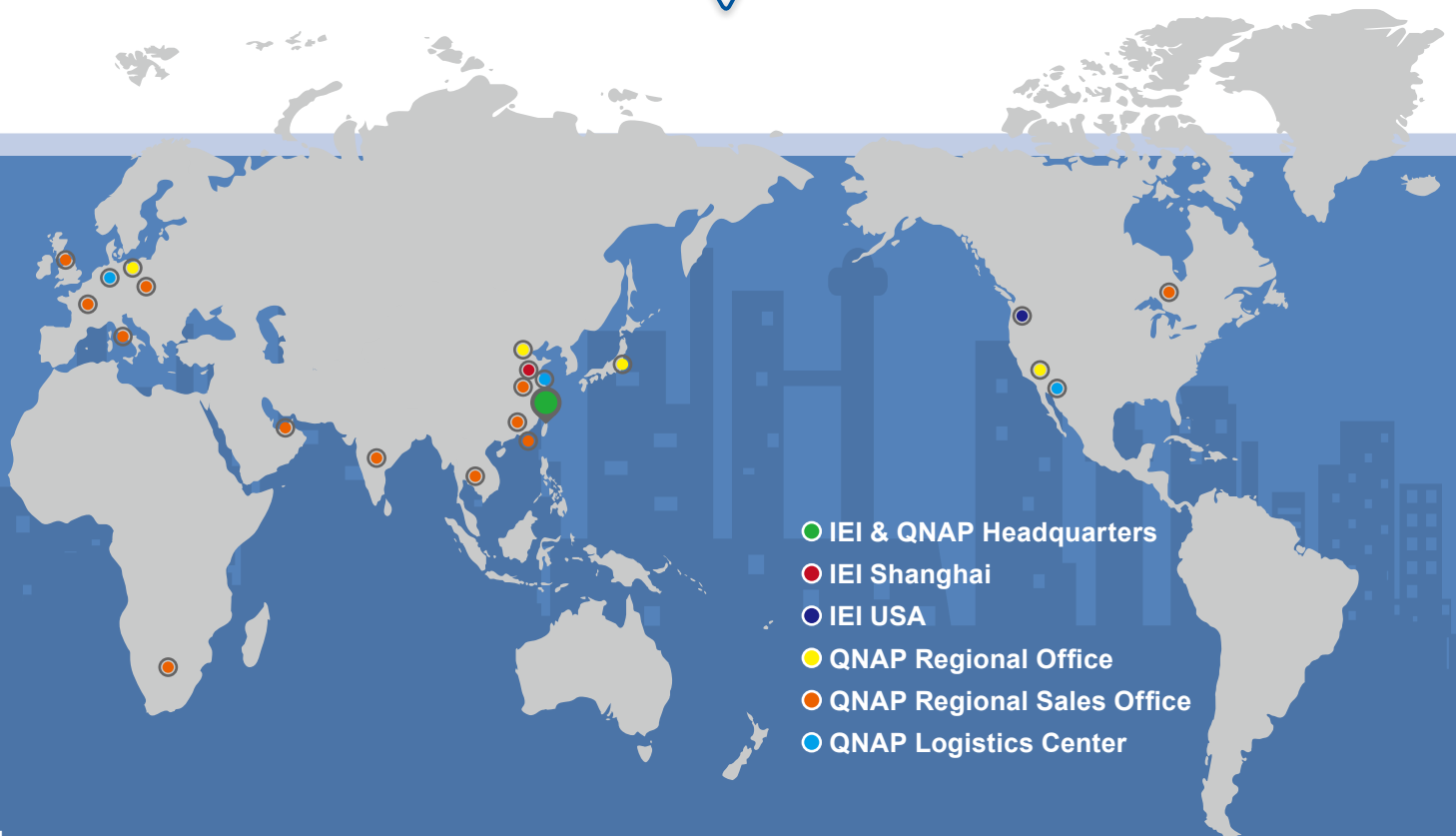


# IEI Group

IEI Group has 20 offices in 14 countries. IEI is alliance with Intel, Microsoft, Wind River, SAP and Amazon to offer a complete intelligent system with various options, including kinds of hardware devices supporting different operating systems, multiple applications, private/hybrid/public cloud computing and data storage/security for developing integrated solutions, collaborating new applications and expanding the markets.



20 Offices in 14 Countries





IEI Integration Corp. cooperates with its group company QNAP System Inc. to provide great service and technologies in both hardware and software. The upgraded services and the complete smart solutions enable our customers to easily achieve win-win business success.



**Leading industrial computer provider**

- Solid experience in a wide range of technologies and vertical know-how
- Support from concept to finished goods
- Specializes in IoT gateway, embedded system, panel PC, image capture and cloud based applications
- Meets market expectations by supplying a complete portfolio of computer-based applications



**Leading network attached storage provider**

- Innovative software development and IoT integration applications
- Complete portfolio from development and hardware design to manufacturing
- Global market allocation
- 1000+ employees worldwide



**Smart Transport**



**Smart Factory**



**Smart Healthcare**



**Smart Retail**



**Building Automation**



**Smart Fitness**

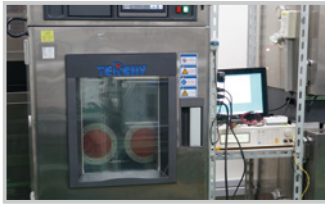


# A Meticulous Commitment to Product Quality

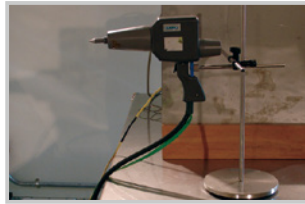
Comprehensive quality assurance tests are performed on all IEI products throughout the product development cycle. Testing is initiated in the research and development phase of a product and continued throughout the manufacturing phase. Quality assurance testing throughout the product development cycle ensures all IEI products to provide stable performance in the industrial environments.

## In-house Reliability Testing Facilities

ICP Reliability and Environment Lab



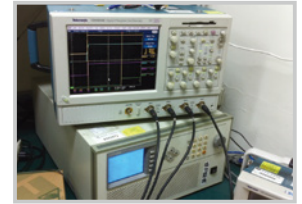
Temperature Testing



ESD Testing



Vibration Testing



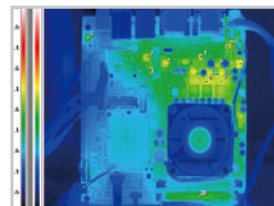
Power Consumption Testing



IP 65 Testing



Drop Testing



Thermal Testing



Safety Testing

## Thermal Test Criteria

IEI uses the following thermal measurement criteria for selecting the critical monitor points of thermal testing. Revealing the complete thermal

- A minimum of 1 DUT must be tested
- There must be no function error
- No any selected component temperature is higher than the maximum specified components specification.
- The test result of all the selected point should meet the specified DUT components thermal specification.
- The operating DUT power input is fixed on AC 110 V or DC 24V voltage.
- Minimum testing DUT configuration: highest speed CPU, add-on card, SPS, HDD, FDD, CD-ROM, DVD-ROM, CD-R/W, max. RAM memory.

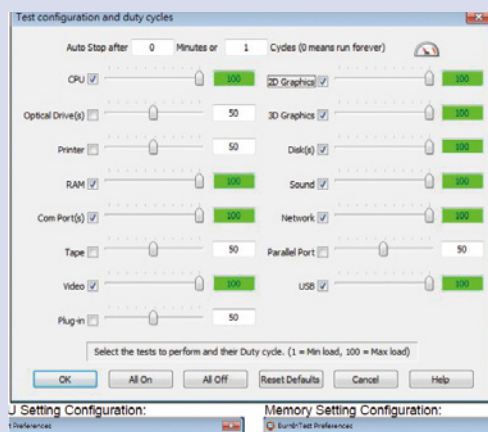
## AVIO Neo Thermo TVS-700N Testing Equipment



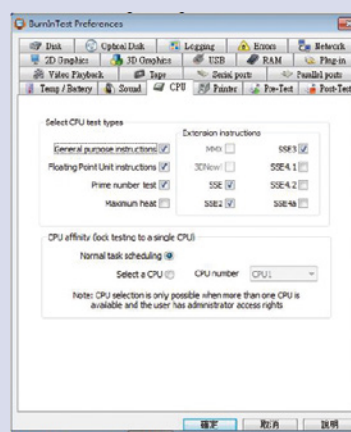
Better temperature control guarantees more reliable system operation in the long run

## Test Software

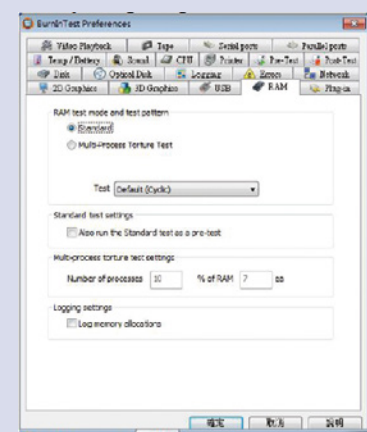
Passmark Burn-In Test Program V6.0



Setting Configuration



CPU Setting Configuration



Memory Setting Configuration

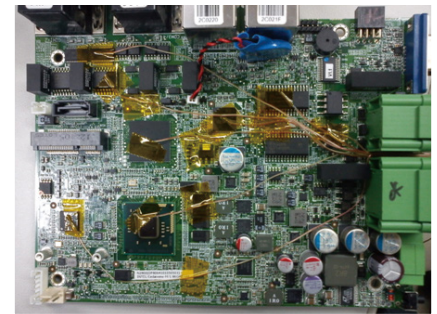


## Thermal Test Results

Against to each testing point, we detected the temperature of system to show the overheat. It reveals how the rugged system we support for user, adapting in wide range temperature situation and application.



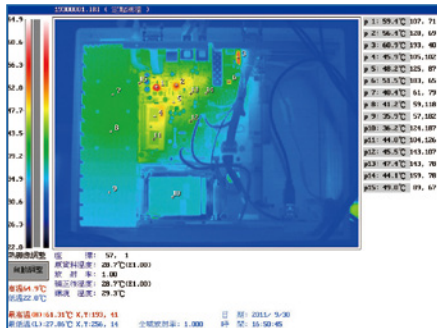
Agilent 34970A-Data Acquisition/Switch Unit



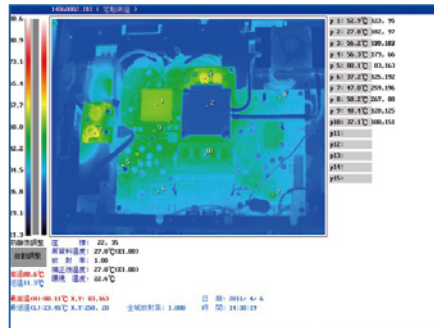
Type K thermocouple

### System Thermal Test

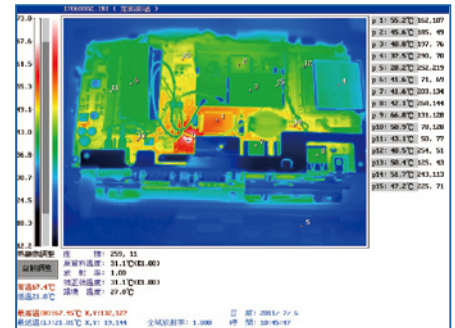
Test Condition: test temperature is 50°C, Test Humidity: 95%



PPC-5152-D525

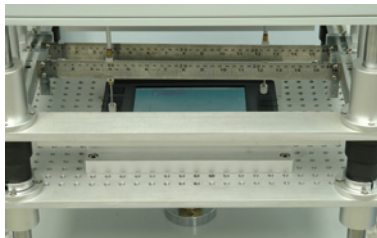


AFL-19i-HM55



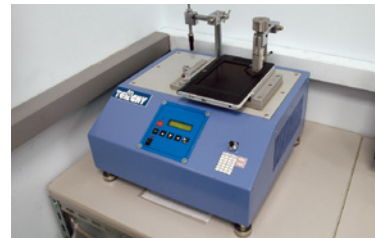
AFL-07A-LX

## Mobile System In-house Reliability Testing Facilities



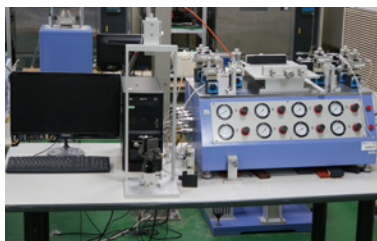
### Keypad Life Test/Touch Panel Tap Test

Press the keypad button and taps the touch panel 1,000,000 times using a test fixture. Measures the force and pressure of the keypad button and touch panel to observe potential damage.



### I/O Connector and Connector Rubber Insert/Remove Test

Ensures the I/O function by testing 5000 times.



### Touch Panel Scratch Test

Ensures the touch panel resists deformation, surface defects, color-off, spots and scratches by testing the surface 15000 times.



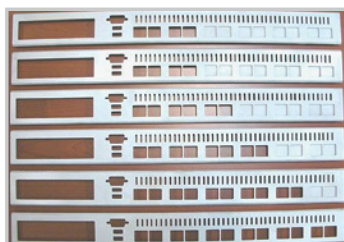
### Sunshine Super Long-life Weather Meter

Simulates sunlight environments to estimate the lifespan of the materials.

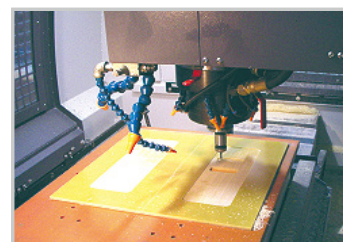
## Flexible Customization Service

### Example:

Front panel customization according to expansion adaptor selections



Front panel smapling by in-house CNC in 2 days





# Optical Design

In order to ensure the quality of all IEI optical products, IEI R&D department has its own optical laboratory, and all optical products are developed and tested in accordance with the standard procedure.

Both the optical lens and the camera itself undergo a series of rigorous tests and calibrations, including color balance, contrast and sharpness (by SFR), white balance, gamma correction, dynamic range (DR), distortion, shading, etc. IEI's products give exactly the same output as the original image, achieving the highest level of what you see and what you get.

## Optical Lab Facility



Color Matcher



Digital Camera



Resolution Capability Projector



Transparency Illuminator



Light Source Box



Barcode Reader



Display Color Analyzer



Illuminance Spectrophotometer

## Algorithm

### Dynamic change output image resolution

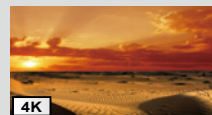
#### Real time Image scaling



Before  
original source: 1080P image



After  
1920x1080



After  
3840x2160

### Image fusion

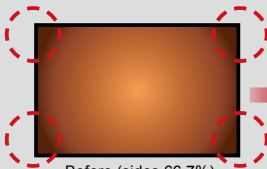


Before



After

### Image uniformity



Before (sides 66.7%)



After (sides 99.9%)

### 3D image processing



### Data encryption and decryption algorithm (AES / 3DES)



### Gamma Curve Adjustment , Anti-aliasing , Dithering and Color Space Convertor



### IC/ASIC/FPGA Customization

IEI's R&D team has the ability to develop FPGA programs. The FPGA technology is implemented in our video capture card, industrial camera and barcode products to optimize image processing. In addition, and more importantly, our products can be customized according to customer specific needs.



Support multi-video format



LCD

# Waterproof Certification Laboratory

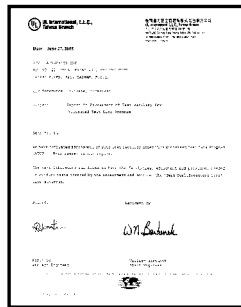
IEI follows standard testing procedures (UL 50) to design ruggedized LCD products with high reliability. We mainly provide IP 64, IP 65 and the latest IP 67 specifications in various dust and water resistant mechanical designs, ideal for outdoor and harsh environment applications.



IEI's LCD products are front sealed and tested in the certified house chamber under UL's Witnessed Test Data Program (WTDP).



IP 66 / UL 50



**UL 50 Certificate Chamber** strictly approved by Underwriters Laboratories Inc. IEI's in-house water resistance chamber is approved by the UL organization commonly recognized in North America.



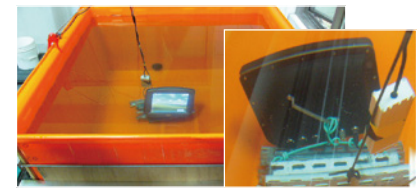
IP 69K



IP 64



IP 65



IP 67

The IP Code defined in international standard IEC 60529 classifies the degrees of protection provided against the intrusion of solid objects, dust, accidental contact, and water in electrical enclosures. It consists of the letters IP followed by two digits and an optional letter. The digits indicate conformity with the conditions summarized in the tables below.

## First digit

The first digit indicates the level of protection that the enclosure provides against access to hazardous parts

Level	Object size protected against	Effective against
0	-	No protection against contact and ingress of objects
1	• Ø50mm	Any large surface of the body, such as the back of a hand, but no protection against deliberate contact with a body part
2	• Ø12.5mm	Fingers or similar objects
3	┆ 2.5mm	Tools, thick wires, etc.
4	┆ 1mm	Most wires, screws, etc.
5	dust protected	Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact
6	dust tight	No ingress of dust; complete protection against contact

## Second digit

Protection of the equipment inside the enclosure against harmful ingress of water.

Level	Protected against	Details
0	not protected	—
1	dripping water	Dripping water (vertically falling drops) shall have no harmful effect
2	dripping water when tilted up to 15°	Vertically dripping water shall have no harmful effect when the enclosure is tilted at an angle up to 15° from its normal position
3	spraying water	Water falling as a spray at any angle up to 60° from the vertical shall have no harmful effect
4	splashing water	Water splashing against the enclosure from any direction shall have no harmful effect
5	water jets	Water projected by a nozzle against enclosure from any direction shall have no harmful effects
6	powerful water jets	Water projected in powerful jets against the enclosure from any direction shall have no harmful effects
7	immersion up to 1 m	Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1 m of submersion)
8	immersion beyond 1 m	The equipment is suitable for continuous immersion in water under conditions which shall be specified by the manufacturer
9K	Powerful high temperature water jets	Protected against close-range high pressure, high temperature spray downs. Test duration: 30 seconds in each of 4 angles, Water temperature: 80 °C

# Complete Line of Innovative Solutions

IEI invests significantly in research and development to provide more consumer-oriented and application-specific products. Extensive design and production experience allows IEI to create products for a diverse range of industries including health care, retail, factory and home automation.

## Rich Variety to Match Diversified Applications

### ODM Reference



#### Telehealth / Telemedicine Solution (ODM & OEM)

- 8" 16:10 IPS TFT LCD (1280x800)
- 8-core Cortex-A53 1.5GHz
- IEEE 802.11 a/b/g/n ; 2x2 802.11n, Bluetooth 4.0
- Android 6.0



#### Flexible ID design (open frame)

- IEI customer reference board (10.1"/18.5"/21.5")
- Waterproof: IPX5 (for customized ID)
- Support Android 7.1

### Mobile Solution



#### Industrial PDA

- 1.5m drop survival and IP67 protection
- Octa-Core Cortex A53 64bit 1.5GHz Processor
- 5.5" Display PDA
- Android 7.0 OS



#### Tablet PC

- 10.1" 350 cd/m<sup>2</sup> TFT LCD with capacitive touch
- Intel® Celeron® 1007U or Intel® Core™ i7-3517UE platform
- Powered by Windows® Embedded Standard 7 P
- Bluetooth, Wi-Fi, 3.75G wireless with GPS

### Display Solution

#### Light Industrial Panel PC



#### AFOLUX GEN III PPC

Narrow bezel, sleek outlook, easy installation

- W7"-W19" Flat-bezel with IP65/IP64 front protection
- Narrow and symmetric bezel allows portrait mode or landscape mode
- Less screws design easy for installation



#### AFOLUX GEN II PPC

Flat bezel, multi-touch, wide voltage

- W7"-21.5" Flat-bezel with IP64 front protection
- LED dash system for eye-catching notification
- IEI Light Fanless technology allows the system to turn on/off smart fan automatically according to environmental temperature, enhancing system stability.



#### AFOLUX PPC

Economical HMI device

- 5.7"-19" multi-functional all-in-one Panel PCs
- Streamlined plastic housing
- Water and dust resistance IP64 front panel protection



## Heavy Industrial Panel PC



### PPC-F Series

- 5.7"~24" rugged panel PC with metal housing
- IP 65 front protection
- Flexible expansion interface



### Full IP65 PC Series

- Redundant power backup
- Sunlight readable LCD
- IP 65 waterproof protection



### Marine Series

- DNV, IEC 60945 4th, IACS-E10 Compliant
- 19" and 24" Fanless marine Panel PC



### IP69K Series

- 15" with SUS304 Stainless Steel Housing
- Anti-corrosion, anti-oxidation, anti-bacteria, high-pressure and IP69K rated allow to high temperature steam clean

## RISC based Panel PC

**New**



### IOBA Series

- 10.1" 1280 x 800 LCD
- Project Capacitive Touch Screen
- CPU: Freescale i.MX6 Cortex-A9 Quad-Core 1GHz
- OS: Android 4.2 or 5.1

**New**



### IOVU Series

- 10.1" 1280 x 800 LCD
- Project Capacitive Touch Screen
- CPU: Freescale i.MX6 Cortex-A9 Quad-Core 1GHz
- OS: Android 5.1

## Display Monitor



### DM-F Series

- IP65 flat-bezel
- Resistive touch window: 6H anti-scratch PCAP multi-touch
- HDMI/DP high definition audio/video interface



### Marine Series

- DNV Certified
- PCAP multi-touch
- DVI/VGA/BNC output and BNC input
- Redundant power : AC and 18-36V DC



### LCD-KIT-F Series

- Integrated open frame mounting holes
- Flexible touch selection: resistive touch, resistive touch window or PCAP touch
- Flexible power selection: 12V DC or 9-36V DC power

## Healthcare Solution



### Medical Panel PC

- FHD Fanless Panel PC
- Three hot-swappable batteries with a total runtime of 8 hours is ideal for non-powered medical carts ideal for non-powered medical carts



### Medical Embedded System

- High Performance (Core i7)
- Fan-less
- Isolation COM Ports

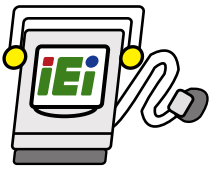


### Nursing Cart

- Battery System Integrated for Max. 8hrs Operation Time
- Easy-to-Use & Easy-to-Clean
- Flexible Configuration for Storage Space



# IEI Intelligent System Management Module



## What is IEI Intelligent System Management Module?

The IEI Intelligent System Management Module (iSMM) is a system health supervision application which utilizes sensor chips on IEI motherboards to track CPU and system temperatures, fan speed, watchdog timer, digital I/O status and system event. By quickly capturing and reporting system health data, users can prevent disasters such as system instability or damage.

## Features

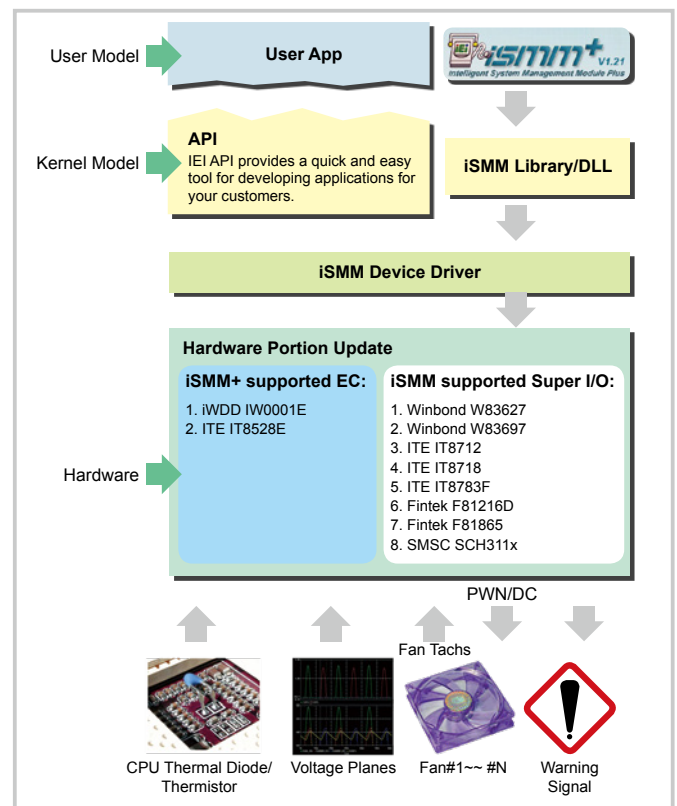
- Both local and remote management
- External and on-chip voltages data feedback
- CPU and system temperature data feedback
- Cooling fan speed data feedback
- Cooling fan speed controlled by PWM/On-Off/Automatic Mode
- Warning sound provided by the buzzer
- WDT test
- Programmable digital I/O
- Save and load system health configurations
- Remote power on/off control

## Available Operation System

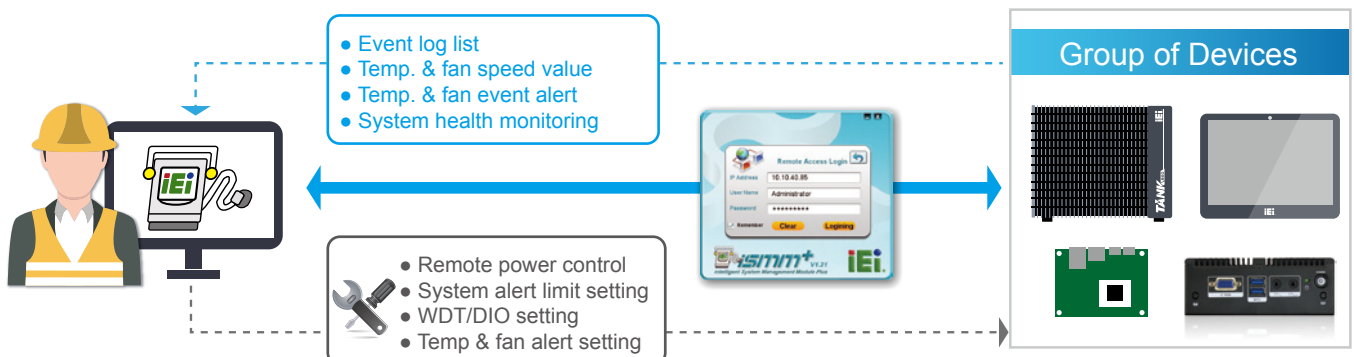
- Windows® XP
- Windows® Vista
- Windows® 7
- Windows® 8
- Windows® 10

Note: Please disable the UAC function or enable Administrator account while using iSMM+ remote management under Windows® Vista, Windows® 7, Windows® 8 and Windows® 10

## Architecture



## Remote Control and Management

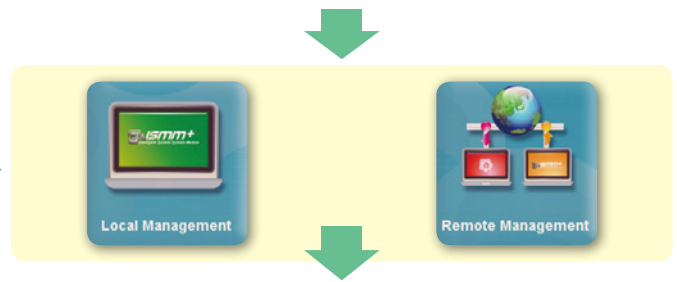


# iSMM+ Interface

## Local/Remote Management

1. Temperature monitoring and alert limit value setting
2. Fan speed control
3. Watchdog timer setting
4. DIO setting
5. Smart fan control
6. Event page
7. iSMM+ setup

Full graphical user interface  
Real-time access system  
Efficient API functions



**Temp. Sensors**  
CPU + System temperature monitoring and alert limit setting

**Fan**  
Dynamic fan speed monitoring, control and alert limit setting

**Watchdog Timer**  
Trouble free watchdog timer testing

**DIO**  
Easy digital I/O configuration



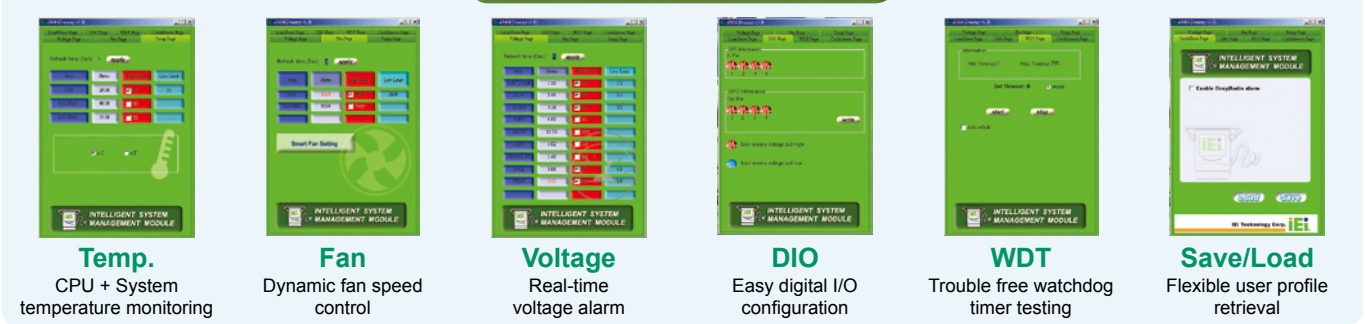
**Smart Fan Control**  
Advanced fan setting for both CPU and system smart fan

**Event List**  
Clear list for abnormal events with event name, event status and 1st generation time

**Beep/Save/Load**  
Flexible user profile retrieval and beep function setting

**Remote Power On/Off**  
Remotely turn off iSMM+ supported system and turn on system which supports remote wake-up

# iSMM Interface



**Temp.**  
CPU + System temperature monitoring

**Fan**  
Dynamic fan speed control

**Voltage**  
Real-time voltage alarm

**DIO**  
Easy digital I/O configuration

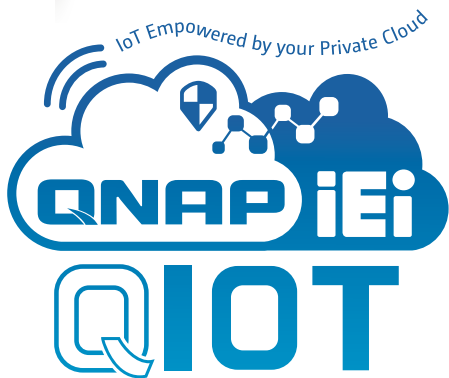
**WDT**  
Trouble free watchdog timer testing

**Save/Load**  
Flexible user profile retrieval



# QTS Gateway for IoT Cloud Solution

Could Base IPC Built-in with QTS Gateway OS for IIoT



By connecting machines, work pieces and systems, we can create intelligent networks along with the entire value chain of IoT, that is, at your demand, our expandable products are connected to each other autonomously.

The IIoT (Industrial Internet of Things) concept is changing the past production modes; more and more automated equipment is used to replace manual labor. However, the meaning of automation would have been lost if these equipment still have to rely on a lot of manpower. Machine to machine (M2M) communication, data storage and analysis capability are the keys to creating a smart production line. IEI incorporates with QNAP to launch cloud-based IPC with QTS Gateway operating system, offering possibilities of connecting devices, communications and the cloud servers for IPC applications.

**Health Care/  
Hospital Care**



**POC-W22A**

**Factory  
Automation  
& MES**



**TANK-870**

**Fleet  
Management**



**IVS-300**

**Retail**



**IDS-300**

**Home  
Automation**



**uIBX-250**

## ■ QTS Gateway for Cloud based IPC Solution

IEI's new generation smart fan-less embedded computer has an ultra-rugged design that allows stable operation even under the worst environments; it is not only quiet but also safe. The QTS Gateway platform allowing you to easily monitor the system status. Diverse application programs can also be downloaded to satisfy different application needs.

QTS Gateway is an operating system designed specifically for IEI IPCs and fully integrated the QNAP NAS operating system (QTS), breaking through the stereotype of IPCs of not having operating systems and saving unnecessary costs for installing servers and computers. QTS Gateway not only allows easy monitoring of computer status through its visualized interface, it also allows the use of many free application programs, making it multifunctional while challenging the values of traditional IPCs.

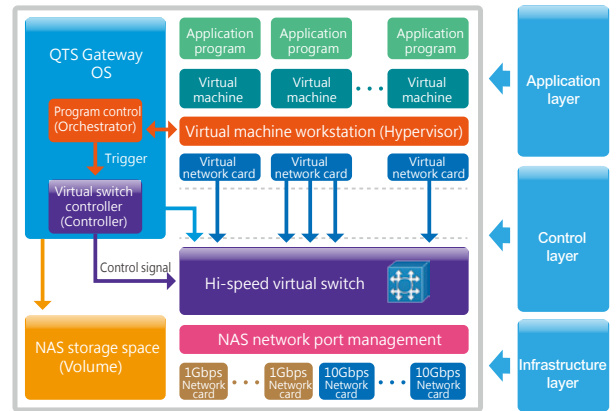


	Traditional IPC	Cloud-based IPC
Remote System Visualization	No	Yes
OS	No (additional devices must be purchased and installed)	Built-in VM virtual application
Remote Device Management	No (additional management software must be installed)	Free Apps: Qcenter, QRM+
Data Backup	No (additional management software must be installed)	Hybrid Backup Sync
myQNAPcloud Management	No	Yes, supports system update through a cloud
Video Surveillance	No (additional surveillance software must be installed)	Free software: Surveillance Station
RAID Data Storage	No (must use with specific platforms)	RAID 0, RAID 1
Support for Mobile Devices	No	Free App Qfile, Qmanager



# Virtualization Station Painless migration, complete OS virtualization

- Quick transfer, zero threshold
- PCIe card connection
- VM Backup & Restore
- Remote Import & Export
- USB Passthrough
- Advances in VM network structure, again — the Software Dened Network
- Virtual switch
- Device Management
- Visibility and direct access to files
- User-based permissions settings
- Operate VMs through web browsers



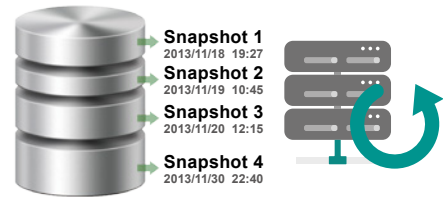
## ■ Quick Transfer, Zero Threshold

Provides physical-to-virtual (P2V) technology can be used to create a familiar operating system (e.g. Win 2000/XP/7/8.1/10/ Server 2003/2012, Linux, x86-Android...etc) adding more flexible system management.



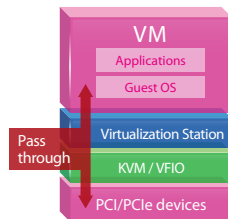
## ■ VM Backup & Restore with VM Snapshot

Supporting local and remote backup and restore your VM avoid disaster. Able to set schedule or real time snapshot to reduce the downtime while restoring.



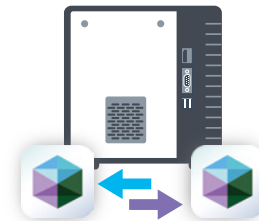
## ■ PCIe card connection and USB Passthrough

With Intel® Virtual technology allowing VMs to allocated H/W resources such as PCIe, PCI, Lan, USB, COM, DIO...etc.



## ■ Remote Import & Export

Virtual machines of various formats can be easily imported to and exported from the Virtualization Station.



# Container Station – Rapidly deploy containers

Container Station is developed following the Just enough OS, or JeOS, philosophy. This lightweight virtualization technology can instantly and truly create a ready-to-use environment on PCs, TANK-860-QGW and the Cloud for RD developers and IT administrators.

## Micro services, quick deployment

Container Station only requires 64MB of memory to run an application program; such lightweight virtualization technology allows you to quickly deploy large numbers of environments.

## A growing number of popular apps

Container station offers the most up-to-date and top-of-technology applications for rapid deployment with just a click. The following apps are now available: LibreOffice, MongoDB, Nginx, Node.js, Redis, MySQL, WordPress, Deluge, Minecraft, Wine, Jenkins, GitLab, Redmine, Joomla! and OpenERP.

## Best partner for IoT maintenance and operation

Container Station supports the required device protocols (MQTT and AMQT etc.), interface services and data computation needed in the IoT environment, allowing it to be easily connected to the IoT era.



## HD Station



Using VGA, DVI, HDMI, DP display to output the entire HD Station provides you easy to access your application (VM), output the Virtual Machine (VM) console via HDMI monitor.



## Linux Station



Comprehensive service from the Ubuntu Linux. Just download Linux Station from the App Center and use VGA/DP/DVI display to output the entire Ubuntu desktop.



## Surveillance Station – remote video surveillance



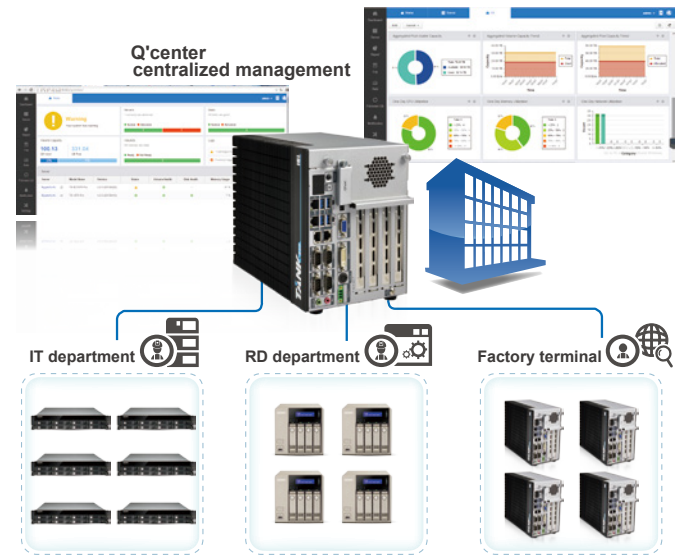
QNAP video surveillance center provides four free camera channels, and supports ONVIF and PSIA universal camera protocols, compatible with over 3,000 IP camera models of over 100 brands. It allows you to easily create an automated video surveillance system for your factory to protect property and personnel safety, and to create a working environment with no blind spots.



## Q'Center – Centralized multi-GTS Gateway management



Q'Center offers you a powerful management solution can view the status and system information of multiple QTS Gateway systems at the same time. Q'center can greatly assist IT administrators in system resource allocation and future capacity planning.



## Data Center and Backup – perfect integration of public and private clouds

In the era of information explosion, there are dozens of thousands of data being written every day. QTS Gateway continues the essence of the cloud purpose operating system and provides several management and backup tools to allow you to easily find data and back them up or share them to other devices or cloud services, providing more diverse and mind-easing backup management solutions.

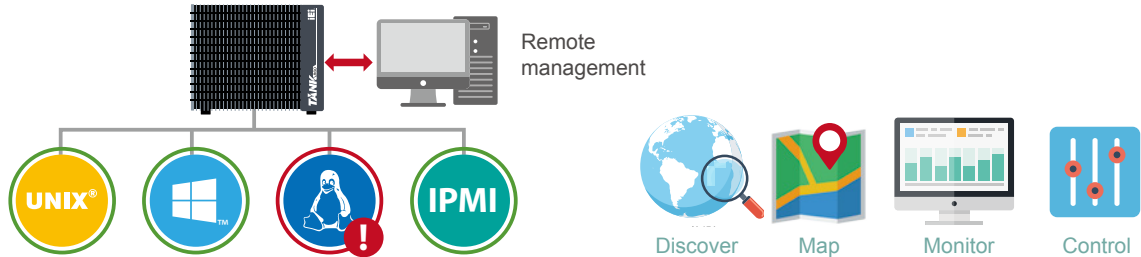
<p><b>Local backup and synchronization:</b></p> <ul style="list-style-type: none"> <li>External device</li> <li>Local folder</li> </ul>	<p><b>Remote backup and synchronization:</b></p> <ul style="list-style-type: none"> <li>RTRR</li> <li>FTP</li> <li>Rsync</li> <li>CIFS/SMB</li> </ul>	<p><b>Cloud backup:</b></p> <ul style="list-style-type: none"> <li>Support for a variety of enterprise-class cloud storage</li> </ul>
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## QRM+ IT infrastructure management

QRM+ is a centralized remote server and PC management solution from QNAP designed for IT teams. QRM+ monitors and controls the pulse/health of all the mission critical servers in your network. QRM+ provides a single point solution to discover, map, monitor and control all the critical devices (Servers/PCs/Thin Clients etc.) in your network. Manage your servers remotely from different client with-in or from outside of the same network.



- Improve server health status control for the administrators
- Discover, map, monitor and control resources in your network on a single platform.
- Supports Agent based (QRMAgent) and Agentless (IPMI) surveillance, supports IPMI 2.0.
- Keeps track of all mission-critical device settings and provides state of art alert/event management.
- Generate reports to help analyze the performance of network resources.
- Exclusive QRMAgent (lightweight remote management agent service) that supports multiple platforms such as Windows and Linux.
- Save time on troubleshooting and quickly restore the system to operable status.



## QRMAgent

Developed by QNAP, QRMAgent is an agent program installed on workstations. QRM+ can monitor and manage the workstations through this program. After you add a device to the QRM+ server, the system will automatically install this agent program to that device. Or, you can choose to manually install QRMAgent on the workstation if you prefer. QRMAgent currently supports the following operating systems (more to be added later):

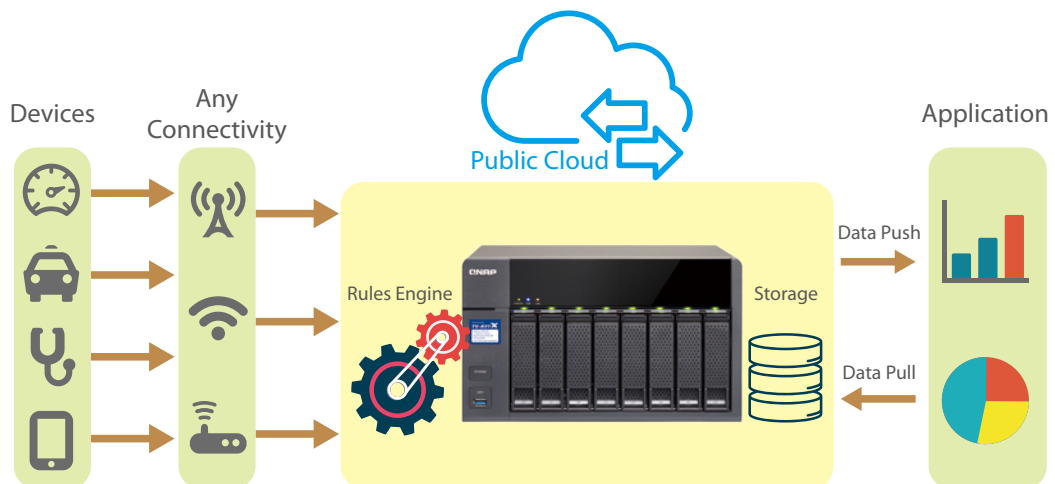
Platform	Operating System
x86 - Windows	Windows XP/7/Vista/8/8.1/10, Windows Server 2008/2012
AMD64 - Windows	Windows XP/7/Vista/8/8.1/10, Windows Server 2008/2012
X86 - Linux	Ubuntu 12.x/14.x/15.x



## QIoT Suite – Your private IoT cloud platform

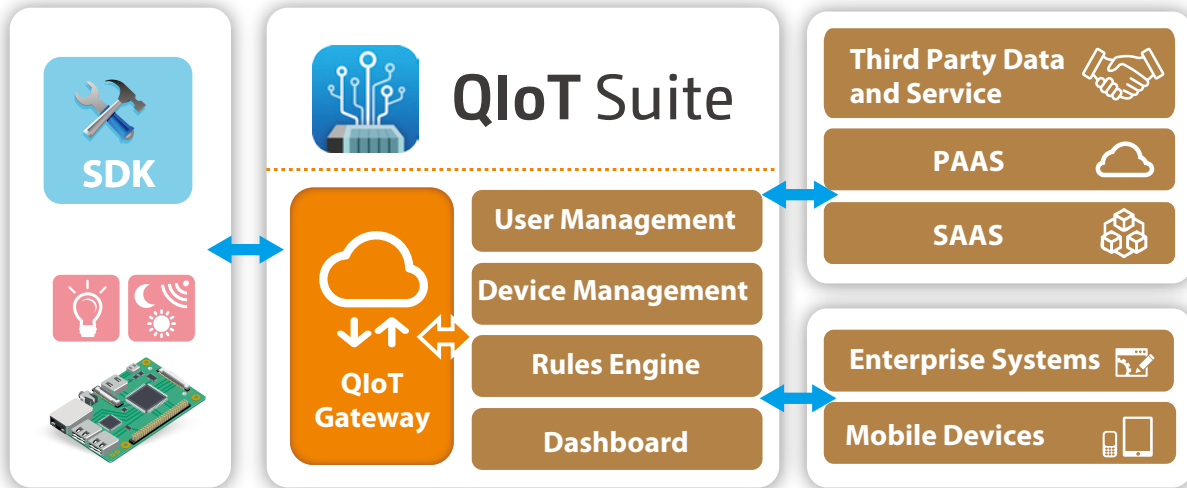
### A look at IoT technology

IoT (Internet of Things) architecture consists of 3 main layers: sensors, networks, and applications. The sensor layer includes devices that collect data about the environment and send that data to the network layer. The network layer transports the accumulated data to the application layer; the application layer combines and processes the data to transform it to actionable information, and eventually help enterprises make informed decisions.



## QIoT Suite with efficient development cases

QIoT Suite provides several IoT tools to help developers build an IoT environment, integrate sensors, and make use of development kits (Arduino, Raspberry Pi, etc) with the NAS's Ponte (data receiver), Node-RED (data analysis), MongoDB (data storage), Freeboard (data presentation) to construct a comprehensive IoT architecture.



## Product List

 <p><b>PPC-FxxB-BT</b></p> <ul style="list-style-type: none"> <li>12"/15"/17"/19" Fanless Intel® Bay Trail Solution</li> <li>Robust IP65 aluminum front bezel</li> </ul>	 <p><b>TANK-860-HM86</b></p> <ul style="list-style-type: none"> <li>Ruggedized fanless embedded system with Intel® HM86 mobile solution</li> <li>Up to six different expansion slot options</li> </ul>	 <p><b>TANK-760-HM86</b></p> <ul style="list-style-type: none"> <li>Ruggedized fanless embedded system with Intel® HM86 mobile solution</li> <li>Three independent video outputs</li> </ul>	 <p><b>ECW-281B-BT</b></p> <ul style="list-style-type: none"> <li>Fanless embedded system with Intel® Celeron J1900 Processor</li> <li>12V DC and 9~36V DC models available</li> </ul>
 <p><b>DRPC-120-BT</b></p> <ul style="list-style-type: none"> <li>Fanless DIN-Rail embedded system with Intel® E3845 processor</li> <li>Programmable OLED display</li> </ul>	 <p><b>IDS-300-BW</b></p> <ul style="list-style-type: none"> <li>Digital signage system with Intel® Celeron N3160 solution</li> <li>Three independent HDMI output</li> </ul>	 <p><b>ECN-380-QM87i</b></p> <ul style="list-style-type: none"> <li>Fanless embedded system with Intel® Core™ i5/Celeron® CPU</li> <li>Triple display with two HDMI and one VGA output</li> </ul>	 <p><b>ulBX-250-BW-QGW</b></p> <ul style="list-style-type: none"> <li>Fanless system with Intel® Celeron® N3160 processor</li> <li>Dual display</li> </ul>
 <p><b>SBOX-100-QM87-QGW</b></p> <ul style="list-style-type: none"> <li>Fanless marine computer with Intel® Core™ i5 CPU</li> <li>Isolated 18 V~36 V DC input</li> </ul>	 <p><b>IVS-200-ULT2-QGW</b></p> <ul style="list-style-type: none"> <li>Intel® i5-5350U or Celeron® 3755U CPU</li> <li>9~36V DC input</li> <li>E-Mark certification</li> </ul>	 <p><b>TANK-870-Q170-QGW</b></p> <ul style="list-style-type: none"> <li>Triple independent displays</li> <li>Flexibility for hardware expansion</li> </ul>	 <p><b>IVS-300-ULT3-QGW</b></p> <ul style="list-style-type: none"> <li>4 x PoE IEEE802.3af</li> <li>E-Mark certification</li> </ul>

# IEI One Key Recovery Solution

IEI's unique One Key Recovery solution allows you to recover and backup your operating system without complicated settings. One Key Recovery is bundled with every IEI SBC, embedded system, and all-in-one panel PC product.

## Recovery Tool for IEI Products Only



### A. Local operation:

#### Fix problems at your finger tips via hot key

By pressing F3, users can access the backup/recovery process easily. One Key Recovery simplifies the imaging and migration process, increasing efficiency in system maintenance.



Support OS List	
Windows® XP	Windows® Vista
Windows® 7	Windows® CE 5.0
Windows® CE 6.0	Windows® XP Embedded
Linux OS	
1. RedHat 9	4. Ubuntu 6.10, 7.10, 8.10
2. RedHat RHEL- 5.4	5. Debian 4.0, 5.0
3. Fedora Core 7, 8, 10, 11, 12	6. SuSe 10.3, 11.2

- One-Key Recovery**
  - Factory restore: restore your system to default setting (iei.gho)
  - Restore your last backup: recover the last system configuration (iei\_user.gho)
- One-Key Backup**
  - Backup your operating system to the secure hidden partition. You can create your own ghost image as "iei\_user.gho" including your application programs set-ups.

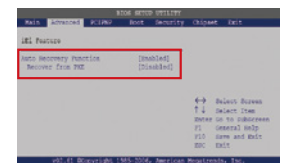
### B. Auto scheduling:

#### Instant problem solving from auto recovery

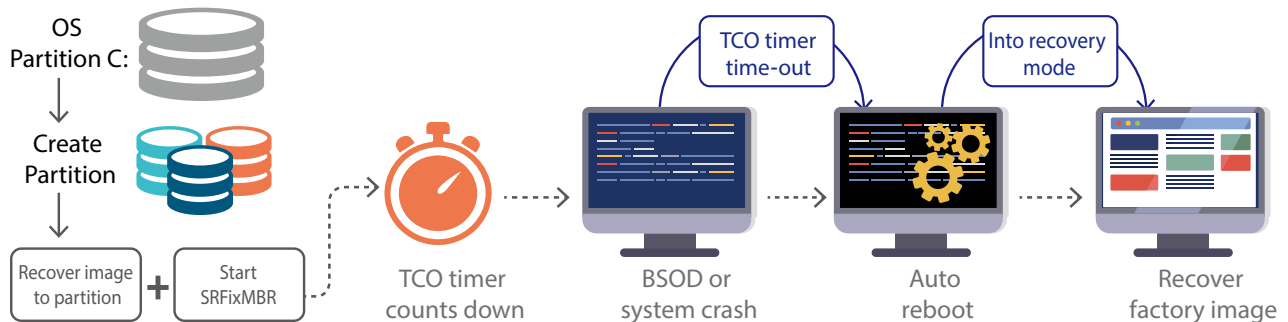
When the system encounters a Blue Screen of Death (BSOD) or hangs for 10 minutes [Default setting is 10 minutes, If want to change the time setting please contact us], the auto recovery function enables the factory default image automatically. This function shortens repair downtime, ensuring continuous work.

Supported OS List	
Windows® 2000	Windows® XP Embedded
Windows® XP	Windows® Embedded Standard 7
Windows® Vista	

Optional function, support by request.



Make sure to enable auto recovery function from BIOS after standard set up



### C. Network:

#### Remote recovery through LAN

One key Recovery also provides a remote recovery function. IT professionals can easily maintain client device through the network. When the system has a Blue Screen of Death (BSOD) or hangs for 10 minutes [Default setting is 10 minutes, If want to change the time setting please contact us], the default factory system image can be restored from server to ensure seamless workflow.



www.ieiworld.com

# IPMI Remote Management in IEI Solution - IPMI 2.0 Compliant



## What is iRIS?

Let's start from IPMI first before we talk about iRIS. IPMI is a standardized computer system interface used by system administrators for out-of band management of computer systems and monitor and control of their operation. It is a way to manage a computer that may be powered off or otherwise unresponsive by using a network connection to the hardware rather than to an operating system or login shell. iRIS is a modularized IPMI product, which is designed and manufactured by IEI company. iRIS is compliant with IPMI 2.0, and 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 kind of scenarios such as:

1. Before an OS has booted
2. When the system is powered off
3. After OS or system failure or BSOD
4. Cross platform and OS independent

Using a worldwide standardized IPMI 2.0 interface and protocol allows IEI's iRIS technology to assist administrators to remotely monitor and manage all IEI iRIS supported devices by group or individual via Internet communication.

## Application for iRIS

### ■ Retail Industry

Retail industry relies on software more than pure hardware architecture. Maintenance cost is the highest cost since service location could be everywhere, and any shutdown will cause business lost. Graphics performance with hardware management is the requirement for retail application such as digital signage, vending machine, kiosk, and ATM machine. IEI offers AMD graphics solution with IPMI module to fulfill application needs.

### ■ Factory Automation

Each production line has its own computer systems to do automated control of production processes. Active system alert could help to monitor all systems in production lines with less human resources, and instant notice and detailed event log with screen record could save time for troubleshooting. IEI provides a variety of solutions with iRIS support to save both time and human resources, and achieve less loss in production capacity.



PPC-F22A-H81



PPC-FXXA-H81



ECN-380



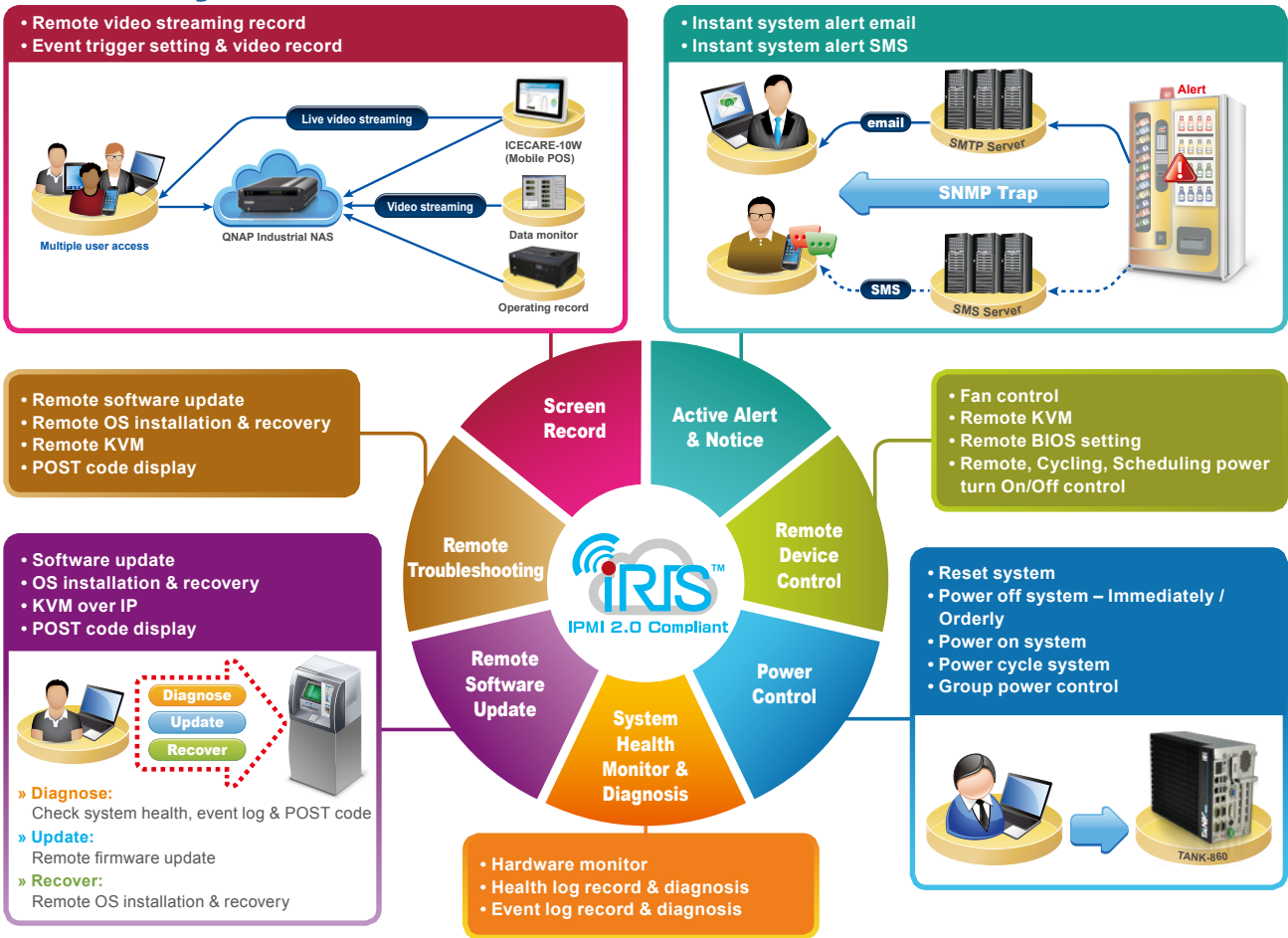
TANK-870



DRPC-120



# iRIS Key Features



## Conclusion

As mentioned in the introduction, more and more devices need to be organized by a smart way. iRIS module is able to support a variety of working environments, and to run in different operating systems. Moreover, iRIS solution can not only help you to manage devices, but also bring more convenience into your business for increasing working efficiency and reducing system failure probability.

## IEI iRIS Solution

Intel® Skylake Project		
Project	Form Factor	IPMI Solution
SPCIE-C2360-i2	PICMG 1.3	iRIS-2400
PCIE-Q170-i2	PICMG 1.3	iRIS-2400
IMBA-C236-i2	ATX	iRIS-2400
IMBA-Q170-i2	ATX	iRIS-2400
Intel® Broadwell-DE Project		
IMBA-BDE	ATX	iRIS-2500 (on board)
Intel® Haswell Projects		
SPCIE-C2260-i2	PICMG 1.3	iRIS-2400
PCIE-Q870-i2	PICMG 1.3	iRIS-2400
IMBA-C2260-i2	ATX	iRIS-2400
IMBA-Q870-i2	ATX	iRIS-2400
IMB-Q870-i2	microATX	iRIS-2400
IMB-H810-i2	microATX	iRIS-2400
KINO-DQM871-i1	Mini-ITX	iRIS-1010
NANO-QM871-i1	EPIC	iRIS-1010
WAFER-ULT/ULT2-i1	3.5"	iRIS-1010
Intel® Bay Trail		
KINO-ABT-i2	Mini-ITX	iRIS-2400
NANO-BT-i1	EPIC	iRIS-1010
WAFER-BT-i1	3.5"	iRIS-1010

AMD G-series		
Project	Form Factor	IPMI Solution
KINO-KBN/SE-i2	Mini-ITX	iRIS-2400
NANO-KBN/SE-i1	EPIC	iRIS-1010
WAFER-KBN-i1	3.5"	iRIS-1010
Embedded Box		
TANK-6000	Intel® Haswell (C226)	iRIS-2400 (on board)
TANK-760	Intel® Haswell (HM86)	iRIS-2400
TANK-870	Intel® Skylake (Q170)	iRIS-2400
TANK-860	Intel® Haswell (HM86)	iRIS-2400
TANK-801	Intel® Bay Trail (J1900)	iRIS-2400
DRPC-120	Intel® Bay Trail (E3845)	iRIS-2400
SBOX-QM87	Intel® Haswell (QM87)	iRIS-2400
ECN-380	Intel® Haswell (QM87)	iRIS-1010
ECW-281B-BT1	Intel® Bay Trail (J1900)	iRIS-1010
Panel PC		
PPC-FxxA-H81	Intel® Haswell (H81)	iRIS-2400
PPC-FxxA-BT	Intel® Bay Trail (J1900)	iRIS-2400
PPC-FXXB-BT	Intel® Bay Trail (J1900)	iRIS-2400
POC-W22A-H81	Intel® Haswell (H81)	iRIS-2400
SxxA-QM87	Intel® Haswell (QM87)	iRIS-2400