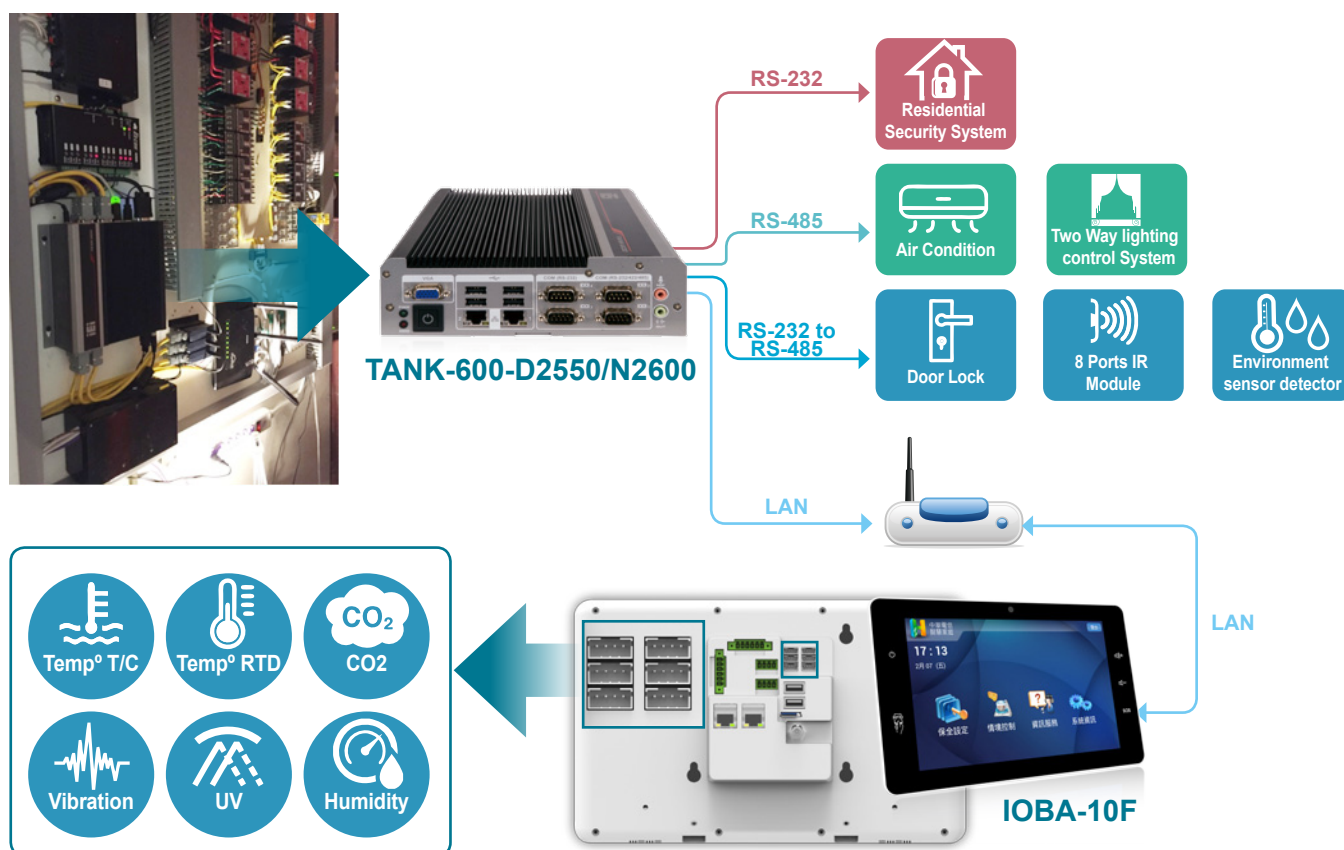
HDMI

Community Management

IEI provides the most often used service in a community and create the software on cloud or TANK-860-QGW. The user can operate these functions via their smart phone easily. For example, the bulletin board system is for resident s to receive the news from their smart phone in real time.

Internet

Remote Control

MODAT-532

WiFi/LTE

Community Internet

IOBA-10F

TANK-860-QGW

| Satisfaction Survey | Facility Reservations | Patrol System | Bulletin Board | Community Management | QNAP IEI QIOT |

Home Automation

TANK-600 provides twenty-four set of serial ports which can fulfill users' demand to connect a large number of devices through serial port. For home automation, user may have different kinds of system, two way lighting control system, door lock system, residential security system, air condition system, environment sensor detector, can be integrated with TANK-600 by serial ports. Besides, TANK-600 also provides GbE LAN and the user can through the Internet/Intranet connection to control or monitor home automation system.

IOBA-10F is 10.1 inch RISC based panel pc with rear input/output connectors which supports IOT starter kit sensors. The user may connect the sensors and integrate to the software which created by system integration.

RS-232 → **Residential Security System**

RS-485 → **Air Condition** **Two Way lighting control System**

TANK-600-D2550/N2600

RS-232 to RS-485 → **Door Lock** **8 Ports IR Module** **Environment sensor detector**

LAN

LAN

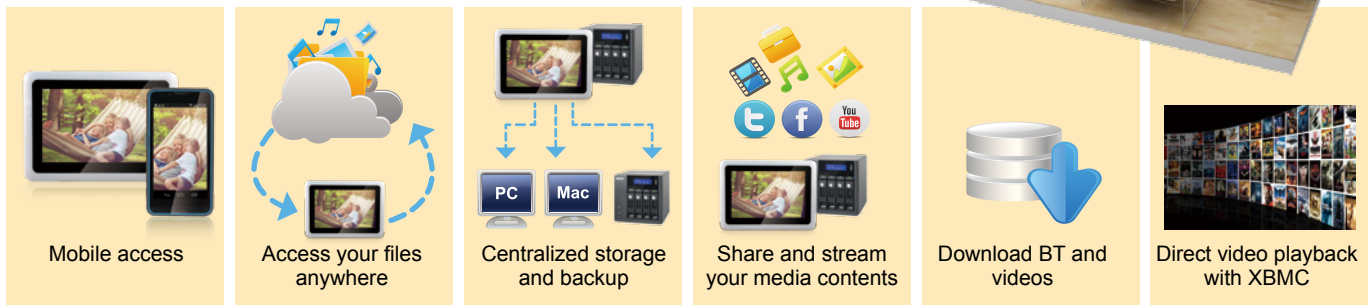| Temp° T/C | Temp° RTD | CO_2 |
| Vibration | UV | Humidity |

IOBA-10F

Home Digital Media Center

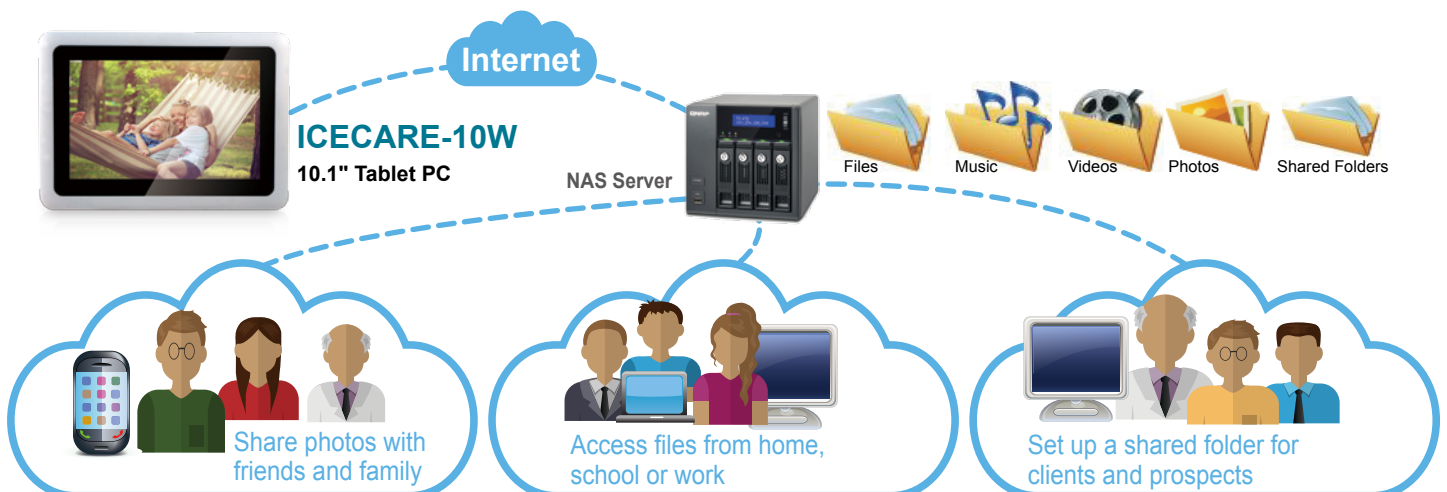# Manage Your Media More Effectively with QNAP NAS

The QNAP NAS server for home use is an easy to use networked storage center for the ultimate digital home entertainment experience. QNAP Turbo NAS servers are a new approach for sharing digital photos, music, and movies/videos, and keeping home computers backed up. You can easily view photos, listen to music, and even watch Full HD 1080p movies on a widescreen TV or projector streamed from the NAS over the network through PS3, Xbox 360, or other network media players. You can share multimedia content with family and friends wherever they are on the Internet by web browsers. iPhone/iPod touch/iPad and Android users can browse shared photos or listen to their music collections anywhere with 3G or Wi-Fi connection by streaming the content directly to the device – no sync required. QNAP NAS brings to life the ultimate in digital home theater enjoyment.

- View precious photos with slideshows and even background music
- Listen to your favorite music using customized playlists
- Enjoy HD movies or family videos on TV when streamed through various network players
- Anytime, anywhere access to your digital media over the Internet by web browsers or iPhone/iPod touch/iPad, or Android mobile devices

| Mobile access	Access your files anywhere	Centralized storage and backup	Share and stream your media contents	Download BT and videos	Direct video playback with XBMC

Plex Media Server to Stream Video Files

Plex Media Server is the back-end media server component of Plex. Plex Media Server is used to host the content and plugins that are then streamed to Plex Media Center and Plex mobile app clients, either on the same machine, the same local area network or over the Internet. Plex Media Server can be configured to index content in any directory on the machine -hosting it, as well as automatically acquiring iTunes and iPhoto content. Content may be transcoded by the server before it is streamed in order to reduce bandwidth requirements or for compatibility with the device being streamed to. Plex Media Server allows extensibility through the addition of plug-ins. Many of these plug-ins are available through the built-in Plex Online digital distribution service. The library organizer gives you the best browsing and watching experience through different platforms.

Internet

ICECARE-10W
10.1" Tablet PC

NAS Server

Files   Music   Videos   Photos   Shared Folders

Share photos with friends and family

Access files from home, school or work

Set up a shared folder for clients and prospects

Remote Diagnostics/Maintenance/Control

IEI remote intelligent system, iRIS, is compliant with IPMI 2.0 which supports out-of-band remote management to allow administrators to manage a system remotely in the absence of an operating system or of the system management software. Thus, IPMI functions can work in any of all scenarios such as:
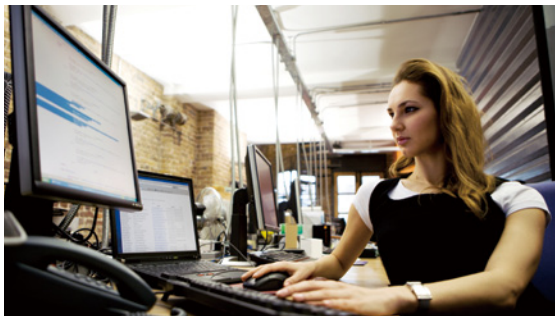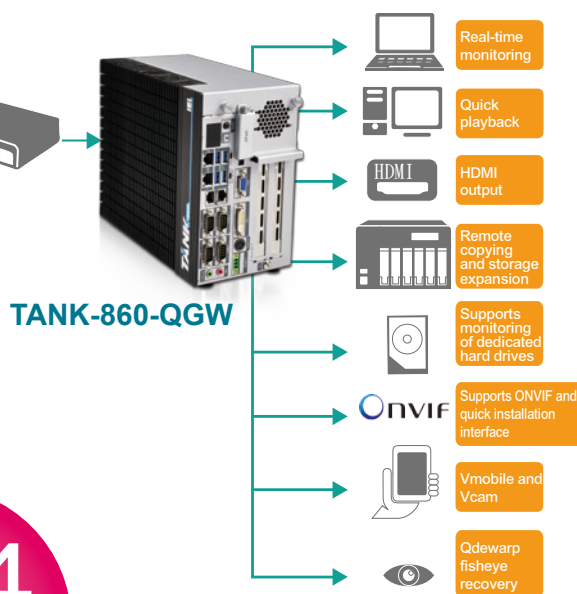
1. Before an OS has booted
2. When the system is powered down
3. After OS or system failure or BSOD
4. Cross Platform and OS independent

iRIS™
IPMI 2.0 Compliant

PPC-F22A-H81
22" Intel® Core I Panel PC
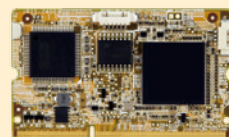
IRIS-2400-R10
Remote Management Module

Security & Surveillance

With TANK-860-QGW, users can upload the floor plan to the video surveillance center and then drag the webcam icon to the installed positions. Once an alarm event occurs, the camera icon will flash allowing you to quickly check and resolve the situation. You can also set five e-mail addresses for the system to send alarm event notification.

TANK-860-QGW

Real-time monitoring

Quick playback

HDMI output

Remote copying and storage expansion

Supports monitoring of dedicated hard drives

Supports ONVIF and quick installation interface

Vmobile and Vcam

Qdewarp fisheye recovery

free **4** video channels

Self-Registration Kiosk

Visitors can use the self-registration kiosk to communicate with the host by its VoIP feature. The visitor will get a registration QR code for opening the entrance gate. The registration QR code can also be used in the elevator for taking the visitor to a certain floor.

IOVU-10F-AD with build in RFID reader
10.1" Fanleess Industrial Panel PC with optional phone headset

Security

TANK-860-QGW

HDMI

PPC-F24A-H81
24" Industrial Panel PC

The TANK-860-QGW can be configured and perform monitoring, playback and management tasks by connecting a USB keyboard and mouse and by using HDMI display to deliver live Full HD video monitoring.

By using the shuttle button, you can drag it to the right to fast forward or to the left to fast rewind in order to quickly find the screen that you want; you can also control the speed. When you get close to the time the event occurred, you can view frame by frame to check details on the event.