Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Advantech DIN-Rail IPC

Providing Fieldbus Control, Connectivity and Sustainability for Smart Factory

Advantech
Industrial Automation Group

Enabling an Intelligent Planet

ADVANTECH

The Next Generation IoT Platform

DIN-Rail IPC with I/O
IPC & I/O Integration

Embedded Box PC
Robust & Compact

IPC
Industrial Grade PC

- Fanless Design
- Low Power
- Compact Size
- No Cable
- More Robust

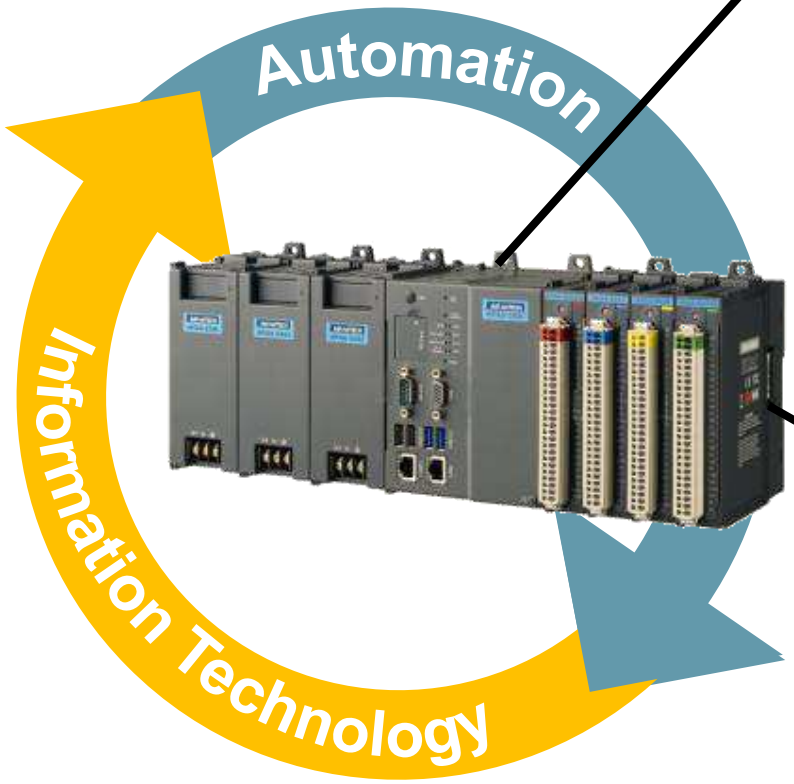
Controller-class ID
- Compact & DIN-rail mount
- Front I/O Access

Modular I/O Integration
- Modular Local I/O
- Fieldbus Solution
- Rich Remote I/O

Open for Easy Deployment
- XPE / WinCE / Linux OS
- I/O R/W & Configure API
- Data Sync Capability

The IoT Platform：APAX Series DIN-Rail IPC

Seamless integration with
Automation and **Information Technology**



Industrial PC in compact size

- DIN-Rail mountable
- Front wiring access and LED indicator
- Robust H/W design
- Window 7/8.1 support
- LAN Teaming, iAMT, WakeonLAN

Controller Feature

- Real time H/W monitoring
- Modular local I/O
- Remote I/O and device connection
- WDT and RTC support
- Hot swap

The IoT Platform：3C Seamless Integration

Computing

Connectivity

Control

Real-time APAX BUS

- High Performance CPU
- Various OS support
- One Key Recover
- Fast Boot
- ACPI
- Dual Power Input
- UPS

- mSATA
- mPCIe interface
- APAX Real Time Bus
- Distributed Topology
- Distributed Comport
- Wireless Communication

- 10 Years Lifetime Battery
- High Accuracy RTC
- Watchdog Timer
- Hot swappable
- 1~1kHz AI sampling rate
- Safety value setting
- Wiring detection(mA)
- Standard API
- SCADA S/W

APAX-5580：DIN-Rail IPC

Small but Powerful, Designed for Smart Factory

- Intel Celeron, Core i3 & Core i7 performance
- Dual power inputs & UPS module increases power reliability
- Real-Time and Deterministic I/O with hot swappable
- Supporting iDoor Fieldbus Technology
- Easily recover OS back to golden image through one key button
- mPCIe slot for wireless communication expansion

Dual CPU to reduce process loading

The distributed topology by standard Ethernet

Automation Controller	Intelligent Power Design	High Reliability	Hot Swappable	High Flexibility
• DIN Rail • Compact size • Versatile I/O Module	• Fast Boot from S3 • Battery Module • 24 Hrs standby	• One key recovery • System backup • Status Alert	• Easy maintenance without system shutdown	• Modular and distributed design for system expansion

APAX-5580：User-Friendly Front Design

Easy Monitoring and Wiring

Boundless Communication
WiFi, GPRS, GPS

Unlimited Storage
SD card slot

Dimension
W 128 x D 106 x H 110 mm

Easy to Diagnostic
Status LED

Easy to Connect
2x USB3.0

Wake on LAN, iAMT
Intel i210-IT, i218-LM

APAX-5580 Powerful Inside Design

Reliable & Powerful Functions

NO MORE battery issue

- Panasonic LITH Battery
- Over 10 years lifecycle

Possibility to Wireless

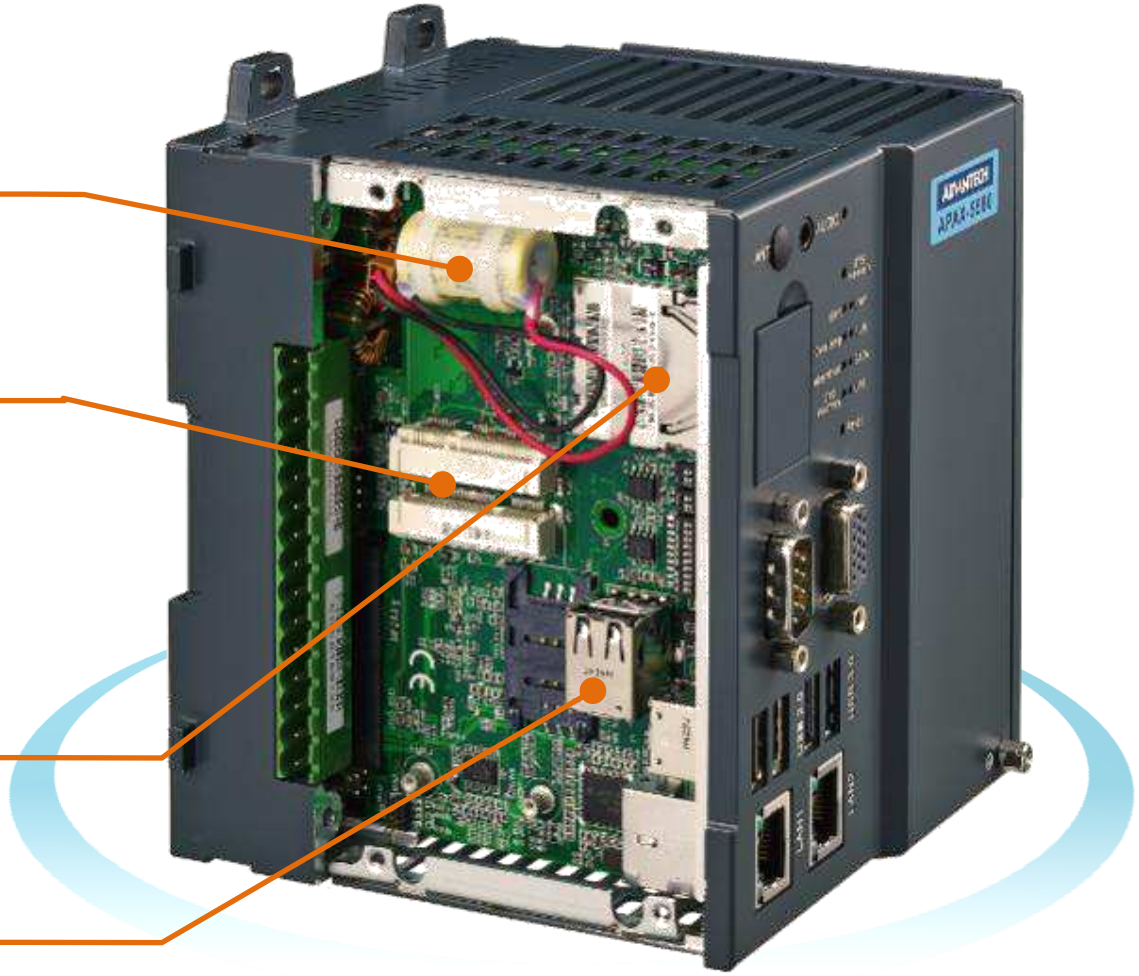
- One half-size mPCIe
- One full-size mPCIe with SIM slot

Reliability

- One inter SD slot for System backup

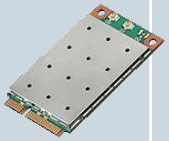
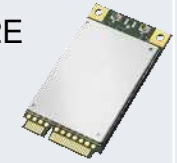
Security

- One internal USB slot



APAX-5580：Powerful Inside Design

[Tips] Possibility to Wireless：mPCIe Solutions

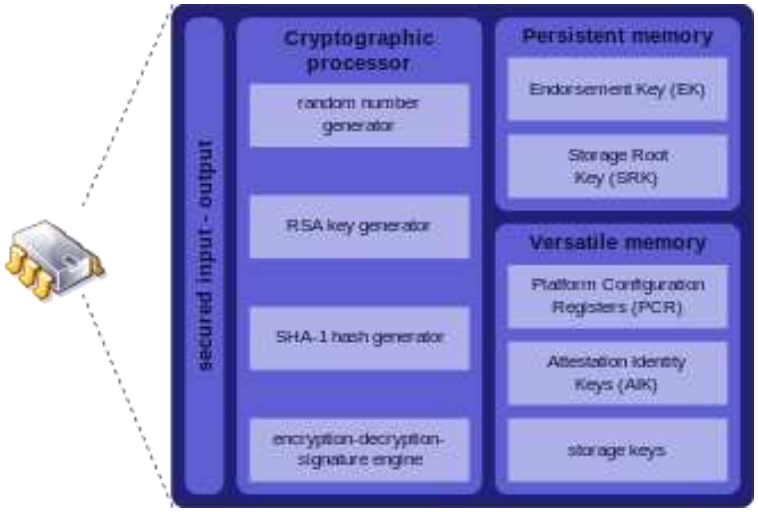
Advantech P/N	Description	Form Factor	Temperature	Cable	Antenna
EWM-W153H01E	802.11 b/g/n 1T1R w/ BT4.0, Atheros AR9485+AR3012	Half size Mini	0 ~ 60℃	1750005885 1750006010 1750006043	1750000318 1750003222 1750003418
EWM-W135H01E	802.11 a/b/g/n, Atheros AR9382, 2T2R	Half size Mini	-10 ~ 70℃	1750005885 1750006010 1750006043	1750002842
NEW EWM-W158F01E 	Advantech 802.11 a/b/g/n, Atheros AR9592-AR1B, 2T2R	Full Size Mini	-40 ~ 85℃	1750005885 1750006010 1750006043	1750002842
EWM-C106FT02E (WCDMA) 	7.2 Mbps HSUPA w/o SIM Slot, WCDMA module, Tri-band WCDMA 850/ 1900/ 2100 MHz, Quad-band GSM/ GPRS/ EDGE, w/o voice function	Full Size Mini w/o SIM slot	-20 ~ 65℃	1750006264 1750006009	1750005865 1750006426
NEW EWM-C118HD01E (WCDMA)	3.75G UMTS/HSPA, SARA-U270, w/ SIM Slot, Dual-band WCDMA (900, 2100 MHz), Dual-band GSM/GPRS/EDGE, w/o voice function	Half-size w/ SIM slot	-40 ~ 85℃	1750006264 1750006009	1750005865 1750006426

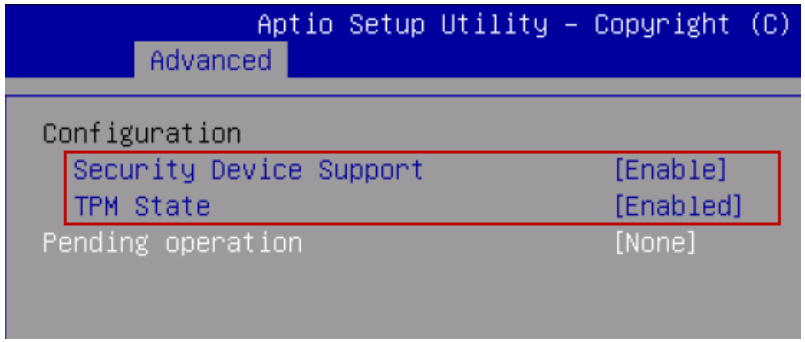
APAX-5580：Powerful Inside Design

[Tips] Security：Add-on Function by Mini Card

Trusted Platform Module (TPM)

A dedicated microprocessor designed to secure hardware by integrating cryptographic keys into devices



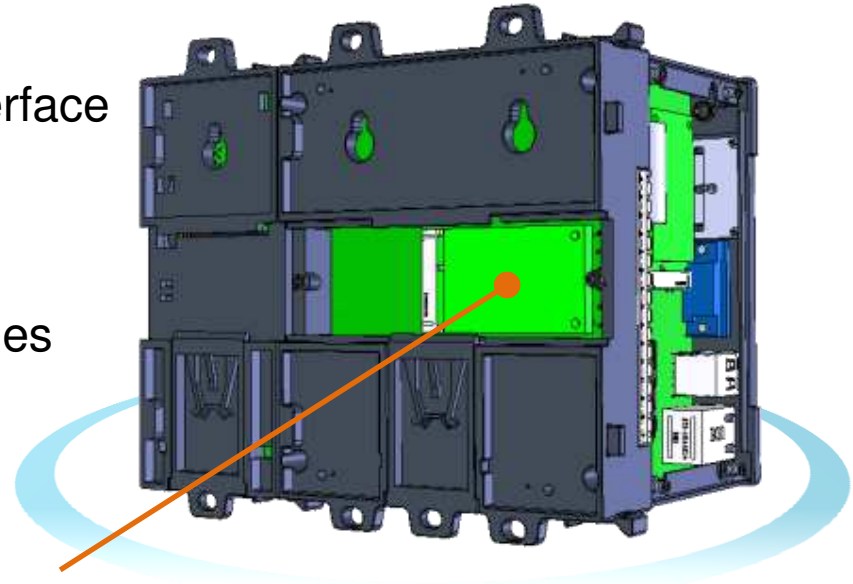


APAX-5580：Reliable Back Design

mSATA Operation Disk
Provide the higher level of Vibration protection

mSATA

- Solid State Disk (SSD) with mini PCIe interface
- Small size with 16/32/64/128G option
- Transfer mode: SATA III
- Vibration Resistance: 20G, peak
- Endurance: 2,000,000 program/erase cycles

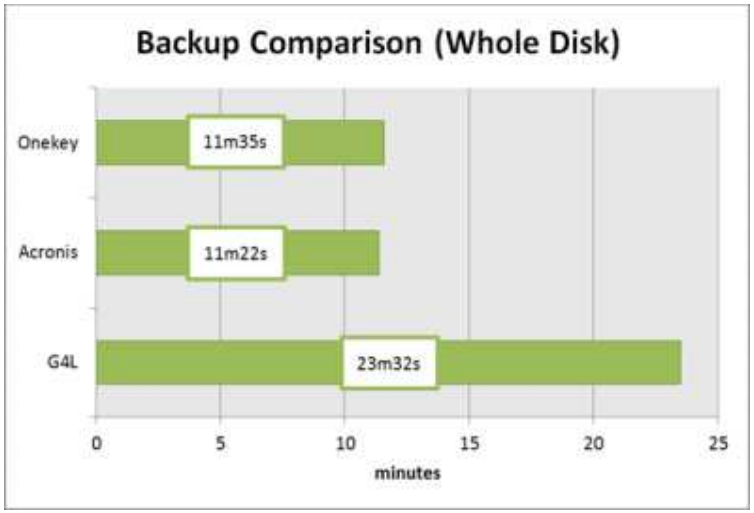


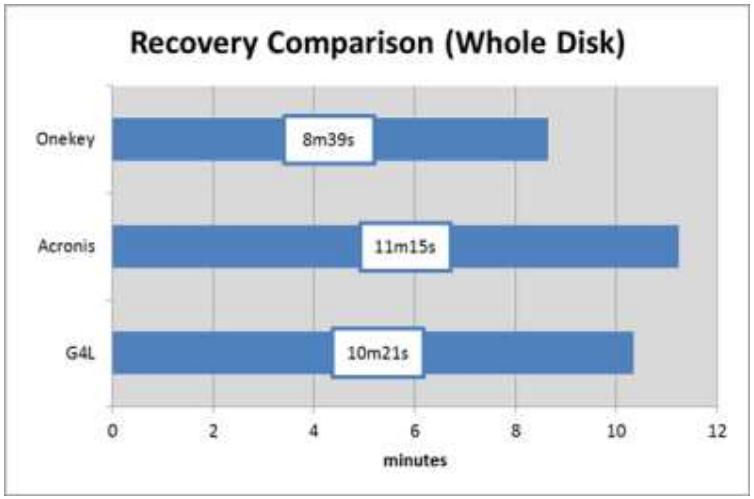
mSATA for
System Storage

- SQF-SMSM4-16G-S8E SQF MSATA 820 16G MLC 4-CH (-40~85˚C)
- SQF-SMSM4-32G-S8E SQF MSATA 820 32G MLC 4-CH (-40~85˚C)

APAX-5580：One Key Recovery

One Key Recovery





- No additional software tool
- Save the backup image in SD card
- Just PRESS SYS recovery button 10s

APAX-5580：Focused Market Segments

Embedded IPC Market

- Compact & Reliable; Front I/O Accessible
- Modular Flexibility for PSU, Connectivity & I/O
- High C/P Advantage

Control PC Market

- Competitive Platform with Popular Control software Collaboration, ex. CoDeSys, No. 1 in Europe

SCADA PC Market

- Built-in WebAccess, Fully Integrated and One-stop shop

APAX System - LEGO Your Control Platform

ARM SUSIAccess Remote Device Management

intel CORE i7 inside

EtherCAT. PROFINET EtherNet/IP CANopen PROFIBUS

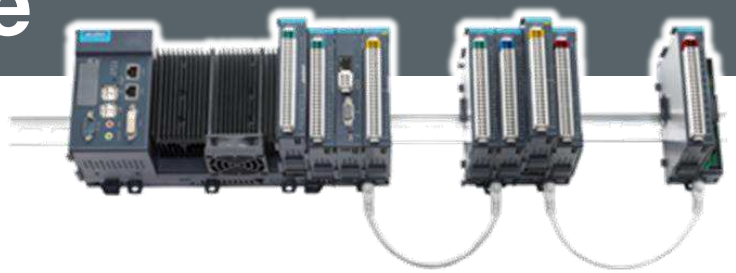
SSD DRIVES WiFi GPS LTE

Power Supply **Embedded IPC** **iDoor** **mPCIe** **I/O**

Software

Windows Embedded Linux WebAccess KW software CoDeSys straton Microsoft .net

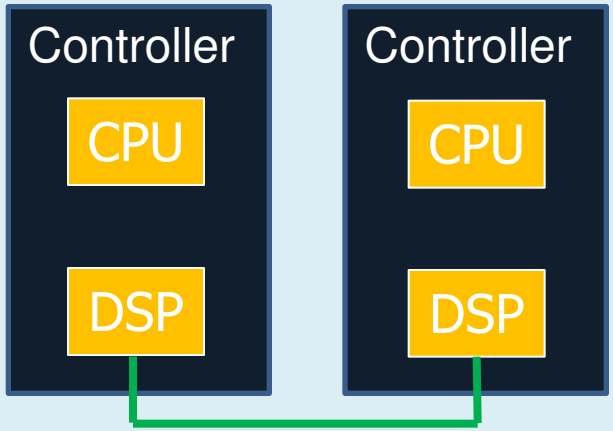
APAX System：H/W Feature



Flexible Topology

APAX Controller Platform with Centralized and Distributed I/O System

Dual Core Design



- Reduce data process loading
- Data sync by local bus

APAX System：Power Supply

Different Configuration Ways
Provides different **Robust** level of Power System

1 Single Power Supply

2 Dual Power Supply

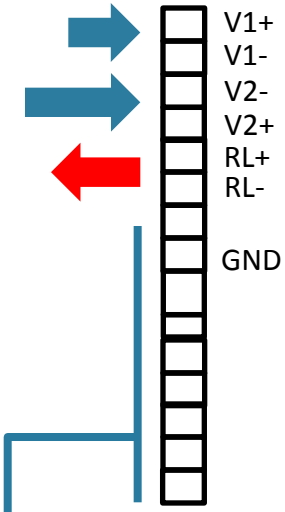
3 Dual Power Supply with Battery Support

- APAX-5343 90 ~ 264VAC Power Supply
- APAX-5340 5000mA battery Module ACPI support

APAX System：Power Supply

4 Power Connector

Dual Power Input



Relay Output

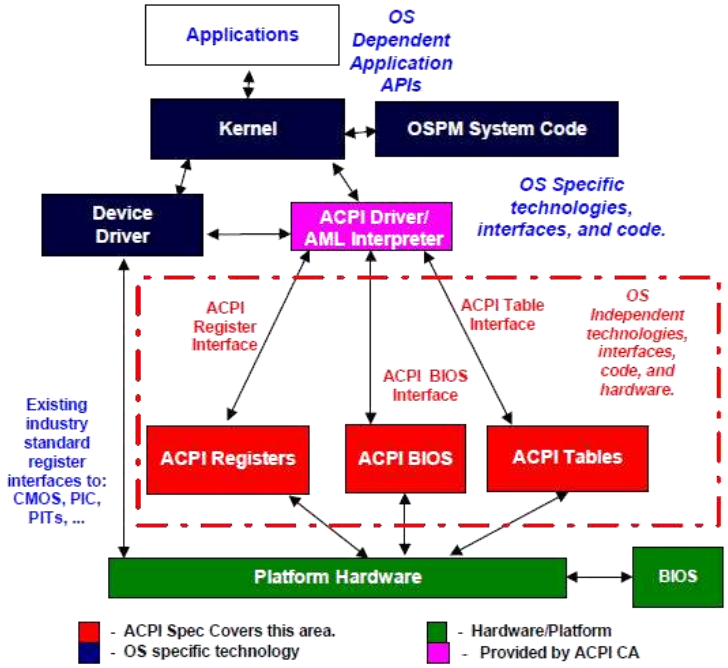
- V1 or V2 failure Alert
- Standby and PowerOn Detection

Smart Battery

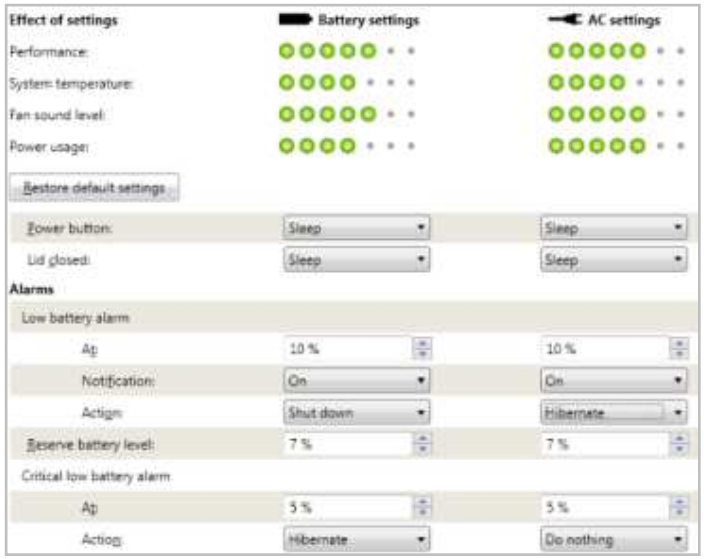
APAX System：Power Supply

4 Power Connector – Smart Battery

Advanced Configuration & Power Interface



- Device/power/control mgmt.
- RTC alarm
- System Events
- Battery mgmt.
- Thermal mgmt.



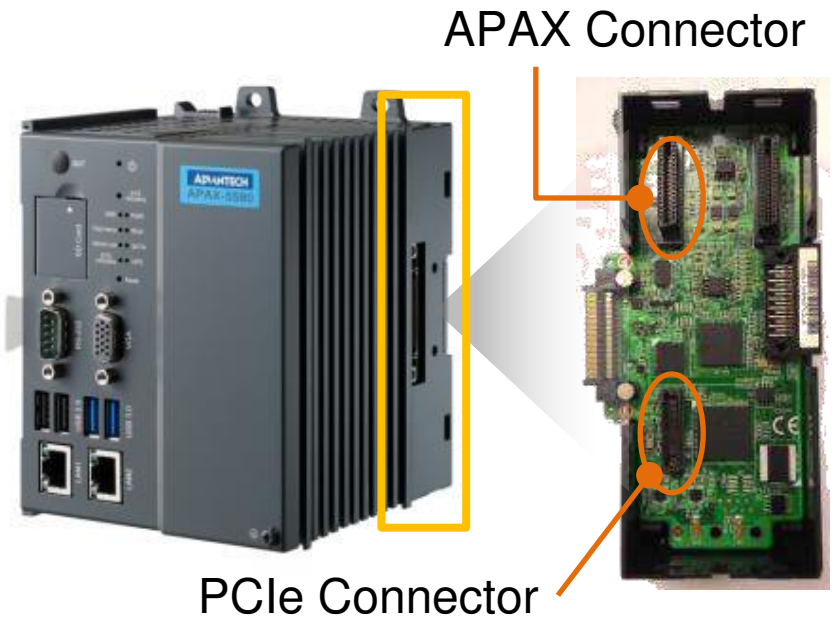
Power Manager

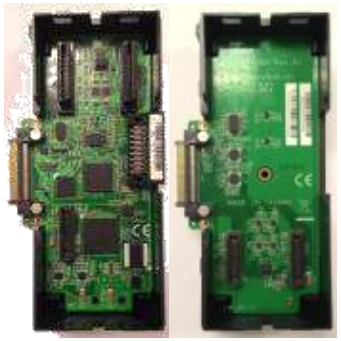
Set and Monitors System Policies

User interface：Allow User Input to Policy

APAX System：Expansion Way

APAX-5580 | APAX-5402 | APAX-5002 | APAX-5002 • • •





- APAX-5402-E1A2AE
- APAX-5402-E2A0AE

[Tips] Naming Rule

APAX-5402-E2 A0 A E

- **RoHS**
- **Version Control**
  A~Z
- **Onboard APAX slot #**
  1,2
- **Onboard PCIe slot #**
  1,2
- **Module slot #**
  2,4

e.g. APAX-5402-E2A1AE

2-slot expansion module with 2 PCI express and 1 APAX Bus

APAX System：Sensing and Control I/O

Provide the Modular I/O module

Extend the capacity of the sensing in Digital , Analog and Counter signal

- APAX-5402-E2A1　2-slot PCI express and APAX Bus module
- APAX-5000 I/O　APAX I/O Module

APAX System：Communication I/O

Provide the Flexibility of Com Port Expansion

Easy to expand your serial interface in local and remote area

- APAX-5402-E2A0 2-slot PCI express module
- APAX-5490 Local Communication Module
- APAX-5090 Remote Communication Module

Data gateway
Protocol converter

APAX System：Fieldbus Connection

Provide the different Fieldbus solution by iDoor

iDoor

Extend the different Fieldbus interface to connect to other device

- APAX-5402-E2A0 2-slot PCI express module
- APAX-5435 APAX PCIe module support iDoor. (Maximum 2 pcs with one 5580)

[Tips] iDoor in Vertical Applications

Industrial Fieldbus

Multi-Fieldbus for vertical usage

CANopen, PROFIBUS, PROFINET, EtherNet/IP, POWERLINK, sercos the automation bus, hilscher COMPETENCE IN COMMUNICATION, EtherCAT

Communication

Wireless solution

- WiFi, GPS, 3G, LTE
- Bluetooth, Zigbee, RFID

Smart I/O & Comm.

Various I/O in different application

- Isolated RS-232, RS-422/485
- Non-isolated RS-232, RS-422/485
- Isolated Digital I/O, Analog I/O

Multiple I/O & Peripheral

Various I/O in different application

- Storage: CFast, MRAM, USB dongle, USB 3.0
- Network: IEEE 1588, GigaLAN, PoE
- Display: HDMI, iLink

IEEE 1588, PoE

APAX System：Data Storage

Provide the Standard Interface for 2.5” SATA

Extend the storage space for big data and raise the system reliability

- APAX-5402-E2A0 2-slot PCI express module
- APAX-5430 APAX SATA Module Maximum 2 pcs with one 5580, Support RAID 0/1

APAX System：Data Storage

Provide the Standard Interface for 2.5” SATA

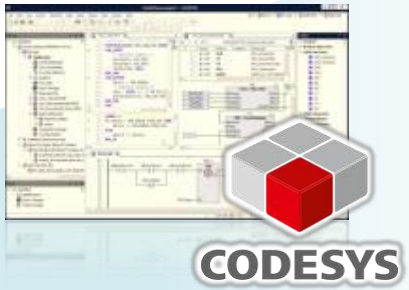
Extend the storage space for big data and raise the system reliability

- APAX-5402-E2A0 2-slot PCI express module
- APAX-5430 APAX SATA Module Maximum 2 pcs with one 5580, Support RAID 0/1

APAX System：Software

Empower by Vertical S/W,
Seamless integration by open API

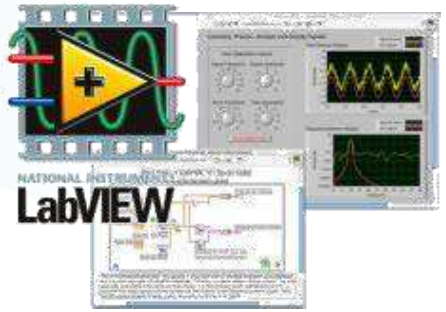
Softlogic



SCADA

SCADA

Test Automation



SUSIAccess
Remote Device Management

Microsoft .net