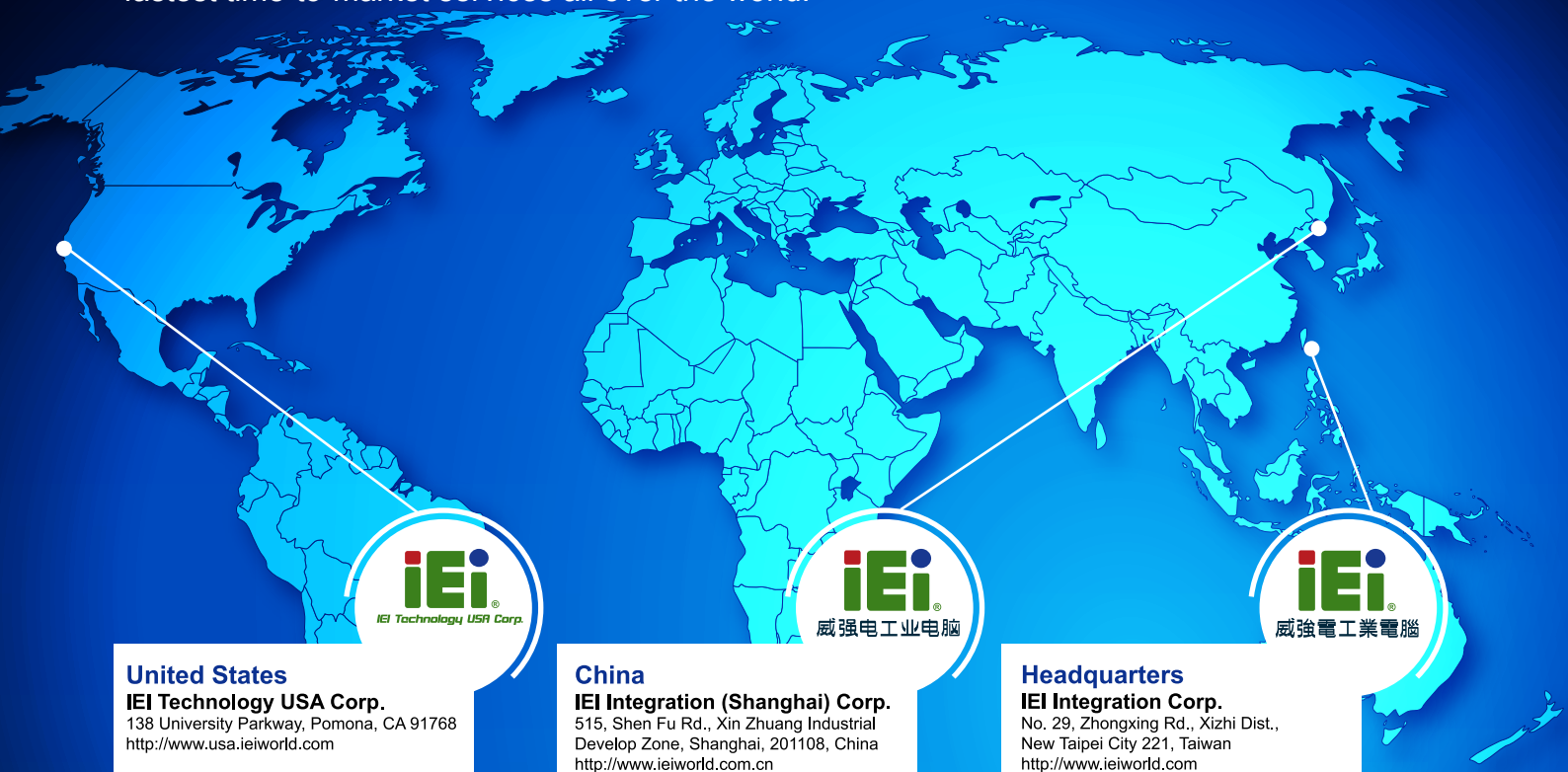


IEI and IEI Worldwide

IEI Integration Corp., a leading industrial computing service provider, integrates computing platforms and customization services. IEI supplies hundreds of industrial computer boards, systems and peripherals for various customer applications, in addition to supporting OEM/ODM services. By reducing customers' design time and accelerating product development, IEI helps customers advance beyond their market competition.

IEI has an innovative R&D team, effective management system, quality assurance and over 400 products passing through more than 100 distributors in order to provide customers with the fastest time-to-market services all over the world.



United States

IEI Technology USA Corp.
138 University Parkway, Pomona, CA 91768
<http://www.usa.ieiworld.com>



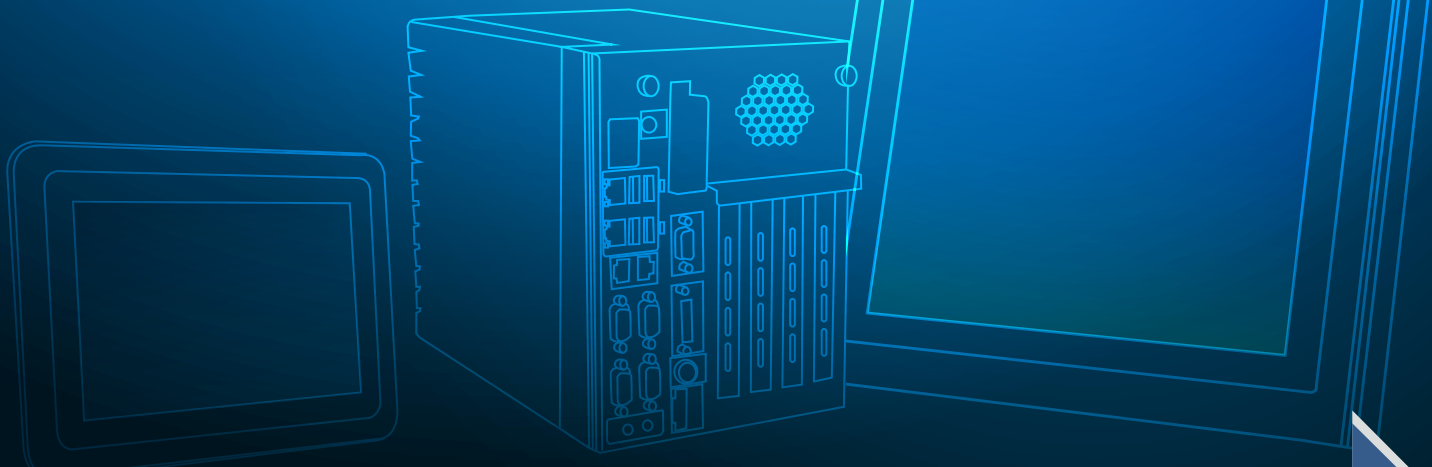
China

IEI Integration (Shanghai) Corp.
515, Shen Fu Rd., Xin Zhuang Industrial Develop Zone, Shanghai, 201108, China
<http://www.ieiworld.com.cn>



Headquarters

IEI Integration Corp.
No. 29, Zhongxing Rd., Xizhi Dist.,
New Taipei City 221, Taiwan
<http://www.ieiworld.com>



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



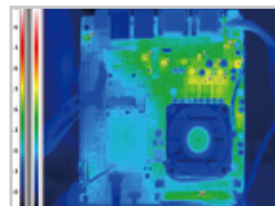
Power Consumption Testing



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.

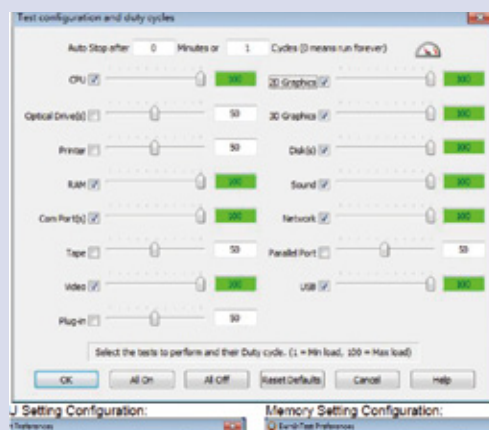
AVIO Neo Thermo TVS-700N Testing Equipment



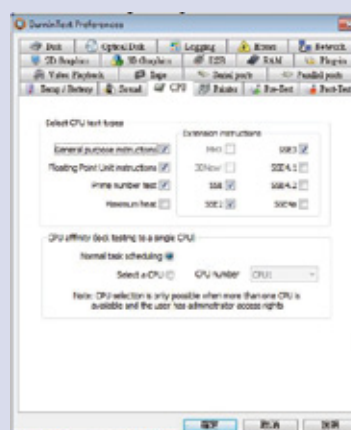
Better temperature control guarantees more reliable system operation in the long run

Test Software

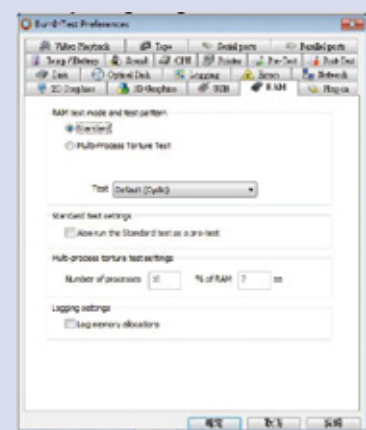
Passmark Burn-In Test Program V6.0



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.



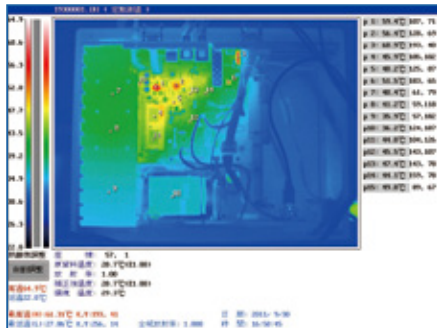
Agilent 34970A-Data Acquisition/Switch Unit



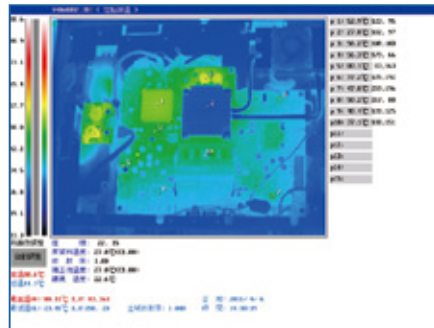
Type K thermocouple

System Thermal Test

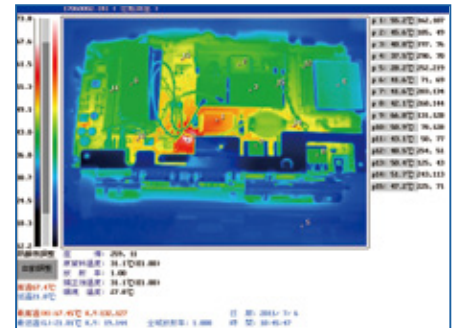
Test Condition: test temperature is 50°C, Test Humidity: 95%



PPC-5152-D525

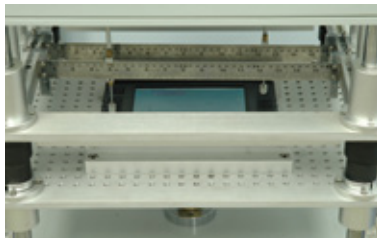


AFL-19i-HM55



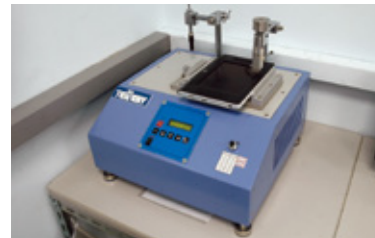
AFL-07A-LX

■ Mobile System In-house Reliability Testing Facilities



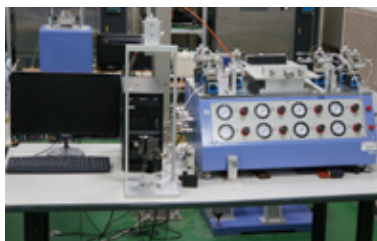
Keypad Life Test/Touch Panel Tap Test

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.



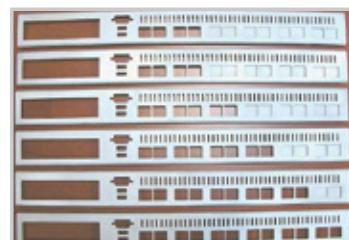
Sunshine Super Long-life Weather Meter

Simulates sunlight environments to estimate the lifespan of the materials.

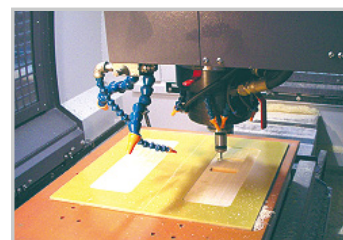
Flexible Customization Service

Example:

Front panel customization according to expansion adaptor selections



Front panel smapping 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

FHD
After
1920x1080

4K
After
3840x2160

Image fusion

Before

Seamless
After

Image uniformity

→

Before (sides 66.7%)

After (sides 99.9%)

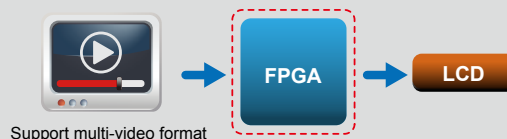
3D image processing

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.



Waterproof Certification Laboratory

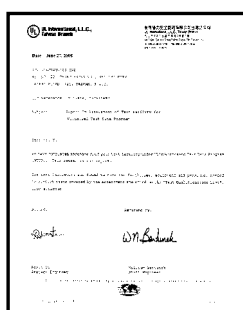
IEI follows standard testing procedures (UL 50) to design ruggedized LCD products with high reliability. We mainly provide IP 64, IP 65 and the latest IP 67 specifications in various dust and water resistant mechanical designs, ideal for outdoor and harsh environment applications.



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



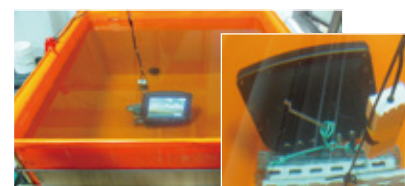
IP 66 / UL 50



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 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	>50 mm 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	>12.5 mm Fingers or similar objects
3	⊥ 2.5mm	>2.5 mm Tools, thick wires, etc.
4	⊥ 1mm	>1 mm 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

Rich Variety to Match Diversified Applications

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.

1. Mobile Systems

Tablet PC



Ultra Tough Assistant

- 10.1" 350 cd/m² 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

Industrial PDA



New

Mobile Data Collector

- Stylish rugged design and ultra-light industrial Android mobile device
- 5.3" Quad-Core Cortex A53 64bit 1.5GHz Processor
- GSM 850/900/1800/1900
- Android 5.0 OS

2. Display Systems

Light Industrial Panel PC

AFOLUX GEN III PPC

New



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

Preliminary



- 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

Preliminary



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

Windows® CE Series

- Powered by Windows® CE 5.0 or 6.0
- Built-in Ethernet LAN
- Built-in RS-232/422/485 Port
- Resistive type touchscreen
- Low power consumption

Android Series New

- Project Capacitive Touch Screen
- CPU: Freescale i.MX6 Cortex-A9 Quad-Core 1GHz
- OS: Android 4.2.2
- Boot Flash: 4GB eMMC Nand Flash
- RAM: 1GB DDR3 SDRAM on board

Display Monitor**DM-F Series New**

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

Robot-TP Series

- 6.5 / 8.4" TFT LCD with resistive touch screen
- 6-meter all-in-one cable design with power, touch, video, and button signal
- Fully IP64 protection

Marine Series New

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

LCD-KIT-F Series New

- 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

3. Healthcare Solutions

Medical Panel PC

- High Performance (Core i5)
- Smart Fan / Fan-less
- Flexible Expansion

Medical Embedded System**Preliminary**

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

Nurcing Cart

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

4. Industrial System

Industrial Automation System**TANK Series**

- Fanless design
- Wide range temperature & range power input
- Easy Maintenance and Expansion

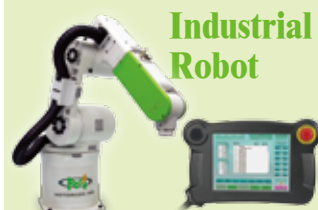
Transportation System**IVS Series**

- Wide Range Temperature
- Vibration and Shock Resistance
- E-Mark / EN50155 / DNV Certification

Digital Signage System New**IDS Series**

- Up to 4K High Resolution
- Three independant Display with HDMI support
- Ultra Thin Design with Multiple Mounting Solution

5. Motorcon Automation Solution

Industrial Robot

- Robot Controller
- Robot arm
- Teaching pendant

Motion Control

- Motion Control Platform
- Motion Control Card

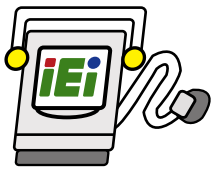
Machine Vision

- Smart Camera

Industrial Computer

- MTC-400
- MTC-800
- MTC-820

IEI Intelligent System Management Module



What is IEI Intelligent System Management Module?

The IEI Intelligent System Management Module (iSM) 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

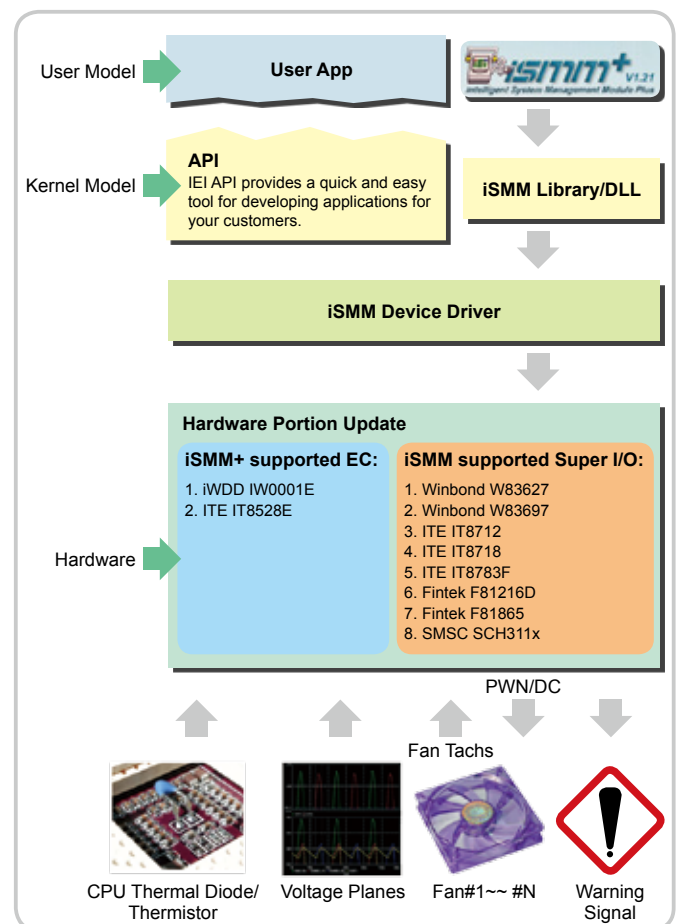
- Both local and remote management
- External and on-chip voltages data feedback
- CPU and system temperature data feedback
- Cooling fan speed data feedback
- Cooling fan speed controlled by PWM/On-Off/Automatic Mode
- Warning sound provided by the buzzer
- WDT test
- Programmable digital I/O
- Save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

Available Operation System

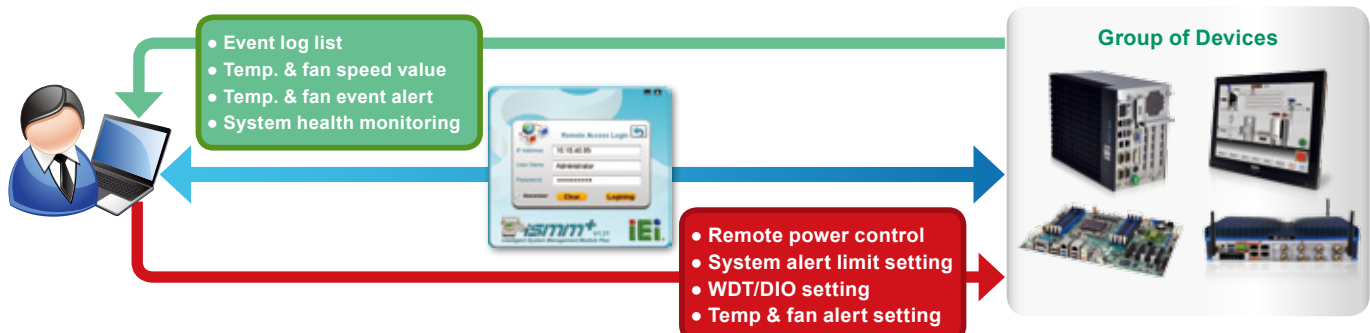
- Windows® XP
- Windows® Vista
- Windows® 7
- Windows® 8

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

Architecture



Remote Control and Management



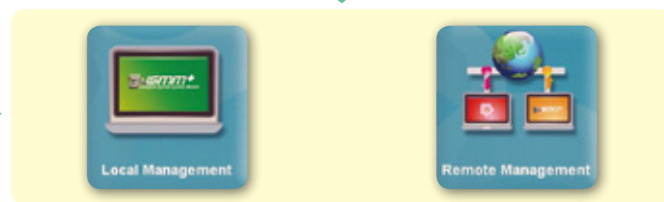
iSMM+ Interface

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



<p>Temp. Sensors CPU + System temperature monitoring and alert limit setting</p>	<p>Fan Dynamic fan speed monitoring, control and alert limit setting</p>	<p>Watchdog Timer Trouble free watchdog timer testing</p>	<p>DIO Easy digital I/O configuration</p>
<p>Smart Fan Control Advanced fan setting for both CPU and system smart fan</p>	<p>Event List Clear list for abnormal events with event name, event status and 1st generation time</p>	<p>Beep/Save/Load Flexible user profile retrieval and beep function setting</p>	<p>Remote Power On/Off Remotely turn off iSMM+ supported system and turn on system which supports remote wake-up</p>

iSMM Interface

INTELLIGENT SYSTEM MANAGEMENT MODULE					
<p>Temp. CPU + System temperature monitoring</p>	<p>Fan Dynamic fan speed control</p>	<p>Voltage Real-time voltage alarm</p>	<p>DIO Easy digital I/O configuration</p>	<p>WDT Trouble free watchdog timer testing</p>	<p>Save/Load Flexible user profile retrieval</p>

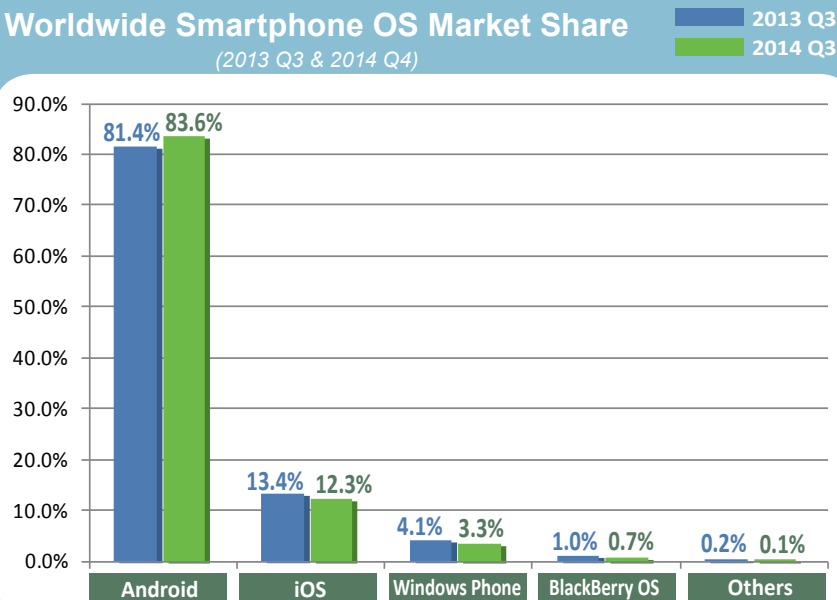
Android for Industrial Embedded & Automation

2017 new platform and OS highlight

Android with High-performance RISC SoC

Worldwide Smartphone OS Market Share

(2013 Q3 & 2014 Q4)



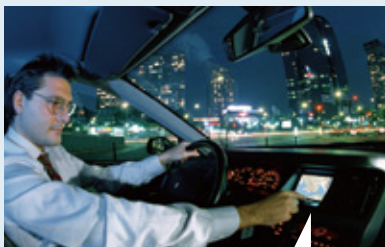
Rate of Adoption

Version	Codename	API	Distribution
2.2	Froyo	8	0.4%
2.3.3-2.3.7	Gingerbread	10	7.4%
4.0.3-4.0.4	Ice Cream Sandwich	15	6.4%
4.1.x	Jelly Bean	16	18.4%
4.2.x		17	19.8%
4.3		18	6.3%
4.4	KiKat	19	39.7%
5.0	Lollipop	21	1.6%

Android		iOS		Windows phone		BlackBerry OS		Others	
2013Q3	2014Q3	2013Q3	2014Q3	2013Q3	2014Q3	2013Q3	2014Q3	2013Q3	2014Q3
81.4%	83.6%	13.4%	12.3%	4.1%	3.3%	1.0%	0.7%	0.2%	0.1%

Android Platform for Different Industries

The Android platforms are widely used since Android 2.3.4 was release in 2010.



Car Infotainment



Transportation



IKARPC-07A-A9

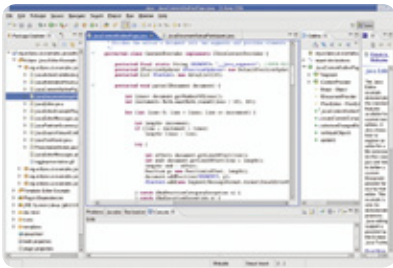


Warehouse Management



MODAT-532

Android (Native) App Development



IDE for Java (eclipse)

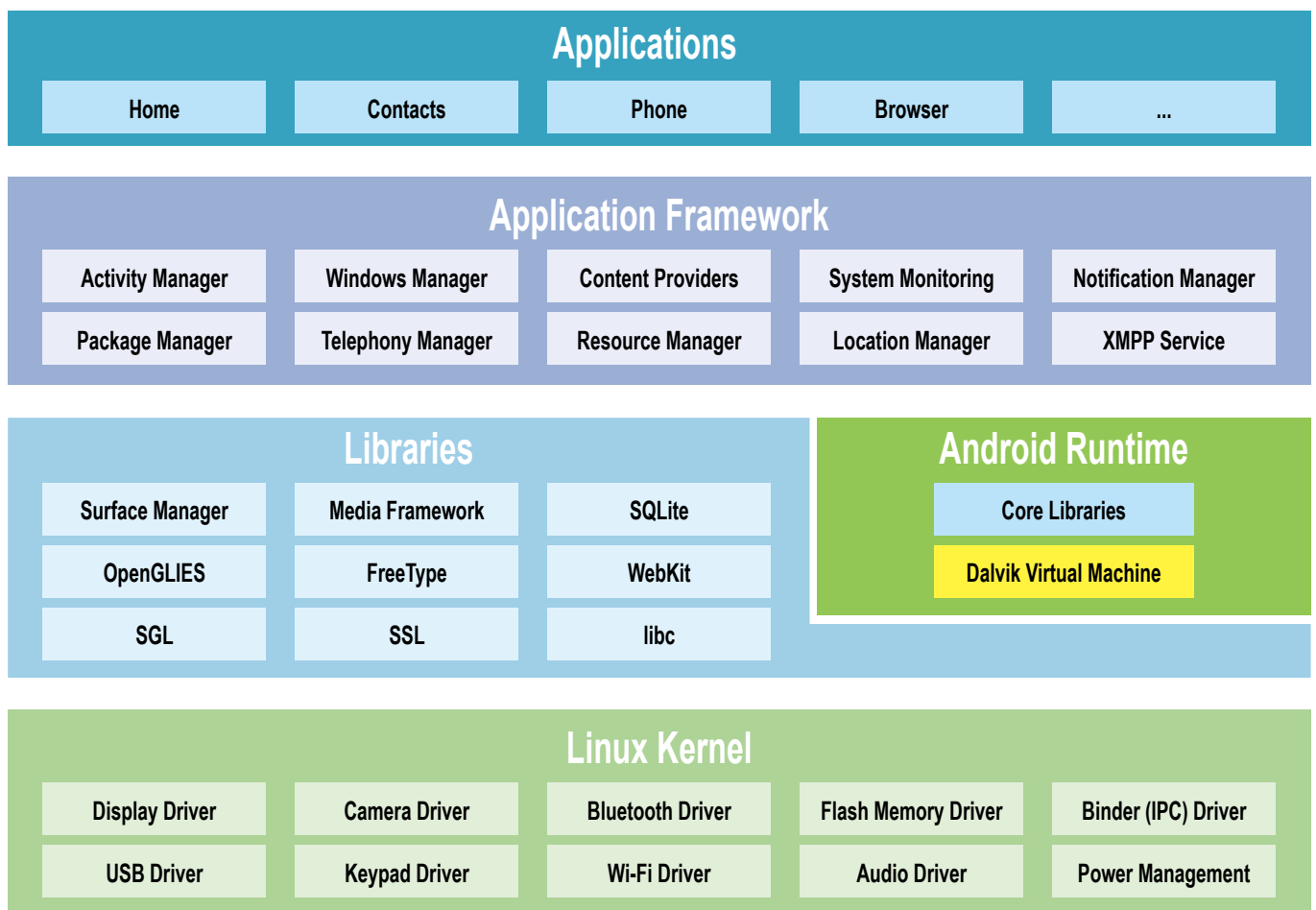


Emulator



ADT Plug-in

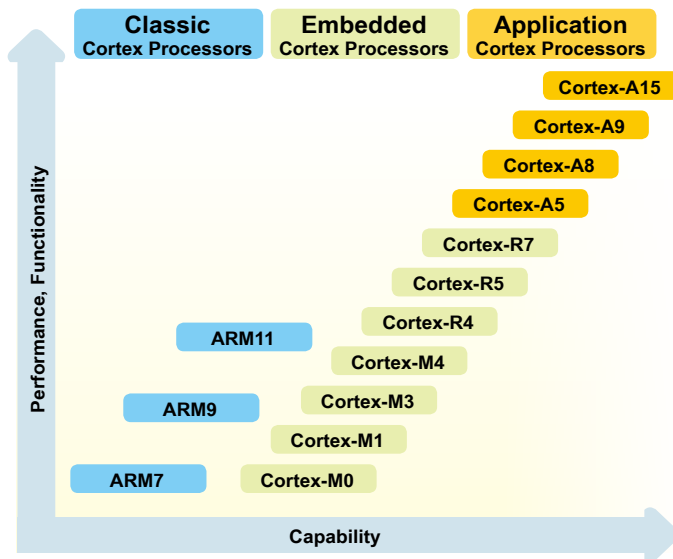
Android Software Architecture



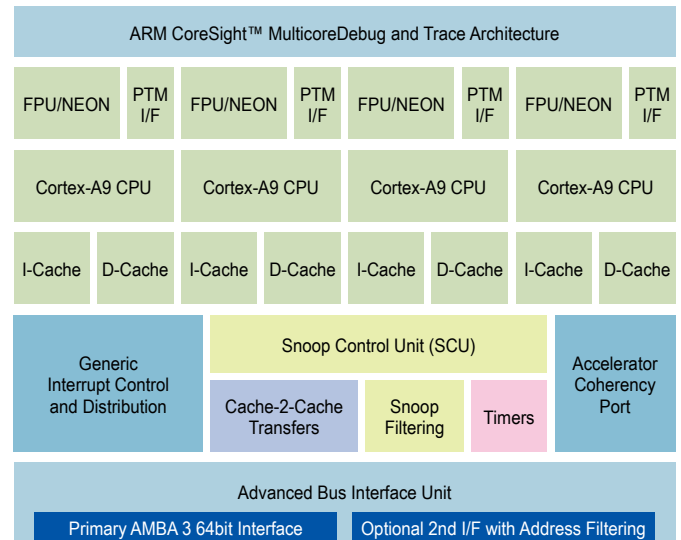
Cortex™-A9 on Freescale™ i.MX 6 Series

Cortex™-A9 Arch.

■ Cortex™-A9 Arch.



■ Cortex™-A9 MPCore



Speed Optimized Macro



Total macro area
• 6.7 mm² (40nm)



Device Speed
• 1.2 GHz



Power Consumption
• Delivering 10,000 DMIPS with 1.9 W

Power Optimized Macro



Total macro area
• 4.9 mm² (40nm)



Device Speed
• 800 MHz



Power Consumption
• Delivering 4,000 DMIPS with 0.5 W

Great Mobile Experience via i.MX 6 Quad

The Great News: i.MX 6Quad enables a richer experience across the board. Four-core computing provides more services, richer 'standard apps', faster response time, and headroom to expand and grow as the market evolves - **(Longterm support to 10 years)**

Richer 'Standard' Apps

1.	Watch Video	+	DVR Show
2.	Reading	+	Video Publishing
3.	Street Maps	+	Browsing
4.	Email/IM	+	Heavy Browsing

Full suite of Enhanced Mobile Services

Search Crawler	VPN
Virus Check	Face Reco
Reality Augment App	Location Sensing
Heavy Browsing	VOIP

OS

Cortex A9 (1)

Cortex A9 (2)

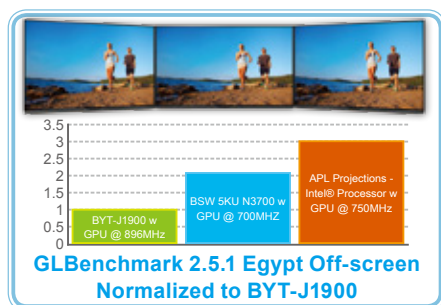
Cortex A9 (3)

Cortex A9 (4)

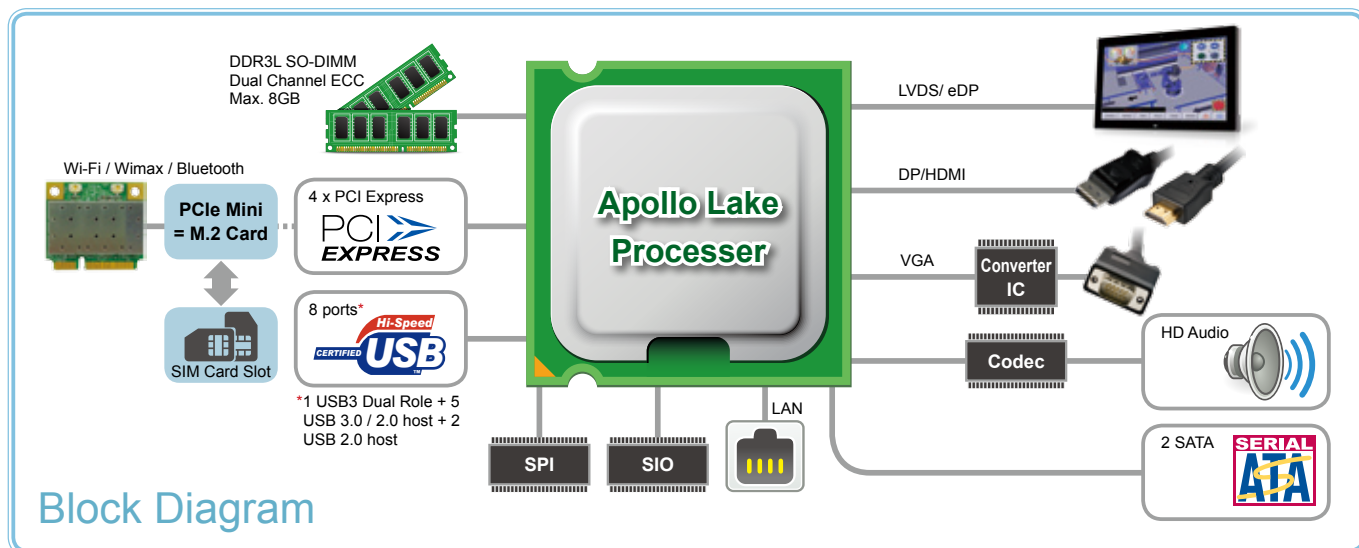
Intel® Apollo Lake Platform

2017 new platform and OS highlight

Intel® Apollo Lake Platform Overview



- Supports 3 independent displays and display resolution up to 4960x2160@60Hz.
- Higher memory bandwidth from DDR3L 1333 to LPDDR4 2400.
- Enhanced memory bandwidth to 38.4 GB/s (@2400 MT/s); 29.9 GB/s (@1867 MT/s).
- Enhanced Integrated Sensor Hub (ISH4.0).
- Multiple streams of HDCP 2.2 decryption and encryption.
- Extended temperature SKUs (-40°C~110°C).



Intel® Apollo Lake Products



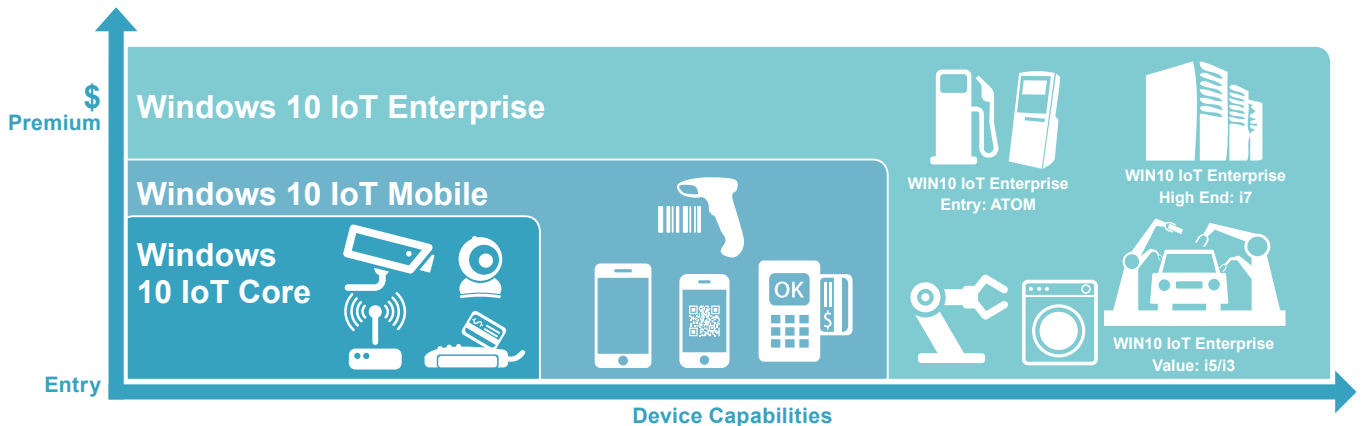
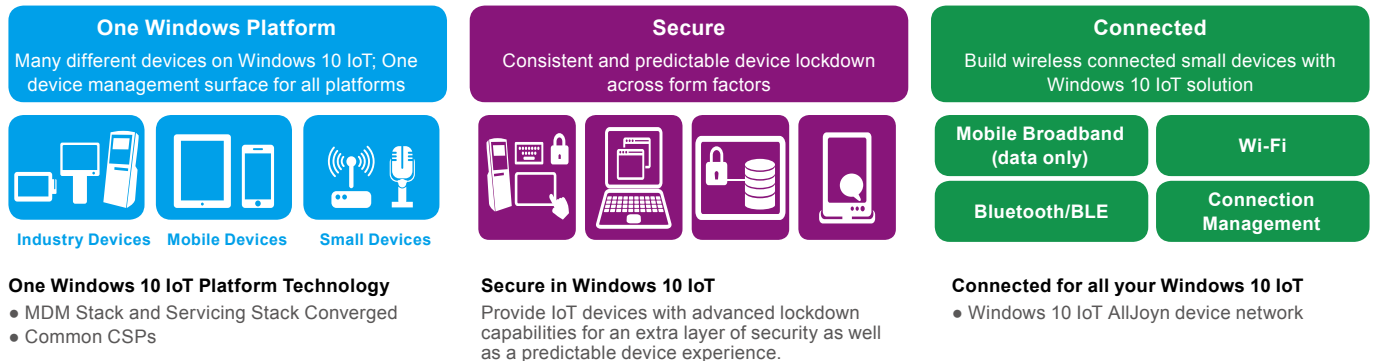
Model Name	AFL3-W19A-AL	IVS-110-AL
Dimensions (WxDxH) (mm)	472 x 292 x 68	261 x 160 x 60
System Memory	2 x 1600/1333 DDR3L SO-DIMM (support up to 8GB)	2 x 204-pin DDR3L SO-DIMM. 4GB pre-installed (system max. 16GB)

IoT Generation OS Support

For an enormous opportunity in the next generation, IoT could be the most popular trade. IEI can help customer to build up the business with reliable partners, Microsoft and Canonical for more powerful support. Customer can use Microsoft Windows 10, Canonical Snappy Ubuntu Core, or Android Brillo to complete the system connection in worldwide by smart IoT architecture with IEI solution.

Microsoft Windows 10 IoT

Windows 10 IoT will power a range of intelligent, connected IoT devices. From small devices like gateways and mobile point-of-sale to powerful industry devices like robotics and specialty medical devices, Windows 10 IoT offers a converged platform for devices with enterprise-grade security from the device to the cloud, and native connectivity for machine-to-machine and machine-to-cloud scenarios with Azure IoT Services.



Microsoft Version	Windows 10 IoT Core	Windows 10 IoT Mobile	Windows 10 IoT Enterprise
Target Platform	x86 or ARM-based platform, small and low-cost IoT devices, single UWP app experience	ARM-based platform, Handheld devices, modern shell and UWP apps	x86 platform, powerful LOB devices, Windows 32 and UWP apps, enterprise manageability and security
Minimum Requirement	256MB RAM 2GB storage	1GB RAM 4GB storage	2GB RAM 16GB storage
Windows Update	Yes	Yes	Yes
Support Lifecycle	--	--	10 years (Servicing Updates Only)

Snappy Ubuntu Core

Snappy Ubuntu Core is a new rendition of Ubuntu with transactional updates - a minimal server image with the same libraries as today's Ubuntu, but applications are provided through a simpler mechanism.

- Transactional updates with rollback
- Signatures and fingerprints ensure system is running exactly what was published by the developer
- The OS and application files are kept completely separate, as a set of distinct read-only images
- Small footprint

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



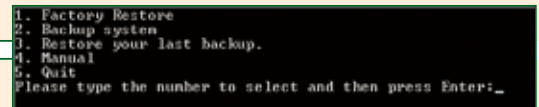
One-Key Recovery

- Factory restore: restore your system to default setting (iei.gho)
- Restore your last backup: recover the last system configuration (iei_user.gho)

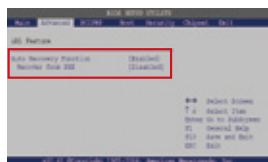


One-Key Backup

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

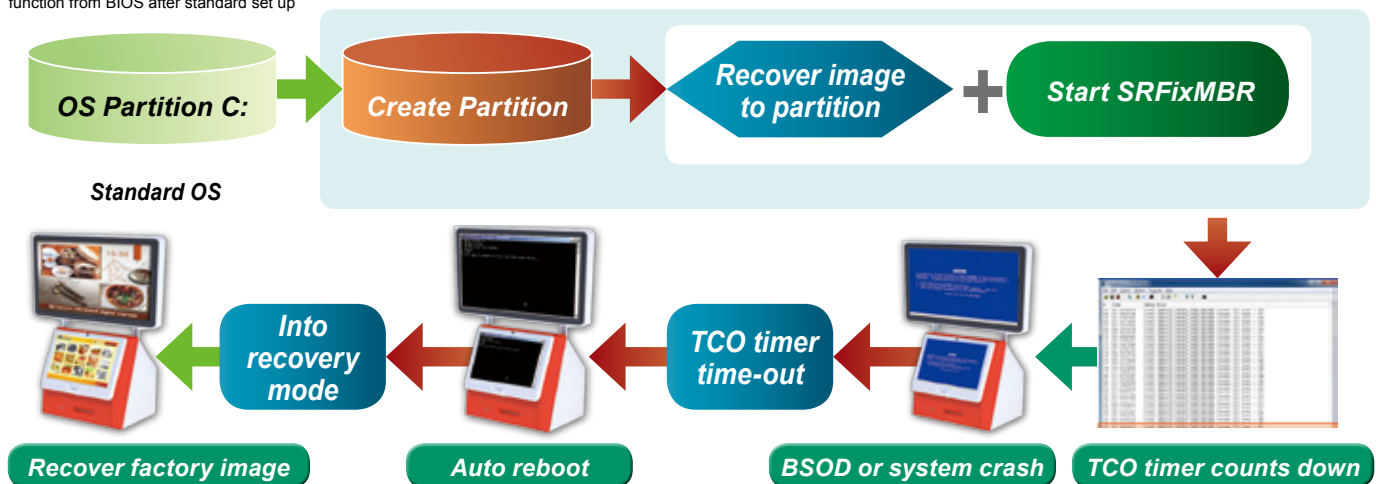


Make sure to enable auto recovery function from BIOS after standard set up

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.



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.



Install utility from One Key Recover CD for server

Server requirement

Linux server with DHCP, TFTP and HTTP function



Install setup from One Key Recover CD for client device



Restart client through LAN

IPMI Remote Management in IEI Solution

IPMI 2.0 Compliant



Introduction

Nowadays, employers keep searching different ways to cost down their expenses to make sure they can get the maximum benefit from their investments. Since more and more businesses start using smart devices in order to increase working efficiency, how to manage those devices became essential issues that need to be solved. The iRIS solution is an easy way to help you save time on controlling your devices via Intranet and Internet to complete your IoT solution.

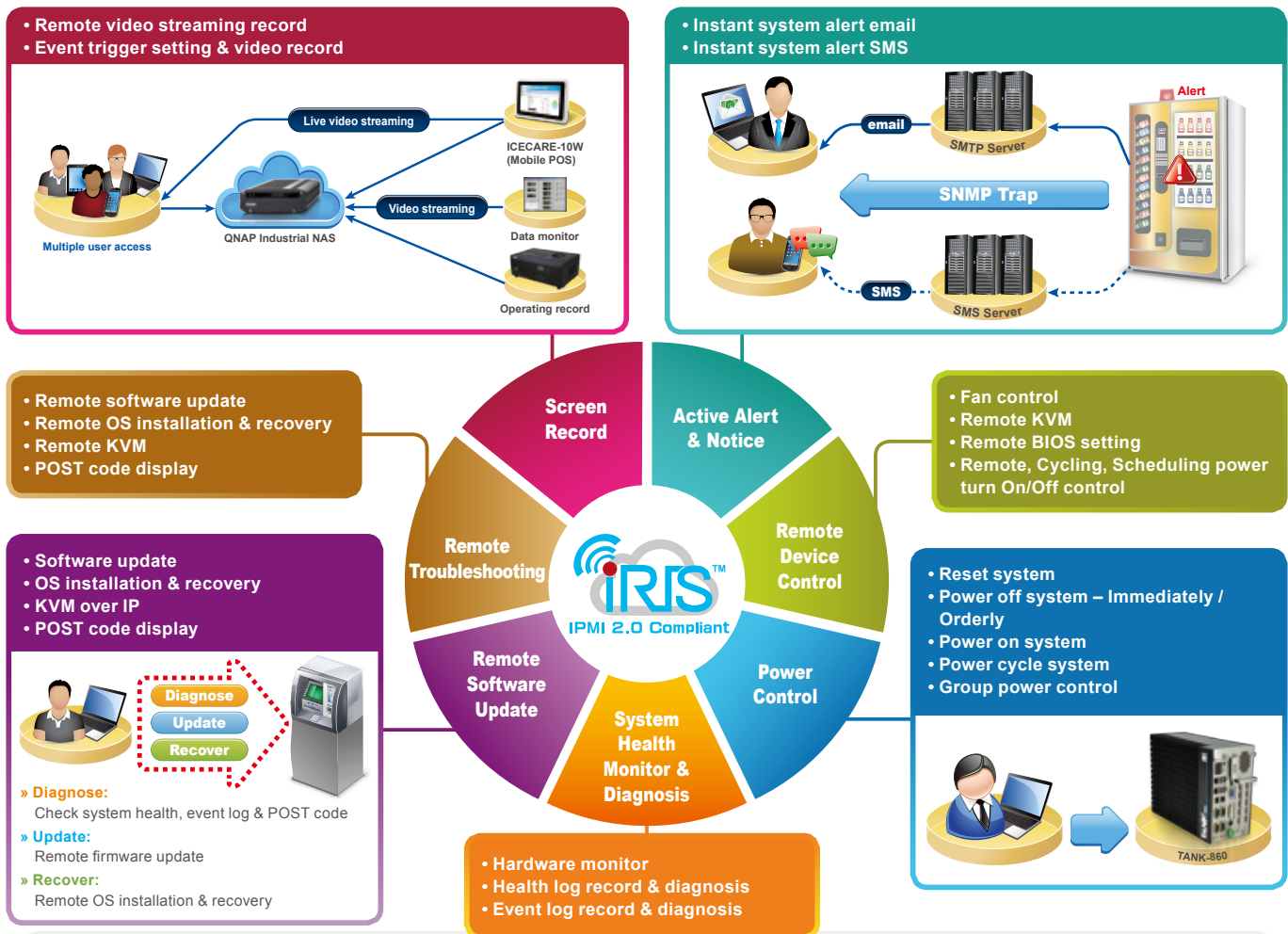
What is iRIS?

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

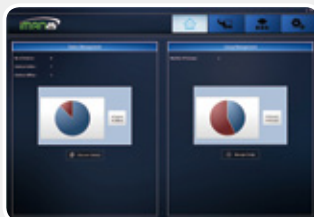
Using a worldwide standardized IPMI 2.0 interface and protocol allows IEI's iRIS technology to assist administrators to remotely monitor and manage all IEI iRIS supported devices by group or individual via Internet communication.

iRIS Key Features



iMAN Utility

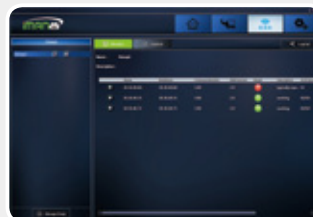
- Free offer in each product with IPMI function
- Group monitoring and power control
- KVM support with iRIS-2400
- Support Windows® operating system



Device status



Device information



Group monitoring and power control



Software setting



QRM+

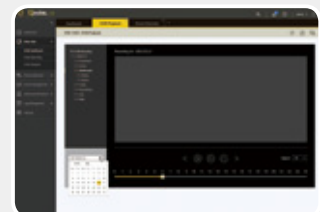
- Device discovery and topology
- Web-based management
- Remote KVM solution for IPMI
- Remote KVM recording and playback



Customizable Dashboards



QPulse Topology



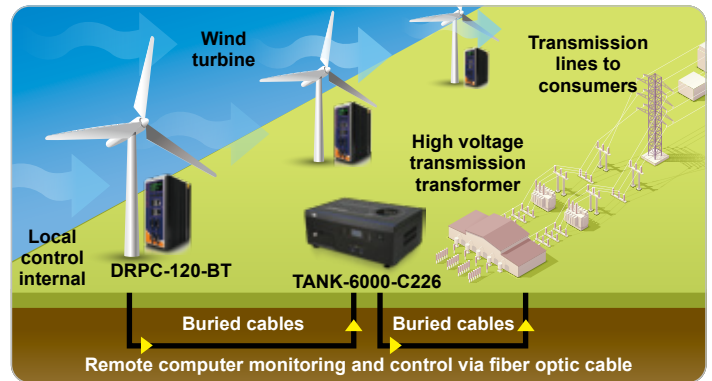
QPulse KVM Playback

Application for iRIS

■ Application Scenarios

■ Energy Industry

Energy industrial workstation may be located in a ruggedized environment with far away distance from support force. Wide range temperature and remote manageable computers are always required. IEI offers all range of processors to support hardware-based out-of-band management options.



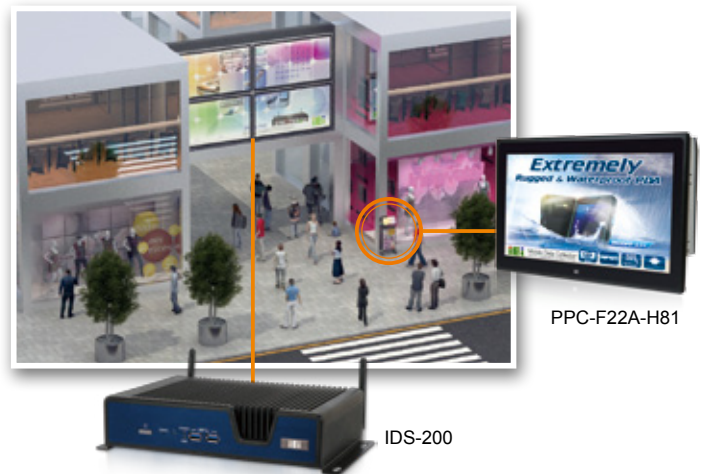
■ Marine Management

It is difficult to send out technical support for maritime field application due to the location limitation. The best way to solve the urgent issue is remote troubleshooting with IEI iRIS solution. IEI marine-grade solutions provide the most convenient method of real-time system alert notice and repair function through iRIS solution to make customer's equipment more reliable and durable in critical environment.



■ 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

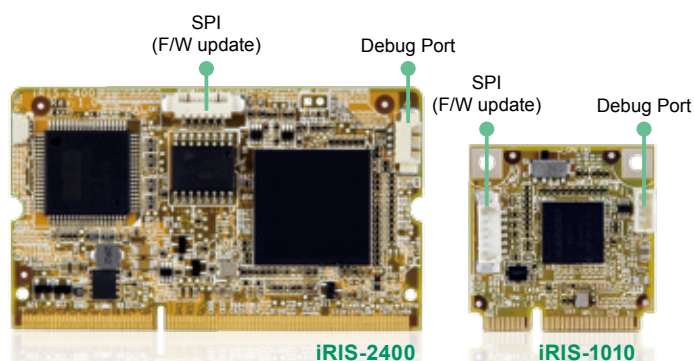
Each production line has its own computer systems to do automated control of production processes. Active system alert could help to monitor all systems in production lines with less human resources, and instant notice and detailed event log with screen record could save time for troubleshooting. IEI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



iRIS Series

Specifications

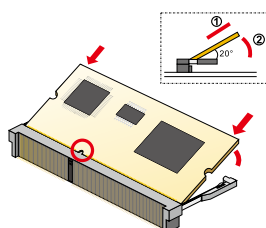
- IPMI 2.0 Based Management**
 BMC stack with a full IPMI 2.0 implementation
 Customizable sensor management
- OS Platform Independent**
- Hardware Health Monitor**
 System/CPU temperature
 Fan speeds
 Voltage
 Chassis intrusion
 Power supply failed
 FRU (Field Replaceable Unit)
- Event Log**
 BIOS event
 Hardware health monitor event
 Sensor readings
- Notifications**
 Email alerts
 SNMP traps
- LDAP Support**
 Direct LDAP support from the device
 Open LDAP (Generic LDAP) supported
- Media Redirection**
 Simultaneous floppy, Hard disk or USB and CD or DVD redirection
 Efficient USB 2.0 based CD/DVD redirection with a typical speed of 20XCD
 Support for USB key
 Completely secured (Authenticated or Encrypted) remote KVM or virtual media
- Remote Power Control**
 Remote power control
 Keyboard, Video & Mouse (KVM) over IP (iRIS-2400 only)
 Serial over LAN (SOL)



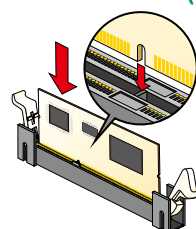
- User Management**
 IPMI based user management
 Added security with SSL (HTTPS)
 Multiple user permission level
 Multiple user profiles
- Web-based Configuration**
 Full configuration using web UI
 Fail-safe firmware upgrade
 Multi-language support in Web interface
- Dimensions (L x W)**
 68mm x 40mm (iRIS-2400)
 30mm x 30mm (iRIS-1010)
- Weight (NW)**
 12g (iRIS-2400)
 4g (iRIS-1010)

Easy to Install

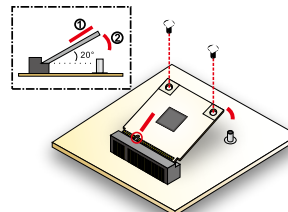
iRIS-2400 slot (90°)



iRIS-2400 slot (180°)



iRIS-1010 slot



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.

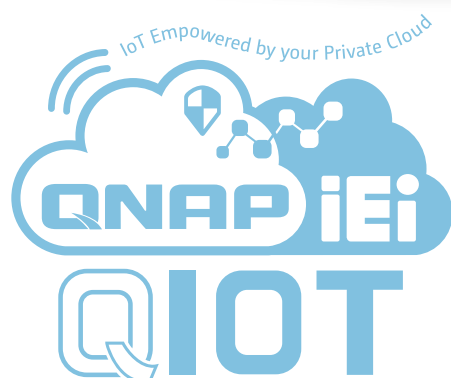
IEI iRIS Solution

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-QM871-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 R-series		
KINO-DA750-i2	Mini-ITX	iRIS-2400
KINO-AA750-i2	Mini-ITX	iRIS-2400

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		
IDS-200-i2	AMD R-series (A70)	iRIS-2400
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-BTi	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

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.



Home Automation



Health Care/ Hospital Care



Factory Automation & MES



Fleet Management



Retail/ Mass Market



PPC-F series



BIS series



TANK-860



TANK-760



IDS-300

QTS Gateway for Cloud 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 TANK-860-QGW supports the QTS Gateway operating system 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.

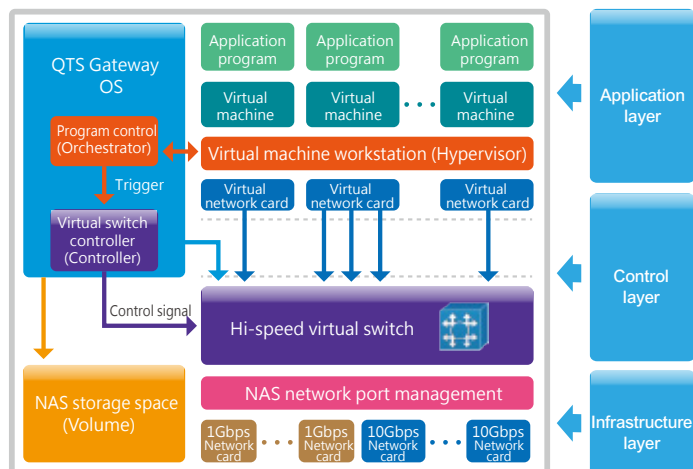


	Traditional IPC	Cloud-based IPC
Remote System Visualization	No	Yes
OS	No (additional devices must be purchased and installed)	Built-in VM virtual application
Remote Device Management	No (additional management software must be installed)	Free Apps: Qcenter, QRM+
Data Backup	No (additional management software 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

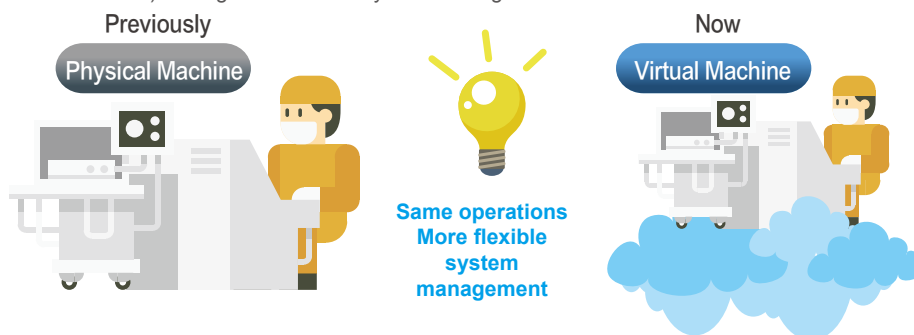


- Quick transfer, zero threshold
- PCIe card connection
- VM Backup & Restore
- Remote Import & Export
- USB Passthrough
- Advances in VM network structure, again — the Software Dened Network
- Virtual switch
- Device Management
- Visibility and direct access to files
- User-based permissions settings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



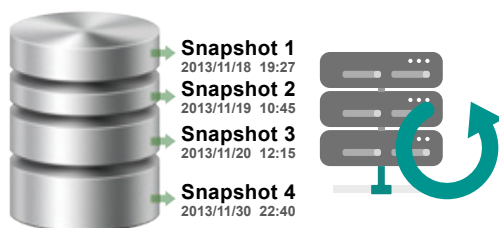
■ Quick Transfer, Zero Threshold

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.



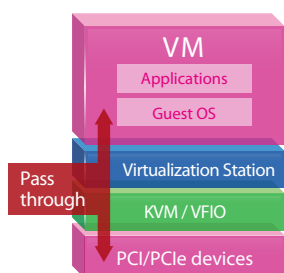
■ VM Backup & Restore with VM Snapshot

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.



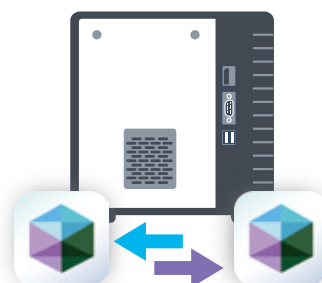
■ PCIe card connection and USB Passthrough

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



■ HD Station



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



■ Linux Station

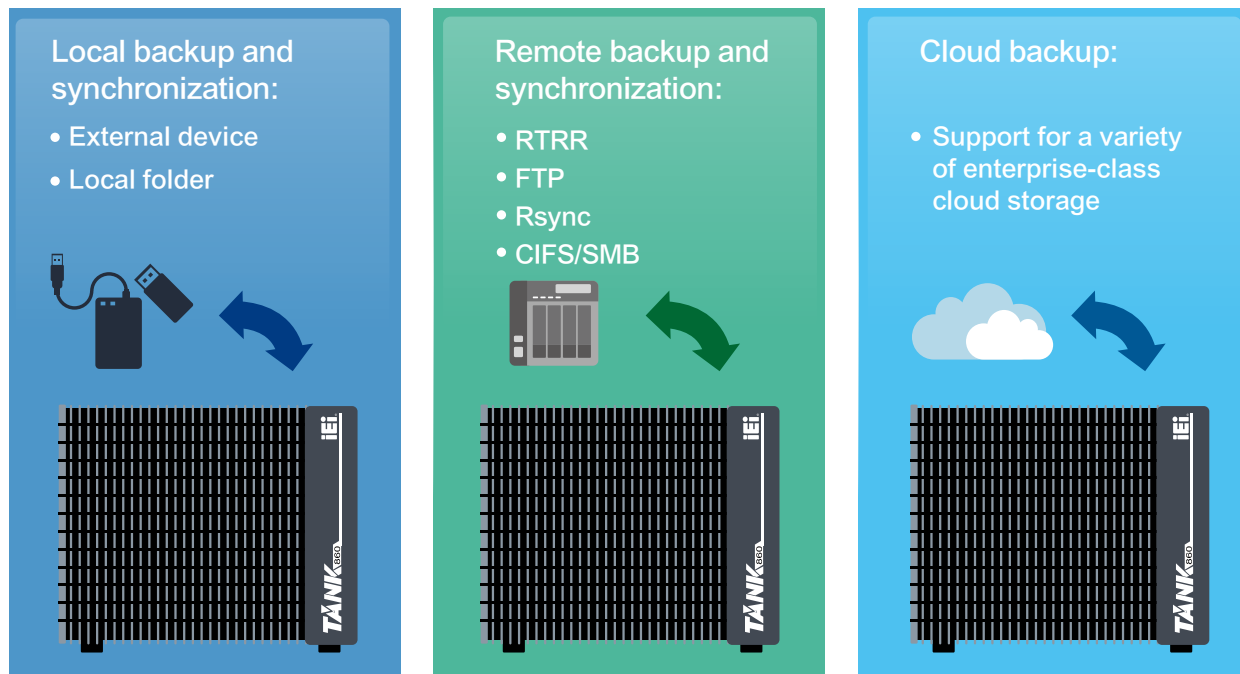


Comprehensive service from the Ubuntu Linux. Just download Linux Station from the App Center and use VGA/DP/DVI display to output the entire Ubuntu desktop.



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.



■ Surveillance Station – remote video surveillance



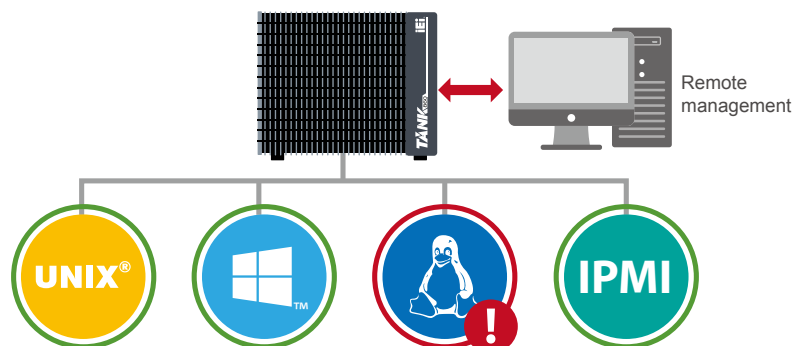
QNAP video surveillance center provides four free camera channels, and supports ONVIF and PSIA universal camera protocols, compatible with over 3,000 IP camera models of over 100 brands. It allows you to easily create an automated video surveillance system for your factory to protect property and personnel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



■ 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.



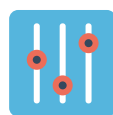
Discover



Map



Monitor

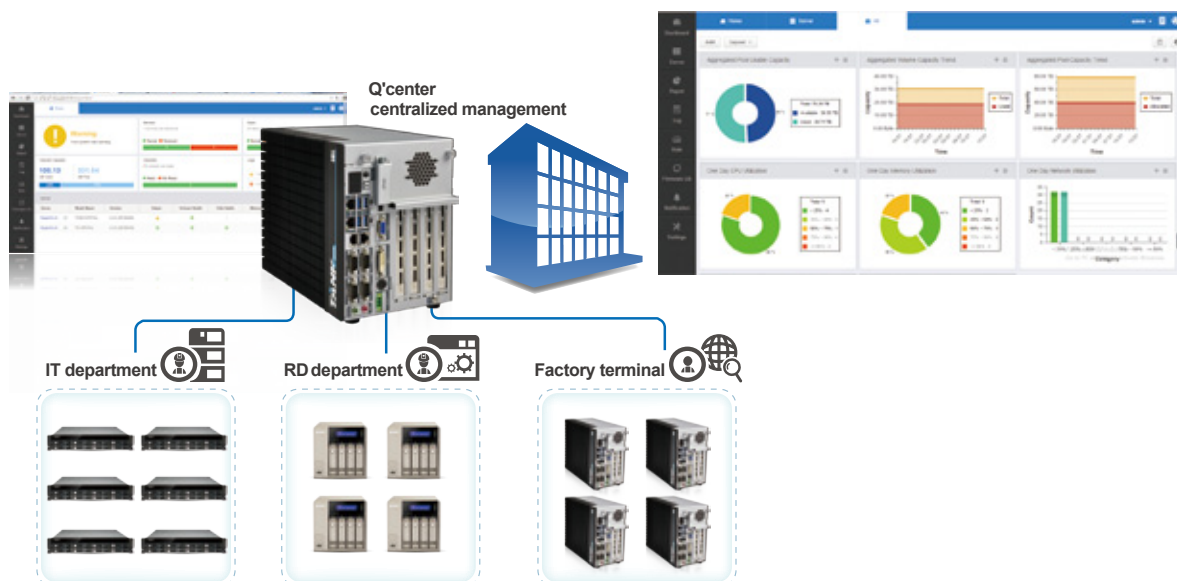


Control

■ 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.





Product List



PPC-FxxB-BT

- 12"/15"/17"/19" Fanless Intel® Bay Trail Solution
- Robust IP65 aluminum front bezel



TANK-860-HM86

- Ruggedized fanless embedded system with Intel® HM86 mobile solution
- Up to six different expansion slot options



ECW-281B-BT

- Fanless embedded system with Intel® Celeron J1900 Processor
- 12V DC and 9~36V DC models available



TANK-760-HM86

- Ruggedized fanless embedded system with Intel® HM86 mobile solution
- Three independent video outputs



DRPC-120-BT

- Fanless DIN-Rail embedded system with Intel® E3845 processor
- Programmable OLED display

Preliminary

IDS-300-BW

- Digital signage system with Intel® Celeron N3160 solution
- Three independent HDMI output



Preliminary

ECN-380-QM87i

- Fanless embedded system with Intel® Core™ i5/Celeron® CPU
- Triple display with two HDMI and one VGA output



Preliminary

uIBX-250-BW-QGW

- Fanless system with Intel® Celeron® N3160 processor
- Dual display



Preliminary

SBOX-100-QM87-QGW

- Fanless marine computer with Intel® Core™ i5 CPU
- Isolated 18 V~36 V DC input



Preliminary

IVS-200-ULT2-QGW

- Intel® i5-5350U or Celeron® 3755U CPU
- 9~36V DC input
- E-Mark certification

