

# Advantech Industrial IoT Systems and Devices Star Product Guide

- ✓ Edge Computing
- ✓ Edge Server & Networking
- ✓ Edge AI
- ✓ Video Solutions
- ✓ Industrial Connectivity
- ✓ Automation Control
- ✓ Edge Devices
- ✓ Edge Software
- ✓ Vertical Market Solutions



**ADVANTECH**

*Enabling an Intelligent Planet*

[www.advantech.com](http://www.advantech.com)

# Elevate Your Sector with

## Industrial Automation

### Intelligent Factory

- Automobile
- Pharmaceutical
- Food & Beverage
- Metal Process

### Energy & Utilities

- Energy Management
- Green Energy
- Smart Grid
- Oil & Gas

### Automation Control

- Manufacturing Processes
- Process Control
- Motion Control
- Building Automation

## AI Fusion

Advancing Domain Solutions with GenAI

## The Trio of AI

### Edge



Automation Control



Edge AI



Edge Compute

### Edge



Sensing Devices



Data Acquisition



Industrial Vision



# Industrial IoT Innovation

## Industrial Edge Solutions

### Semicon & Industrial Equipment



- Semicon Equipment
- Electronics Equipment
- Robotic Equipment

### Intelligent Transportation



- Road Transportation
- Railway Transportation
- In-vehicle Solution

### Edge Cloud & AI Solutions



- Industrial AI
- Mobility AI
- Edge Server

### Network Security & Broadcasting



- Enterprise Networking
- NFV & SD-WAN
- Broadcasting

## T Co-creation

### EdgeSync 360

Device and Data Orchestration

### WISE-IoTSuite

AIoT Development Toolset

## Platforms



rs & Servers IP Video Streaming Network Edge Appliances

## Devices



ion & Camera

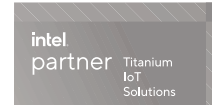
Connectivity

Industrial Gateways

# Intelligent Systems and GPU Cards

## Infrastructure for the IoT

Advantech offers a comprehensive range of edge computers in a variety of form factors with high computing power high performance CPU and GPU computing, multiple I/O and communication interfaces, compact and fanless design, security, energy-saving, and expansibility features. Our intelligent systems and GPU cards can be deployed in verticals such as factory automation, power & energy, intelligent transportation, machine vision, and edge AI applications.



### Modular IPC

NEW



#### MIC-770 V3

##### Compact Fanless System with Intel® Core™ Processors (14th/13th/12th Gen)

- Intel® Core™ processors (14th/13th/12th Gen)
- CPU type: Socket (LGA1700)
- Chipset: Intel® Q670E/H610E
- Operating temperature: -20~60°C/ -4~140°F
- VGA/HDMI output and NVMe M.2
- 2 x GigaLAN, 2 x USB 3.2 (Gen2) and 6 x USB 3.2 (Gen1)
- 2 x DDR5 ECC/Non-ECC SO-DIMM, up to 64GB

NEW



#### MIC-770 V3 + MIC-75GF10

##### Edge AI Fanless GPU System Supports MXM GPU

- Intel® Core™ processors (14th/13th/12th Gen)
- CPU type: Socket (LGA1700)
- Chipset: Intel® Q670E/H610E
- Fanless system supports NVIDIA MXM GPU (up to 80W)
- 3 x DP and 1x HDMI with 2x removable 2.5" SATA storage bay

NEW



#### MIC-770 V3 + MIC-75G20/MIC-75G30

##### Edge AI Hybrid Platform Supports GPU Cards

- Intel® Core™ processors (14th/13th/12th Gen)
- CPU type: Socket (LGA1700)
- Chipset: Intel® Q670E/H610E
- MIC-75G20: GPU expansion module for 1 x NVIDIA 350W, 2.75-slot width, 330mm length GPU card
- MIC-75G30: GPU expansion module for 2 x NVIDIA 350W, 2.75-slot width, 330mm length GPU cards

### Box IPC

NEW



#### IPC-320

##### Compact Size Tower IPC with Intel® Core™ Processors (14th/13th/12th Gen)

- Intel® Core™ processors (14th/13th/12th Gen)
- CPU type: Socket (LGA1700)
- Chipset: Intel® H610E
- Compact design fits in small cabinet or limited space
- Rich USB ports (2 x USB 3.2 and 2 x USB 2.0) on both front and rear side
- Dual independent displays: 1 x HDMI, 1 x DP
- 2 x expansion slots (PCIe x16 and PCIe x4)
- Built-in 250W 12V and 5V output only power supply, enabling simple wiring in system
- Compatible motherboard : AIMB-308

NEW



#### IPC-220/240/242

##### Compact Industrial Computer System with Intel® Core™ Processors (14th/13th/12th Gen)

- Intel® Core™ processors (14th/13th/12th Gen)
- CPU type: Socket (LGA1700)
- Chipset: Intel® Q670E/H610E
- Up to 4 x expansion slots (PCIe/ PCI)
- 2 x GbE, 1 x NVMe M.2, 2 x SATAIII, 2 x RS-232/422/485 serial ports
- Supports power output 5V/12V (max. 2A)
- Compatible motherboard : PCE-2033/ 2133

NEW



#### IPC-730

##### Industrial Edge AI IPC Supports High Performance CPU and GPU

- Supports ATX/uATX motherboards
- Built-in industrial-grade ATX 3.0 850W/1200W power supply
- Dual rear system fans and dual optional auxiliary front system fans for extreme thermal dissipation efficiency
- Supports powerful 450W GPU cards
- Supports 2 x 3.5" and 2 x 2.5" HDD/SSD by default, with an option for 2 front swappable 2.5" HDD/SSD for easy maintenance
- Front I/O ensures easy cabling



## Slot Single Board Computers (SBCs)

NEW

**PCE-5133****PICMG 1.3 Full-size Single Board Computer with Intel® Core™ Processors (14th/13th/12th Gen)**

- Intel® Core™ processors (14th/13th/12th Gen)
- CPU type: Socket (LGA1700)
- Chipset: Intel® R680E
- Up to 64GB of dual-channel ECC/non-ECC DDR5 5600MHz
- M.2 NVMe, USB 3.2, SATA 3.0 (RAID 0, 1, 5, 10)
- Triple displays: 1 x VGA, 2 x DVI/DP/HDMI
- Dual 2.5Gbps LAN

**PCA-6029****PICMG 1.0 Full-size Single Board Computer with Intel® Core™ Processors (7th/6th Gen)**

- Intel® Core™ processors (7th/6th Gen)
- CPU type: Socket (LGA1151)
- Chipset: Intel® R680E
- Up to 64 GB of dual-channel (non-ECC) DDR4 2133/2400 MHz
- USB 3.0, SATA 3.0
- Dual displays: 1 x VGA, 1 x DP/DVI-D (optional)

## Industrial Motherboards &amp; Computers

NEW

**AIMB-723****ATX Motherboard with AMD® Ryzen™ Embedded 7000 Processors**

- AMD® Ryzen™ Embedded 7000 Processors with B650 chipset
- 4 x DIMM sockets up to 128 GB DDR5 5200
- M.2, USB 3.2 Gen 2, and SATA (RAID 0, 1, 10)
- Optimized PCIe placement for GPU and frame grabber card installation
- Triple displays: 1 x DP, 1 x HDMI, 1 x VGA
- Dual GbE LAN

## Industrial Motherboards &amp; Computers

NEW

**AIMB-788E****ATX Motherboard with Intel® Core™ Processors (14th/13th/12th Gen)**

- Intel® Core™ processors (14th/13th/12th Gen)
- CPU type: Socket (LGA1700)
- Chipset: Intel® Q670E
- Up to 192 GB of dual-channel (non-ECC) DDR5 5600 MHz
- 1 x PCIe x16 (x8 Gen 5), 1 x PCIe x16 (x8 Gen 4), 3 x PCIe x4, 2 x M.2 M-key or 1 x M.2 + 1 x PCIe x4, USB 3.2, SATA 3.0 (RAID 0, 1, 5, 10)
- Triple displays: 1 x DP, 1 x HDMI, 1 x VGA

NEW

**AIMB-788****ATX Motherboard with Intel® Core™ Processors (14th/13th/12th Gen)**

- Intel® Core™ processors (14th/13th/12th Gen)
- CPU type: Socket (LGA1700)
- Chipset: Intel® Q670E
- Up to 128 GB of dual-channel (non-ECC) DDR4 3200 MHz
- 1 x PCIe x16 (Gen 4), 4 x PCIe x4 (Gen 3), 2 x PCI slots, M.2 M-key, USB 3.2, SATA 3.0 (RAID 0, 1, 5, 10)
- Triple displays: 1 x DP, 1 x HDMI, 1 x VGA

NEW

**AIMB-708****ATX Motherboard with Intel® Core™ Processors (14th/13th/12th Gen)**

- Intel® Core™ processors (14th/13th/12th Gen)
- CPU type: Socket (LGA1700)
- Chipset: Intel® H610E
- Up to 64 GB of dual-channel (non-ECC) DDR4 3200 MHz
- 1 x PCIe x16 (Gen 4), 2 x PCIe x4 (Gen 3), 4 x PCI slots, M.2 M-key, USB 3.2, SATA 3.0
- Dual displays: 1 x HDMI, 1 x VGA

## Industrial MXM GPU Cards

NEW

**SKY-MXM-2000A****MXM 3.1 Type A NVIDIA Quadro Embedded 2000 Ada-Lovelace**

- MXM 3.1 Type A form factor
- 3,072 CUDA, 24 RT, 96 Tensor
- 12.99 TFLOPS
- 8 GB GDDR6 memory with ECC
- 256 GB/s maximum memory bandwidth
- 5-year longevity supply

NEW

**SKY-MXM-3500A****MXM 3.1 Type B+ NVIDIA Quadro Embedded 3500 8GB Ada-Lovelace**

- MXM 3.1 Type B+ form factor
- 5,120 CUDA, 40 RT, 160 Tensor
- 23.04 TFLOPS
- 12 GB GDDR6 memory with ECC
- 432 GB/s maximum memory bandwidth
- 5-year longevity supply

NEW

**SKY-MXM-5000A****MXM 3.1 Type B+ NVIDIA Quadro Embedded 5000 Ada-Lovelace**

- MXM 3.1 Type B+ form factor
- 9,728 CUDA, 76 RT, 304 Tensor
- 41.15 TFLOPS
- 16 GB GDDR6 memory with ECC
- 576 GB/s maximum memory bandwidth
- 5-year longevity supply

**SKY-MXM-A2000****MXM 3.1 Type A NVIDIA Quadro Embedded A2000 Ampere**

- MXM 3.1 Type A form factor
- 2,560 CUDA, 20 RT, 80 Tensor
- 8.25 TFLOPS
- 8 GB GDDR 6 memory with ECC
- 224 GB/s maximum memory bandwidth
- 5-year longevity supply

## Industrial PCIe GPU Cards (Bundled Sale)

**High-End NVIDIA Quadro GPU Cards Based on Ada Lovelace Architecture**

NEW

**SKY-QUAD-6000A-48**

- NVIDIA RTX 6000 Ada
- 18,176 CUDA, 142 RT, 568 Tensor
- 48 GB GDDR6 memory with ECC
- Double slot, full height

**SKY-QUAD-4500A-24**

- NVIDIA RTX 4500 Ada
- 7,680 CUDA, 60 RT, 240 Tensor
- 24 GB GDDR6 with ECC
- Double slot, full height

**SKY-QUAD-5000A-32**

- NVIDIA RTX 5000 Ada
- 12,800 CUDA, 100 RT, 400 Tensor
- 32 GB GDDR6 memory with ECC
- Double slot, full height

**SKY-QUAD-4000A-20**

- NVIDIA RTX 4000 Ada
- 6,144 CUDA, 48 RT, 192 Tensor
- 20 GB GDDR6 with ECC
- Single slot, full height

**Entry to Mid-range NVIDIA Quadro GPU Cards Based on Ada Lovelace and Ampere Architecture**

NEW

**SKY-QUAD-4000SA-20**

- NVIDIA RTX 4000 SFF Ada
- 6,144 CUDA, 48 RT, 192 Tensor
- 20 GB GDDR6 with ECC
- Double slot, low profile

**SKY-QUAD-A1000-8**

- NVIDIA RTX A1000
- 2,304 Cuda, 18 RT, 72 Tensor
- 8 GB GDDR6
- Single slot, low profile

**SKY-QUAD-2000A-16**

- NVIDIA RTX 2000 Ada
- 2,816 CUDA, 22 RT, 88 Tensor
- 16 GB GDDR6 with ECC
- Double slot, low profile

**SKY-QUAD-A400-4**

- NVIDIA RTX A400
- 4 GB GDDR6
- Single slot, low profile

**NVIDIA Tesla GPU Card for Computing + Graphics**

NEW

**SKY-TESL-L4-24P**

- NVIDIA L4
- 7,424 CUDA cores, 60 RT, 240 Tensor
- 24 GB GDDR6 memory with ECC
- Single slot, low profile



Machine Control



Data Analytics

Protocol  
Conversion

Visualization

# Embedded Automation Computers

## Seamless Connection and Transmission for Edge IoT Applications

Advantech's UNO series embedded automation box PCs are ideal for edge computing and bridge the gap between IT and OT. The UNO series serve as flexible IoT gateways and industrial controllers in different sizes and various mountings. They also support Advantech iDoor technology that gives them the flexibility to configure various I/O requirements. Moreover, the compatibility with IoT edge software enable UNO series to support various industrial applications.



### Compact Embedded Computers

#### Basic Unit

**NEW**



#### UNO-2271G V3

##### Pocket-Size Edge IoT Gateway with Intel Atom® Processor

- Intel Atom® x7211RE processor
- With 8GB DDR5 onboard memory, 64G eMMC
- 2 x GbE, 2 x USB3.2, 1 x HDMI
- 1 x M.2 (B-key), TPM 2.0
- 2nd stack: leverage V2
- UNO-2271 series 2nd stack expansion compatibility
- Fanless, cable-free and robust design with high stability



#### UNO-2271G V2

##### Pocket-Size Edge IoT Gateway with Intel® Celeron®/Pentium® Processors

- Intel® Celeron® processor N6210/ Pentium® processor N6415
- With 4GB/8GB DDR4 onboard memory
- 2 x GbE, 2 x USB 3.2, 1 x HDMI
- 1 x mPCIe, TPM 2.0 onboard
- Pocket-size, robust, fanless and cable-free system with high stability
- Microsoft Azure IoT Edge and Amazon AWS IoT Greengrass certified



#### UNO-2372G V2

##### Small-Size Modular Embedded Box PC with Intel® Celeron® Processor

- Intel® Celeron® processor J6412
- With 8GB DDR4 memory
- 2 x GbE, 3 x USB 3.2 Gen 2, 1 x USB 2.0, 1 x HDMI 1.4, 1 x DP 1.4, 4 x RS-232/ 422/ 485
- Modular design with optional SSD/ NVME/ Wi-Fi/ 4G/ 5G/ AI accelerator scalability
- Supports dual wireless communication to satisfy diverse usage requirements for IoT applications



#### UNO-2484G V2

##### Modular Embedded Box PC with Intel® Core™ Processors (11th Gen)

- Intel® Core™ processors (11th Gen)
- With 8GB DDR4 memory
- 4 x GbE, 3 x USB 3.2 Gen2, 1 x USB2.0, 1 x HDMI 1.4, 1 x DP 1.4a, 4 x RS232/422/485
- Ruggedized with cableless and lockable I/O design
- Scalability with optional SSD/ NVME/ Wi-Fi/ 4G/ 5G/ AI accelerator

#### Expansion kit



#### UNO-2271G-RES2EA

- 2 x COM, 1 x M.2 (B key), 1 x M.2 (E key)
- Second stack module for supporting UNO-2271G V2



#### UNO-2271G-RPIEA

- 2 x COM, 1 x M.2 (B key), 1 x M.2 (E key)
- Second stack module for supporting UNO-2271G V2



#### UNO-2372G-EKCE

- 1 x iDoor
- Second stack module for supporting UNO-2372G V2



#### UNO-2484G-EKCE

- 2 x iDoor (2 x mPCIe only)
- Second stack module for supporting UNO-2484G V2



## Machine-to-Intelligent Computers

**UNO-127****Pocket-Size DIN-Rail Edge IPC with Intel Atom® Processor**

- Intel Atom® x6413E processor
- With 4GB DDR4 onboard memory
- Onboard 64G eMMC 5.1
- 2 x LAN, 2 x USB, 1 x HDMI, 1 x mPCIe, 2 x LED Indicators (Power/Run)
- Modular design for optional 4 x iso, COM, 1 x LAN, 1 x M.2 B Key expansion
- Onboard TPM 2.0, IBECC supported

NEW

**UNO-137 V2****Small-Size Integrated DIN-Rail IPC with Intel Atom® Processors**

- Intel Atom® x6413E/x6425RE processor
- With 8GB DDR4 memory
- Operating temperature: -40~70°C/ -40~158 °F
- Wide power input range (10 ~ 36 V<sub>DC</sub>)
- Port isolation for 8 x DI, 8 x DO, 2 x COM
- Dual storage: 1 x M.2 M-key 2242 PCIe/NVMe or SATA/SSD and 1 x mSATA
- Onboard TPM 2.0
- Modular design for optional iDoor extension
- Compliant with IEC 61010-1 safety requirements

NEW

**UNO-148 V2****Fanless DIN-Rail IPC with Intel® Core™ Processors (13th Gen)**

- Intel® Core™ processors (13th Gen)
- With 8GB DDR5 memory
- Port isolation for 8 x DI, 8 x DO, 4 x COM
- Supports 2 x M.2 M key 2280 NVMe SSD and 1 x M.2 B key 2242 storage
- Supports 1 x M.2 E Key 2230 wi-fi module and 1 x miniPCIe with Nano SIM card slot for LTE
- Dual 2500BASE-T Ethernet supports Time-Sensitive Network(TSN) technology
- Modular design for optional iDoor extension

**UNO-348****Expandable Embedded Box IPC with Intel® Core™ Processors (10th Gen)**

- Intel® Core™ processors (10th Gen)
- With 8/16GB DDR4 memory
- 3 x GbE, 1 x RS-232, 2 x RS-232/ 422/ 485, 4 x USB 3.2, 2 x USB 2.0, 1 x DP++, 1 x HDMI, Mic-in, Line-out
- Flexible expansion up to 3 x PCIe/PCI slots, 1 x M.2 B key, 1 x mPCIe and 2 x 2.5" SSD
- Rugged and fanless design for harsh embedded environment
- Onboard TPM 2.0, Out of Band (OOB) manageability with iBMC

## Application-Oriented Computers

**UNO-430 EXP****Waterproof Outdoor Gateway with IP66 Rating and Explosion Protection**

- Intel Atom® E3950 processor
- With 8GB DDR3L memory
- Reserved M.2 3052/3042 key B, M.2 2230 key E for Wi-Fi, LTE & GPS expansion
- Operating temperature: -40~70°C/ -40~158 °F
- Easy installation with front door and cable gland design
- C1D2, ATEX, IECEx certified
- Microsoft Azure IoT Edge and Amazon AWS IoT Greengrass certified

**UNO-238 V2****Compact IoT Edge Computer with Intel® Core™ Processors**

- Intel® Core™ processors (12th Gen)
- 2 x LAN, 4 x USB, 2 x COM, 2x CAN, 1 x HDMI, 1 x DP, 1 x GPIO, 2x Type-C
- 24V<sub>DC</sub> terminal block DC-in
- Integrated with CANBus for reliable communication
- Dual M.2 E/B Key expansion for wireless solutions

**UNO-220****Industrial Raspberry Pi 4 HAT Gateway Kit**

- Industrial-grade gateway kit provides Raspberry Pi-ready solutions for rapid prototyping
- Industrial grade I/O board for RS-232/485 and GPIO extension
- Battery-backed RTC chip for keeping the track of time
- Preloaded with the open-source Raspbian® OS for easy integration and deployment
- Integrated with PoE function allows users to power Raspberry Pi 4 via an Ethernet cable (UNO-220-P4N2AE)

## iDoor Modules

**Industrial Fieldbus****PCM-26 Series****Industrial Fieldbus iDoor Modules Support Common Automation Protocols**

- CANOpen
- PROFIBUS
- PROFINET
- EtherCAT
- EtherNet/IP
- POWERLINK

**Wireless Communication****PCM-24S Series****Wireless Communication iDoor Modules Enhance Connectivity for Industrial IoT**

- Wi-Fi/ Bluetooth
- LTE/ GPS

**Industrial I/O and Peripherals****PCM-23/24/27 Series (mPCIe)****PCM-33/34 Series (M.2)****Industrial I/O and Peripheral Modules Enable Flexible I/O Expansion**

- RS232/ 422/ 485
- Digital I/O
- Giga LAN & PoE
- MRAM
- CFast slot
- USB 3.0



# Intelligent HMI and Industrial Monitors

## Leading HMI Innovations for Smart Factories

Advantech offers a diverse range of general, as well as domain-focused HMI products equipped with iDoor technology, including high performance control panels, thin clients, web browser terminals, and industrial monitors. Advantech has developed a new generation of modular solutions for a diverse range of configurations to meet specific usage requirements, offering customers a quick time to market and high level of expandability.

intel  
partner  
Titanium  
IoT  
Solutions

### Thin Bezel Panel PCs

#### Better Narrow Bezel



#### Why Thin Bezel Series?



##### Better User Visual Experience

More screen real estate and fewer distractions mean you can focus better on your work



##### Perfect Integration into Any Environment

Seamlessly integrates into various scenarios, striking a balance between robust functionality and aesthetics

### All-in-One Series

NEW



#### PPC-315W/318W/321W

**15.6"/18.5"/21.5" All-in-One with Intel® Celeron®/Atom® Processors**

- Intel Atom® x7433RE processor/ Celeron® processor N97
- All metal enclosure with compact fanless design
- Aesthetic appearance with narrow bezel
- Operating temperature: -20~60°C/ -4~140°F
- iDoor slot x1, PCI/PCIe expansion (optional)

NEW



#### PPC-312/315/317

**12"/15"/17" All-in-One with Intel® Core™ Processors**

- Intel® Core™ processors (13th Gen)
- All metal enclosure with compact fanless design
- Aesthetic appearance with narrow bezel
- iDoor slot x1, PCI/PCIe expansion (optional)
- True-flat touchscreen with P-CAP multi-touch control

NEW



#### TPC-310W EHL

**10" All-in-One WSVGA TFT LED with Intel® Celeron®/Atom® Processors**

- Intel Atom® x6425E processor/ Celeron® processor J6412
- Compact, fanless embedded system with DDR4 SO-DIMM
- Operating temperature: -20~60°C/ -4~140°F
- True-flat, IP66-rated front panel
- Front-facing LED indicators to show operating status
- True-flat touchscreen with P-CAP multi-touch control

### Modular Industrial Panel PC Series

Display panel modules combined with box modules offer a range of flexible platforms.



NEW

#### FPM-S Series

- Wide range sizes: 15.6"/ 18.5"/ 21.5"
- Aesthetic appearance with narrow bezel
- P-CAP touch panel
- 1920 x 1080 resolution



FPM-S15W-A



FPM-S18W-A



FPM-S21W-A



## Modular Panel PCs

NEW



### TPC-B300

#### Computing Box Module

- Intel Atom® x6425E processor/ Celeron® processor J6412
- 1 x DDR4 SO-DIMM (up to 32GB)
- 1 x mPCIe, 1x M.2 AE key, 1x M.2 M key, 1 x SATA
- 4G & 5G supported
- TPM 2.0 built-in

NEW



### TPC-B520

#### Computing Box Module

- Intel® Core™ processors (13th Gen)
- 1x DDR5 DIMM (up to 32GB)
- 1x M.2 M key, 2x M.2 B key, 1x M.2 E key
- 5G supported
- NVMe SSD supported
- TPM 2.0 built-in



### TPC-B610

#### Computing Box Module

- Intel® Core™ processors (10th Gen)
- Dual Channel DDR4 RAM (up to 64GB)
- Graphic cards supported (PCIe x16)
- PCIe x16, PCIe x4/ PCI
- M.2 NVMe SSD (Key-M 2280)
- 5G supported (M.2 Key-B 3052)
- TPM 2.0 built-in



### FPM-D Series CE/HE

#### Panel Modules

- 4:3\_12.1"/15"/17"/19"
- 16:9\_15.6"/18.5"/21.5"/23.8"
- P-CAP touch panel
- 12.1", 15", 15.6" and 21.5" panels support high brightness LCD (FPM-D HE Series)

## Web-Browser Terminals



### TPC-100W

#### 7"/ 10.1"/ 15.6"/ 21.5" with Arm®-Based Processor

- NXP® ARM® Cortex™ A53 i.MX8M 1.6 GHz quad-core processor
- Operating temperature: -20~60°C/ -4~140°F
- Flat-sealed and IP66-rated front multi-touch panel
- Embedded chromium and QT browser
- Supports Linux Yocto 4.0, Android 10

NEW



### TPC-100WX

#### 7"/ 10.1" with Arm®-Based Processor

- NXP® ARM® Cortex™ A53 i.MX8M processor with 4G DDR4 RAM & 32G eMMC
- 7" 1000 nits/ 10.1" 1200 nits high brightness LCD
- Operating temperature: -40~70°C/ -40~ 158°F
- P-CAP multi-touch panel
- Supports Linux Yocto 4.0, Android 10
- GPIO function supported

## All-in-One Thin Clients



### TPC-300 EHL Series

#### 7"/ 10.1"/ 12.1"/ 15"/ 17" TFT LED LCD Intel Atom® Processors

- Intel Atom® x6425E/x6211E processor/ Celeron® processor J6412
- With DDR4 SO-DIMM memory
- Support speeds up to 2.5GbE in 12.1" - 23.8"
- Operating temperature: -20~60°C/ -4~140°F
- IP66-rated waterproof and true-flat front panel
- Supports TPM 2.0 TSN

## Explosion Proof Panel PC



### TPC-318WH

#### C1D2 Certified 18.5" TFT LED LCD

- Intel® Core™ processors (8th Gen)
- With 8G DDR4 SO-DIMM memory
- UL C1D2 certified for hazardous environments
- Compact and fanless embedded system with aluminum alloy front bezel and chassis
- IP66-rated waterproof and true-flat front panel
- Supports iDoor technology and HDD

## Industrial Monitors



### FPM-200 Series

#### 12"/ 15"/ 15.6"/ 17"/ 19"/ 21.5"

#### Semi Industrial Monitor

- 12 V<sub>DC</sub> supported
- Die-casting aluminum chassis
- IP66-rated front bezel
- Supports panel, wall, desktop, rack and VESA mounting



### FPM-700 Series

#### 15"/ 15.6"/ 17"/ 19"/ 21"/ 24"

#### Advanced Industrial Monitor

- 24 V<sub>DC</sub> supported
- On screen display (OSD) added
- Optimized lockable I/O connectors
- Die-casting aluminum chassis
- IP66-rated front panel
- Operating temperature: -20~60°C/ -4~140°F
- Supports panel, wall, desktop, rack, VESA or Rack mounting



### FPM-800 Series

#### 15"/ 17"

#### Domain Industrial Monitor

- Robust design with 304 stainless steel front bezel and anti-rust coated SPCC rear cover
- Operating temperature: -20~60°C/ -4~140°F
- IP66-rated front panel
- Supports panel, wall, desktop, rack, VESA and stand mounting



### FPM-3000 Series

#### 12"/ 15"/ 17"/ 19"

#### Extreme Rugged Industrial Monitor

- Robust design with IP65/66-rated hardened anodized front bezel and stainless steel rear cover
- Operating temperature: -20~60°C/ -4~140°F
- Supports panel, wall, desktop, rack and VESA mounting

## RISC Base Panel PCs

**PPC-100 Series****11.6"/15.6" All-in-One Android Panel PC**

- Powered by Rockchip RK3399 chipset with support for 4K decoding
- 16:9 widescreen display with P-CAP touch control
- Front panel with IP65-rated protection
- Pre-installed Android 10 and supports Linux/Debian
- Built-in WISE-IOTSuite/AppHub remote management service for Android devices

## Configurable Panel PCs

NEW

**PPC-600 series****12"/15"/17"/19"/15.6"/18.5"/21.5" High Performance Fan Panel PC with selectable Motherboard**

- Supports Intel® Core™ processors, up to 65W TDP
- Selectable mini-ITX motherboard for diverse requirements
- 2 x expansion slots of PCI or PCIe
- Dual SATA storage (RAID 0, 1)
- Compatible with PPC-MB series

NEW

**PPC-MB-620****Mini-ITX Motherboard with Intel® Core™ Processors (14th/13th/12th Gen) with Intel® Q670E/H610E Chipset**

- Two 262-pin SO-DIMM up to 64GB DDR5 4800 MHz SDRAM
- Supports triple display of DP/HDMI/LVDS
- PCIe x16 (Gen 5), 1 x M.2 M key & 1 M.2 E key, 6 x USB 3.2
- Supports 2 x SATA 3.0 (RAID 0, 1) (only for Intel® Q670E chipset)
- Supports 4 x RS-232, 1 x RS-232/422/485

## Ruggedized All-in-One Panel PCs

**PPC-300 Series with Intel® Core™ Processors****15.6"/18.5"/21.5"/23.8" Fanless Panel PC**

- Intel® Core™ processors (11th Gen)
- Supports dual channel memory, up to DDR4 3200 32GB x 2
- Supports M.2 2280(NVMe) and RAID 0,1
- Supports TPM and TSN

**PPC-300 Series with Intel® Celeron® Processors****6.5"/10.4"/12"/15"/15.6"/18.5"/21.5" Fanless Panel PC**

- Intel® Celeron® processor N4200/J6412/x7433RE
- 2 x USB 2.0, 2 x USB 3.1, 1 x RS-232/422/485, 1 x RS-232, 1 x HDMI
- Dual Ethernet Network, up to 2.5GbE
- Supports USB Type-C x 1 and TSN
- Supports Android

## Enhanced All-in-One Panel PCs

NEW

**PPC-400 Series with Intel® Core™ Processors****15.6"/21.5" Fanless Panel PC**

- Intel® Core™ processors (11th Gen)
- Supports dual channel memory up to 64G
- Operating temperature: -20~60°C/ -4~140°F
- Wide input voltage range (9~32 V<sub>DC</sub>) and built-in isolated RS-422/485
- Supports M.2 2280(NVMe) and RAID 0,1
- Supports TPM and TSN
- Supports PCI/PCIe expansion

**PPC-400 Series with Intel Atom® Processor****15"/17"/19" Fanless Panel PC**

- Intel Atom® x6425E processor
- Operating temperature: -20~60°C/ -4~140°F
- Wide input voltage range (9~32 V<sub>DC</sub>) • Built-in isolated RS-422/485
- Supports PCI/PCIe expansion and triple display
- Supports TPM and TSN

## Domain-Focused Panel PCs

**SPC-200 Series****All-Around IP66-Rated 21.5" Encapsulated Touch Panel Computer**

- Intel® Core™ processors
- 7H surface hardness glass widescreen with true-flat design, and all-around IP66 rating VESA mount support
- Waterproof M12 I/O: 1 x RS-232, 1 x USB, and 2 x LAN (customization is allowed)

**SPC-500 Series****All-Around IP69k-Rated 15" TFT LED LCD Stainless Steel Touch Panel Computer**

- Intel® Core™ processors
- All-around 304L stainless steel housing with IP69k & M12 connectors
- VESA mount supported
- EN 1672-2 compliance
- Shatter protection film

**SPC-800 Series****All-Around IP65-Rated 15.6"/21.5" Arm-mounted HMI or Industrial Monitors**

- Intel® Core™ processors or pure monitor
- All-around IP65-rated protection
- Supports Rittal and Bernstein arm system dimensions for mounting
- Supports RAFI FS22+ push button dimension for integration maintenance
- Flexible configuration with integrated customizable extension unit





# Industrial Tablet Solutions

Supports On-site Management, Manufacturing and Patrol Inspection

AIM and PWS industrial-grade tablets, available in 8" and 10" sizes, are designed for a variety of industrial applications. Mobile computing devices provide real-time data access, enabling field workers to make informed decisions on the spot. This streamlines workflows and improves efficiency to ultimately optimize quality and increase productivity. The AIM series tablets are also equipped with extension ports for integrating additional modules that expand system functionalities to support a wide range of applications.

## Industrial-Grade Tablet & Peripherals



### AIM-75S

**8" Industrial-Grade Tablet with Qualcomm Snapdragon 660 Processor, Android 12, and Google AER Certified**

- 1920 x 1200 resolution, 400nits brightness, Corning® Gorilla® and multitouch PCAP TS
- LTE, WLAN, Bluetooth, NFC
- IP65 and 4-ft drop tolerance
- Optional vertical solution extension modules and docking station



### AIM-65

**8" Industrial-Grade Tablet with Intel Atom® processors, Windows 10 IoT**



### AIM-78S

**10.1" Industrial-Grade Tablet with Qualcomm® Snapdragon™ 660 Processor, Android 13**

- 1920 x 1200 resolution, 380/800nits brightness, Corning® Gorilla® and multitouch PCAP control
- WLAN, Bluetooth, NFC
- IP65 and 4-ft drop tolerance
- Integrated barcode scanner supports data collection as option
- Optional vertical solution extension modules and docking station



### AIM-68S

**10.1" Industrial-Grade Tablet with Intel® Processor N200, Windows 10 IoT/ Windows 11 GAC**



### AIM-77

**10" Light-Duty Industrial Tablet with Rockchip RK3568, Android 12**

- 1280 x 800, 350nits brightness, Corning Gorilla and multi-touch PCAP
- WiFi5 with BT5.2 / WiFi6E with BT5.3
- IP54 and 2.4-ft drop tolerance
- Optional Barcode Reader, MSR, NFC



Multi-Battery Charging Station



Multi-Tablet Charging Station



Vehicle Docking Station



VESA Docking Station



Office Docking Station



Extension Modules



Rugged Case



Holster



Hand Strap



### PWS-872FL

**10" Industrial-Grade Tablet with Intel® Core™ Processors, Windows 10 IoT**

- 1920x1200 with 1000nits / 1280x800 with 300nits display brightness, Corning Gorilla and multi-touch PCAP, supports gloved operation
- WiFi 6E, 4G LTE, Bluetooth 5.2, and GPS modules with BeiDou/GLONASS support
- Hot-swappable battery, MIL-STD-810G, IP65, 4 ft drop
- Integrated barcode scanner supports data collection as option
- RFID and Finger printer support ID identification
- Optional vertical solution extension modules and docking station



Universal cover: Hand Strap, Shoulder Belt, Carry Bag



Extension Modules: I/O Extension, MSR & Smart Card Reader



Desk Docking Station



Vehicle Docking Station



Multi-Battery Charging Station



# Energy & Utilities Solutions

## Pathways to Future Trends & Opportunities in Green Energy

Advantech leads in the digital transformation of substations, crucial for the energy sector's efficiency and reliability. With its IEC 61850-3 certified ECU-series servers, Advantech ensures secure, efficient, and reliable operations in digital substations. The IEC 61850-3 Ethernet switches feature time synchronization, and security measures, facilitating robust network connections, essential for uninterrupted data communication. Additionally, Advantech's HSR/PRP communication solution offers a redundant network minimizing risks of data loss or downtime. These integrated solutions significantly advance digital substation management and protection, enhancing the reliability and efficiency of the energy infrastructure.

### Common Substation Platforms



#### ECU-579

##### IEC 61850-3 Substation Server

- 2nd Gen Intel® Xeon® Scalable processors
- 12 x DIMM sockets support up to 768GB DDR4 RAM
- 4 x 2.5" hot-swappable HDD/SSD, 1 x M.2 2280 NVMe/SATA
- 2 x hot-swappable PSU (100-240 V<sub>AC</sub>/V<sub>AC</sub>)
- 2 x PCIe x16, 1 x PCIe x8, 1 x PCIe x4, and 1 x ECU-P slots
- IPMI 2.0-compliant management



#### ECU-479

##### IEC 61850-3 Substation SCADA Server

- Intel® Core™ processors (13th Gen) support up to 16 cores
- 2 x DDR4 SODIMM RAM with ECC, supports up to 64GB
- 4 x 2.5" swappable SSD, 1 x M.2 2280 NVMe/SATA
- 2 x hot-swappable PSU (100-240V<sub>AC</sub>/V<sub>AC</sub>)
- 3 x PCIe x4 Gen. 3, 1 x PCIe x16 Gen. 4, and 1 x ECU-P slots
- Supports TPM 2.0 by optional module



#### ECU-4784 Series

##### IEC 61850-3 Substation Automation PC

- Intel® Xeon® E-2276ML processor, up to 64G DDR4 ECC RAM
- Intel® Xeon® E3-1505L v5 processor, up to 32G DDR4 ECC RAM
- Intel® Core™ processors (6th Gen), Intel® Celeron® processors, up to 16G DDR3L RAM
- 8 x Giga LAN, 2 x RS-232, 8 x RS-232/422/485 serial ports
- 3 x Display output/ 3 x SATA/ 2 x I/O expansion slots

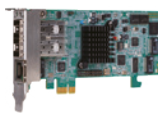
### HSR/ PRP Peripherals



#### EKI-HSRPRP-A

##### HSR/PRP module for EKI-8528/ EKI-7528

- 2 x SFP interface (100/1000 Mbps HSR/PRP)
- 1 x RJ45 (100/1000 Mbps Interlink)
- IEEE 1588 supported
- Operating temperature: -20~70 °C/ -4~158 °F



#### ECU-P1522LPE

##### 2-Port SFP PCIe Card with HSR/ PRP Support

- PCIe Low Profile Card
- 2 x SFP interface (100/1000 Mbps HSR/PRP)
- 1 x RJ45 (100/1000 Mbps Interlink)
- IEEE 1588 PTP v2 supported
- Operating temperature: -25~70 °C/ -13~158 °F



#### ECU-P1524PE

##### HSR/PRP module for ECU-series

- 2 x SFP interface (100/1000 Mbps HSR/PRP)
- 2 x SFP interface (100/1000 Mbps Ethernet)
- 1 x RJ45 (100/1000 Mbps Interlink)
- IEEE 1588 PTP v2 supported
- Operating temperature: -25~70 °C/ -13~158 °F

### Ethernet Switches & Communication Gateways



#### EKI-8528

##### IEC 61850-3 Layer 3 Ethernet Switch

- L3 Modular Switch
- Supports up to 24 Gigabit SFP ports through hot-swappable modules + 4 x 10G SFP+ ports
- Supports VRRP, RIP v1/v2, OSPFv3, PIM
- Operating temperature: -40~75 °C/ -40~167 °F



#### EKI-7528/ EKI-9226

##### IEC 61850-3 Layer 2 Ethernet Switches

- IEC 61850-3 and IEEE 1613 certified for Power Energy
- 20 x Gigabit SFP ports + 6 x Gigabit x RJ-45 ports
- SFP socket for easy and flexible fiber expansion
- Management: SNMP v1/v2c/v3, WEB, Telnet, standard MIB
- Supports HSR/PRP optional by module



#### ECU-1000 Series

##### Industrial Communication Gateways

- Diverse options for CPU, memory, and storage
- Includes bundled EdgeLink IoT software for data acquisition and cloud communication
- Remote monitoring through web service
- Multi-protocol conversion, including IEC 104, IEC 61850, DNP3, OCPP, Modbus, OPC UA, MQTT, and more
- Operating temperature: -40~70 °C/ -40~158 °F





# Intelligent Transportation Systems

## Smart Solutions for Modern Infrastructures

Advantech is committed to rugged systems that align with our vision of empowering intelligent cities globally. With a proven track record spanning over a decade, we possess extensive expertise in designing and developing cutting-edge solutions for the urban transportation sector. Our comprehensive product portfolio caters to rail and roadway applications, encompassing railway automatic fare collection, wayside control, rolling stock management, urban traffic management, highway management, transportation hub management, and autonomous vehicle technologies.

### Intelligent Edge Platforms

**NEW**



#### ITA-360

##### Compact Fanless Edge Computer

- Intel® Core™ processors (13th/12th Gen)
- Supports 2 x SO-DIMM slots, up to 64GB memory
- Supports 4 x GbE(TSN), 4 x USB3.0, 2 x HDMI, 6 x COM ports
- Supports 2 x 2.5" SSD, 1 x full-size mPCIe or mSATA, 1 x M.2 B key (SATA/ USB 3.0 signal) for 2280 SATA SSD or 3052 5G module
- Operating temperature -25~60°C and 9-36 V<sub>DC</sub> power input

**EN 50121-4**



#### ITA-260

##### DIN-Rail Compact Fanless System

- Intel® Core™ processors (11th Gen)
- Supports up to 64GB SO-DIMM memory
- Compliant with EN 50121-4 EMC standard for signaling applications
- Supports 6 x GbE, 4 x USB, 2 x COM ports
- Operating temperature: -40~60°C
- Dual power input: 9-48 V<sub>DC</sub>

**NEW**



#### ITA-168/ ITA-178

##### Rich I/O Compact Fanless Systems

- Intel® Celeron® processor J6412
- 8 GB DDR4 onboard memory and 1 x SO-DIMM slot up to 32 GB
- Supports 8 x USB ports; 6 x COM ports in ITA-168 and 14 x COM ports in ITA-178
- Supports 4 x LAN, up to 2.5G Ethernet
- Supports HDMI 4K display or independent triple display
- Operating temperature -25 ~60 °C and 9-36 V<sub>DC</sub> power input

### EN 50155 Compliant Rolling Stock Computing Solutions

**NEW**



#### ITA-580/ ITA-580G

##### Multi-Application and AI Oriented

- Intel® Core™ processors (11th Gen) with RM590E
- Virtualization capability for handling multiple tasks
- Supports advanced wireless connectivity
- SuperCap Power kit for power backup in interruptions
- With an MXM GPU module that conforms to EN 50155 standards (ITA-580G)
- Wide voltage input range: 24-110 V<sub>DC</sub>

**NEW**



#### ITA-510/ ITA-560

##### AI Inference Systems

- Fanless systems designed for AI inference
- Embedded NVIDIA® Jetson Orin™ NX /Orin™ Nano platform
- Compliant with EN 50155 and EN 50121-3-2 standards
- Rugged M12 connectors suitable for harsh, industrial environments
- 1 x Mini PCIe, 1 x M.2 (E-key), 1 x M.2 (M-key) and 1 x M.2 (B-key) for easy expansion



#### ITA-8100/ 8100B/ 8120

##### Driver Machine Interface

- 10.4" & 12.1" touch panel and auto dimming (1300 nits as optional for 10.4")
- Compliant UIC 612-01 keypad layout
- Expandable CANBus/ CANOpen/ MVB/ Wi-Fi/ LTE/ GPS
- Wide voltage input range: 24-48/72-110 V<sub>DC</sub>
- OT4 operating temperature: -40~70°C
- Compliant with EN 45545-2 fire safety

### 3U CPCI Platforms



#### 3U CPCI Serial 19" System

##### Rugged Edge AI/Video Solution on Railway

- STD chassis (W x H x D): 482.6 x 250 x 132.55mm
- Intel® Core™ processors (11th/9th Gen) NVIDIA® Jetson Orin™ platforms option
- Single or multi system in one chassis by internal Ethernet connection on backplane
- Flexible and rich I/O resources to backplane, up to PCIe x8, PCIe x4, PCIe x1, SATA, Ethernet, USB interface
- Compliance: EN 50155 OT2/OT3/OT4, PICMG CPCI-S.0 R2.0



#### 4U CPCI Serial Compact Size System

##### AI/Video Solution on IEM/ Surgical Robot/ Defense

- STD chassis (W x H x D): 279.4 x 177 x 265 mm or custom size
- Intel® Core™ processors (11th/9th Gen) with MXM GPU module or video capture card
- Diverse and rich I/O card extension options like USB, GbE/ 10GbE Ethernet, NVMe, Serial and Wifi card, etc
- Operating temperature: -40~70°C
- Compliance: PICMG CPCI-S.0 R2.0



#### ITA-460/ ITA-460G/ ITA-460E

##### In-Vehicle AI Platforms

- Intel® Core™ processors (9th/8th Gen)
- 8GB memory onboard, 1 x SO-DIMM, 1 x mSATA, 2 x 2.5" SSD
- Supports 2 x GbE, 2 x USB3.1, 2 x COM, 3 x mini PCIe
- All-around IP65 rating and rugged design
- Operating temperature: -25~70°C
- Optional expansion for PoE kit, 1 x MXM GPU module
- SuperCap Power kit for power backup in interruptions

# Industrial Server & Network Appliances

## Accelerating AI Cloud to Edge Transformation

Advantech offers integrated server and network appliance solutions optimized for AI, 5G, smart manufacturing, and smart city applications. These include flexible building blocks and customizable options, as well as pre-validated SD-WAN, SASE, and uCPE appliances, supported by leading technology partners and global supply chains. From high-density GPU servers to power-efficient edge devices, Advantech's scalable range empowers edge-to-cloud network transformation, building an elastic infrastructure for the hyperconnected AIoT era.

### SKY Servers



#### SKY-8134S-11

##### Ultra-short Depth 1U Edge Server

- 5th/4th Gen Intel® Xeon® Scalable processors with Intel® vRAN Boost up to 32c (225W TDP)
- 8 x DDR5 DIMMs, up to 2TB
- Up to 16 x 25GbE onboard ports
- 1 x PCIe 5.0 or OCP 3.0 slot



#### SKY-820V3

##### 2U Edge Server

- 5th/4th Gen Intel® Xeon® Scalable processors
- 16 x DDR5 ECC-REG RDIMM/LRDIMM
- 4 x PCIe 5.0 x16, can support dual width 3/4L GPU card
- 2 x 1GbE RJ45, 2 x 10GbE SFP+



#### SKY-821E3

##### Compact 2U High Performance Edge Server

- Dual AMD® EPYC™ Embedded 9004 Series Server Processors up to 400W TDP
- 24 x DDR5 4800MHz RDIMM/3DS RDIMM
- Up to 4 x FHFL, 2 x FHHL and 2 x low profile PCIe 5.0, 1 x OCP 3.0 support



#### SKY-9234S3

##### 2U4N Multi-node Server

- Up to 4 x Hot-Swappable CPU Node boards support 5th/4th Gen Intel® Xeon® Scalable processors
- 1 x OCP3.0 + 1 x HHHL PCIe 5.0 slot + 1 x U.2 SSD per node
- Up to 8 x DIMM sockets DDR5 4800MHz RDIMM per Node
- 12 x 3.5" SATA HDD (4 per node)

### Industrial Servers



#### HPC-6120+ASMB-610V3

##### Short Depth 1U Edge Accelerator Server

- Intel® Core™ processors (14th/13th/12th Gen)
- DDR5 up to 128GB
- Flexible I/O module design & chassis depth <19"
- 1 x PCIe 5.0 x16 / 2 x PCIe 5.0 x8 cards
- 2 x PCIe 4.0 x4 low-profile cards
- 2 x hot-swappable 2.5" SATA/SAS/SSD drive



#### HPC-7484+ASMB-807

##### 4U High Performance Industrial Server

- Intel® Xeon® W processor
- Single socket up to 60c (385W TDP)
- First workstation Server board supports 2 x PCIe 5.0 x4 slots
- 1 port USB 3.2 Gen2x2 (20G) Typc-C
- Intel Dual 10GbE ports
- IPMI v2.0 compliant BMC with web interface

### Network Appliances



#### FWA-1112

##### Tabletop Fanless Network Appliance with 5G/LTE & Wi-Fi 6

- Intel Atom® C3000 processor, up to 8Cores
- Up to 4 x 1GE RJ45 + 2 x 10GE SFP+/1GE SFP or 6 x 1GE RJ45
- RF: 5G, Dual LTE and WiFi 6 supported
- Intel® QAT integrated
- IP40, up to -20~70C wide temperature
- 2 x PoE+ Support(Optional)



#### FWA-1013

##### Tabletop Network Appliance up to 20C with 100G QAT

- Intel Atom® P5300/C5300 processors, 4 to 20 cores
- 2 x DDR4 DIMM slots, up to 128GB
- 8 x GE RJ45, 2 x 2.5GE RJ45, 4 x 10GE SFP+, w/ 2pairs LAN Bypass
- Intel® QAT up to 100G Crypto
- IPMI v2.0 compliant BMC with web interface
- 1 x Advantech network module expansion

### Network Appliances



#### FWA-3034

##### 1U Network Appliance with Hybrid Performance & Efficiency Cores

- Intel® Core™ processors (14th/13th/12th Gen), up to 24 cores/32 threads
- DDR5 UDIMM with up to 64GB
- 2 x 1GE SFP, 8 x 2.5GE RJ45, 2 x 10GE SFP+, w/ two pairs of LAN bypass
- 2 x internal 2.5" SATA SSD/HDD
- IPMI v2.0 compliant BMC
- 1 x Advantech network module expansion



#### FWA-3051

##### 1U Network Appliance, Intel® Xeon® D Processors up to 20C with 100G QAT

- Intel® Xeon® D-2800 processor family, up to 20 cores with 100G QAT
- 4 x DDR4 ECC RDIMM/UDIMM Slots
- 8 x 1GE RJ45, 4 x 10GE SFP+, w/ two pairs of LAN bypass
- Intel® QAT support up to 100G Crypto
- IPMI v2.0 compliant BMC
- 2 x Advantech network module expansion



#### FWA-5072

##### 1U Rackmount with 5th/4th Gen Intel® Xeon® Scalable Processors

- 5th/4th Gen Intel® Xeon® Scalable processors, up to 60 cores
- 16 x DDR5 ECC RDIMM Slots
- Hot-swap system fan and redundant PSU
- Intel® QAT up to 200G Crypto
- IPMI v2.0 compliant, with web interface
- 4 x Advantech network module expansion w/ PCIe Gen5 bandwidth



#### FWA-6172

##### 2U Rackmount with 5th/4th Gen Intel® Xeon® Scalable Processors

- 5th/4th Gen Intel® Xeon® Scalable processors, up to 104 cores
- 16 x DDR5 ECC RDIMM Slots
- Hot-swap 2.5" disk bays, and system fan, redundant PSU
- Intel® QAT up to 200G Crypto
- IPMI v2.0 compliant, with web interface
- 8 x Advantech network module expansion w/ PCIe Gen5 bandwidth



# AI Inference Solutions

## Accelerate AI Deployment at the Edge

Artificial intelligence (AI) breaks away from static rule-based programming as it substitutes inference systems using dynamic learning for smarter decisions. Advanced AI technology, in combination with IoT technology, is redefining entire industries using smart applications. Advantech has collaborated with NVIDIA to deliver AI products at the edge for AI inference and training. These products adopt NVIDIA's Jetson System on Module (SOM) and GPU cards. In sum, these systems deliver AI to manufacturing, transportation, and smart city applications.



### AI Camera



#### ICAM-540

**Industrial AI Camera Equipped with NVIDIA Jetson AI system on module**

- Embedded with NVIDIA Jetson Orin
- 8MP 45 fps SONY industrial grade sensor
- HW ISP no GPU/CPU workload
- C-mount lens compatible

### AI Vision Sensor



#### ICAM-220/ICAM-240

**AI Camera with AI OCR and Anomaly Detection Model**

- Built-in AI pre-train model
- Supports re-train function in multiple language detection and defect detection
- Hardware output, RESTfulAPI, and log file to review different trigger modes

### AI Developer / Solution Kits



#### MIC-711D/MIC-713S

**Open-frame System Based on NVIDIA® Jetson Orin™ NX/Orin Nano™**

- Open-frame carrier board design for algorithm PoC or environment PoC
- Embedded with NVIDIA® Jetson Orin™ NX/Orin Nano™
- Multiple expansions for GMSL, PoE, USB
- Support Allxon 24/7 remote monitoring

### AI Inference Systems



#### MIC-711/MIC-713

**AI Inference System Based on NVIDIA® Jetson Orin™ NX / Orin Nano™**

- Fanless and ultra-compact design
- Embedded with NVIDIA® Jetson Orin™ NX/Orin Nano™
- Multiple expansions for GMSL, PoE, USB
- Supports Allxon 24/7 remote monitoring

### High-end AI System



#### MIC-733-AO

**AI Inference System Based on NVIDIA® Jetson AGX Orin™**

- Fanless Compact System
- Embedded with NVIDIA Jetson AGX Orin™
- Multiple expansions for GMSL, PoE, USB
- Supports Allxon 24/7 remote monitoring

### AI Rugged System



#### MIC-715-OX

**Ruggedized In-Vehicle AI Fanless System Based on NVIDIA® Jetson Orin™ NX**

- Ruggedized IP67 waterproof fanless design
- Embedded with NVIDIA® Jetson Orin™ NX up to 100 TOPS
- Lockable I/O and ignition design
- Supports Allxon 24/7 remote monitoring
- Compliant with e-Mark

### AI NVR



#### MIC-717-OX/MIC-717-ON

**AI NVR Systems Based on NVIDIA® Jetson Orin™ NX/Orin Nano™**

- NVR fan base design
- Embedded with NVIDIA® Jetson Orin™ NX/Orin Nano™
- Supports 8 x PoE
- Supports 1 x mPCIe, 2 x SATAIII
- Supports Allxon 24/7 remote monitoring

### IGX System



#### MIC-735 Series

**AI Edge Server based on NVIDIA® IGX Orin™**

- Medical-grade & industrial-grade systems in Tower & 4U rackmount form factors.
- Embedded with NVIDIA® IGX Orin™ up to 248 TOPS
- Supports 1 x NVIDIA RTX A6000 for powerful visual computing
- Supports NVIDIA Clara™ Holoscan or Metropolis SDK

### Edge Accelerator Servers



#### HPC-7420+ASMB-977

**Short Depth 4U Edge Accelerator Server**

- 5th/4th Gen Intel® Xeon® Scalable processors
- 16 x DDR5 ECC RDIMM up to 4TB
- Front access I/O and chassis depth < 18"
- 5 x PCIe x16 (Gen5) and 5 x PCIe x8 (Gen5)
- 2 x hot-swappable 2.5" SATA/SAS/SSD drive
- 1 x slim/ultra slim ODD bay



#### HPC-6240+ASMB-622V3

**Short Depth 2U Edge Accelerator Server**

- 5th/4th Gen Intel® Xeon® Scalable processors
- 16 x DDR5 RDIMM up to 4TB
- Flexible I/O design and chassis depth < 21"
- 2 x PCIe x16 (Gen5) and 4 x PCIe x8 (Gen5)
- 4 x hot-swappable 2.5" SATA/SAS/SSD drive (2 x NVMe in option)
- 1 x ultra slim ODD bay in option

### GPU Servers



#### SKY-620V3

**2U GPU Server (2U 6GPUs)**

- 5th/4th Gen Intel® Xeon® Scalable processors
- 16 x DDR5 5600MHz RDIMM up to 4TB
- Support 6 x PCIe x16 double-deck cards and 2 x PCIe x8 single-deck cards
- Support up to 6 U.2 NVMe drives and up to 8 SAS/SATA drives
- 2700W Redundant PSU



#### SKY-602E3

**Turbo Cube GPU Server**

- Single AMD EPYC™ 8004 Series Processor
- 6 x DDR5 ECC/RDIMM
- 2 x PCIe 5.0 X16 DW GPU
- 4 x PCIe 5.0 X8 slots
- 2 x 2.5" SATA SSD internal
- 800W Redundant PSU





# Video Solutions

## Next Generation IP Video Solution

Advantech video solution includes various video transmission protocols and can be connected to video streaming and editing platforms. Our impressive quality, density, and cost benefits can bring a competitive advantage to a wide range of media processing applications for the broadcasting, mobile, gaming, and medical markets. Customers can leverage our video expertise and leading-edge computing and networking design skills to accelerate the deployment of their next-generation media solutions.

### SDVoE Video Solution



#### VEGA-1000 Series

##### 4K SDVoE HDMI over IP Signal Extender

- Supports HDR and up to 4K@60 4:4:4
- Supports HDMI 2.0 & HDCP 2.2
- Lite compression with less than 100us latency for 4K2K@60 4:4:4
- Extends the transmission over multi-mode optic cable up to 400m (1320ft)



#### VEGA-1200

##### 4K SDVoE Hybrid Encoder/ Recorder

- Zero Latency 4K HDR SDVoE Video encoder
- Loop-through HDMI output for real-time view
- Provides high-quality live HEVC encoding up to 4Kp60 10bit for streaming or local recording
- NDI/SRT protocol supported
- Web GUI configuration and security link provides easy control with high safety



#### VEGA-3003

##### UHD SDVoE Video Capture Card

- UHD SDVoE zero latency video capture and loop-out by HDMI 2.0
- FPGA-based color space convert and de-interlace support
- Customized resolution video capture and processing support
- Linux and Windows SDK including simple-to-use API and example code
- FHHL PCI Express Gen3 x8, compatible with standard PCIe slots



#### VEGA-6321

##### SDVoE Thumbnail Management Server

- The latest UHD encoder/ recorder supported by HDMI2.1 & 12G-SDI
- Advanced video processing & low power consumption with DDR5 5200MT/s
- High bandwidth PCIe Gen4 support, a professional Gen4 x8 video accelerator card FH/HL
- True color preview supported by a 5" touch monitor
- First ProAV thumbnail feature with VEGA-3003

### Video Platform & Accessories Cards



#### VEGA-6321

##### 8K UHD Live Video Player/Recorder

- The latest 8K display supported by HDMI2.1
- Advanced video processing & low power consumption with DDR5 5200MT/s
- High bandwidth PCIe Gen4 support, a professional Gen4 x8 video accelerator card LP/HL



#### VEGA-7030

##### 1U High Density Video Server for Accelerated Video Processing

- Short depth 1U x 19" video streamer platform
- Powerful CPU with on-board GPU for extra video processing
- Up to 4 PCI Express accelerators or I/O cards per chassis
- Front panel LCD display, keypad, and confidence monitor
- Redundant power supplies



#### VEGA-3312

##### Medical Video Card

- Flexible IO for HDMI/DP/SDI
- Realtime scaling & blending
- PCIe Gen3 x8
- Windows Linux Driver & API support
- PCIe FHHL board size, up to 15W



#### VEGA-3321

##### 4K Broadcast IP Video Gateway & Acquisition Accelerator PCIe Card

- 4-ch UHD ST2110 over 2x 25G SFP or 4x12G-SDI
- Broadcasting grade video acquisition up to 4:2:2 10bit
- NMOS IP video management w/ IS-04 & IS-05
- 1-ch 4Kp60 or 4-ch 1080p60 real-time HEVC/AVC encode
- Supports FFmpeg and property advantech SDK



# Cellular Routers & Gateways

## Industrial IoT & Enhanced Networking

Effortlessly connect, configure, and operate with Advantech's scalable 3G, 4G, and 5G industrial routers and gateways. Offering global wireless cellular connectivity through mobile providers, these solutions empower industries with instant control and monitoring of devices and processes. Robust security measures ensure safe deployment in sensitive environments, guaranteeing the protection of critical assets and transmitted information. Whether connecting vending machines, eye surgery robots, high-voltage reclosers, or EV charging stations, our routers provide versatile connectivity options, including serial, Ethernet, Wi-Fi, digital I/Os, and Bluetooth. Supported by the powerful ICR-OS operating system, management platform WebAccess/DMP, and additional software features, Advantech cellular routers usher in a new era of connectivity solutions.



WebAccess/DMP WebAccess/VPN

### Intelligent Connectivity Software for Cellular Routers

#### WebAccess/DMP



#### WebAccess/DMP

##### Remote Device Provisioning, Monitoring, and Management Platform

- Monitoring, alerting, auditing
- Configuration and router apps management
- Zero-Touch deployment, Integration (API)
- Security - AssureAuth PK

#### WebAccess/VPN



#### WebAccess/VPN

##### Advanced Secure Networking Platform

- Secure private networks in Internet
- Centrally defined VPN topology
- Encryption & access control
- Managed LAN and 1:1 NAT modes

#### RouterApp



#### RouterApps

##### Extended Functionality for Cellular Routers

- Industrial and IoT protocols support (Modbus, IEC101/104, MQTT)
- Networking and tunneling protocols
- Development tools (Python, Node-Red)
- Docker application containerization

### 5G & LTE Advanced High Speed Routers - Platform v4i, v4



#### ICR-4100/4200 Series

##### Industrial 5G Router & IoT Gateway

- 5G, Sub-6GHz, NSA & SA modes, 2x SIM
- Quad-core CPU with 1 GB RAM
- 2x Gigabit Ethernet
- 2x RS232, RS485
- GNSS receiver, Micro SD card, TPM 2.0
- Optional Tri-Band Wi-Fi 6



#### ICR-4400 Series

##### Ultra-High-Speed 5G NR Router & Edge Computing Gateway

- 5G, Sub-6GHz, NSA & SA modes, 2x SIM
- Quad-core CPU with 1 GB RAM
- 5x Gigabit Ethernet (optional 4x PoE+ PSE)
- SFP, GNSS, Micro SD card, USB, TPM 2.0
- RS232, RS485, CAN BUS

### 4G Powerful Routers - Platform v3



#### ICR-3200 Series

##### Industrial 4G Router & IoT Gateway

- LTE Cat.4, 2x SIM
- Powerful CPU, 1.3 GB
- 2x Ethernet 10/100, RS232, RS485
- Wide temperature range
- Sleep mode & power ignition
- Optional Wi-Fi, Bluetooth, GNSS



#### Smart Flex Series

##### Flexible, Modular 4G LTE Router & Gateway

- LTE Cat.4, 2x SIM
- Up to 5x Ethernet 10/100
- GNSS receiver
- Optional PoE, RS232/RS422/RS485, Wi-Fi

### 4G Entry Level Industrial Routers - Platform v2i



#### ICR-2000 Series

##### Entry-Level 4G Router

- LTE Cat.4, Cat.M, Cat-NB 450 MHz
- 2x SIM
- Up to 4x Ethernet 10/100 Mbps
- Optional RS232, RS485, Wi-Fi



#### ICR-2700/2800 Series

##### Industrial 4G Router & IoT Gateway

- LTE Cat.4, 2x SIM
- 1.3 GB eMMC storage
- 2x Ethernet 10/100, GNSS receiver
- Optional 2x RS232, RS485, Wi-Fi
- Optional USB, last gap capacitor

### 5G & 4G Connectivity Gateways - Platform v1



#### ICR-1600 Series

##### Industrial 4G Router & IoT Gateway

- LTE Cat.4, 2x SIM
- 2x Ethernet 10/100/1000 Mbps
- Optional RS232, RS485, Wi-Fi 5



#### ICR-1700 Series

##### Industrial 5G Router & IoT Gateway

- 5G, LTE Cat.12 fallback, 2x SIM
- 1x Ethernet 10/100/1000M/2.5 Gbps
- Optional RS232, RS485, Wi-Fi 5

# Industrial Ethernet Switches and Communications

## Reliable Industrial Communication and Networking Solutions

Empower your network with Advantech's industrial Ethernet solutions. Our diverse range includes L2/L3 managed and unmanaged switches, featuring PoE, 10G, and X-Ring Pro redundancy. Specifically designed for industrial settings, our Ethernet switches hold domain-focused certifications – EN50155 for railways and IEC-61850-3 for smart substations. All of which contribute to the secure transmission of data, monitoring, and control of networked devices.

### Unmanaged Ethernet Switches



#### EKI-2000 Series

- Operating temperature: -40~75 °C / -40~167 °F
- Features fast Ethernet, gigabit Ethernet, POE, POE+ and fiber optics connectors
- Designed in slim size with IP30 metal mechanism
- Supports DIN-rail mounting method

### PROFINET Unmanaged Switches

NEW



#### EKI-2525NI/2528NI/2728NI/5726NI

- Supports PROFINET Conformance-Class A
- Complies with IEC 61131-2 specifications
- Enhanced traffic prioritization for automation protocols
- Supports ESD Level 4

### L2 Managed Switches



#### EKI-7700 Series

- High variety of port combinations
- Supports Advantech Security Pack for cyber security
- IXM function enables fast deployment
- Supports X-Ring Pro and CLI/Web GUI
- EN 50121-4 and NEMA TS-2 certified

### L3 Managed Switches

NEW



#### EKI-9700/9600 Series & EKI-8528

- L3 Modular Switch
- Static routing/ NAT (EKI-9612G, EKI-9628G)
- Static routing, RIP v1/ v2, OSPF v3, PIM-SM, PIM-DM, VRRP(EKI-9728G)
- Supports up to 4 x 10G SFP+ ports (EKI-9728G)

### TSN Ethernet Switches



#### EKI-8500 Series

- IEEE 802.1AS time synchronization
- IEEE 802.1Qbu frame preemption
- IEEE 802.1Qbv time aware shaper
- IEEE 802.1CB seamless redundancy

### EN 50155 Switches

NEW



#### EKI-9500 Series

- EN 50155, EN 50121-3-2, IEC 61373 compliant
- PoE/ PoE+ models are available
- Various port combination with Fast Ethernet/ Giga/10G Ethernet options: 8 / 10 / 12 / 16 / 20 / 28 ports
- IP54/ IP67 and rugged housing

### IEC 61850-3 Switches

NEW



#### EKI-7528 / EKI-8528 / EKI-9226

- IEC 61850-3 and IEEE 1613 certified for Power Energy
- L3 features: VRRP, RIP v1/v2, OSPFv3, PIM
- IEEE 1588v2 PTP for precise time synchronization

### Long Reach Ethernet Solutions



#### IMC-150 Series

- Extend the reach of both power and data delivery to 800 meters
- Supports Link Fault Pass Through (LFPT) mechanism
- Leverage pre-built UTP and coaxial cables to upgrade network infrastructure
- Industrial grade hardware design with EN50121-4 EMC certification

### Industrial PoE Switches



#### EKI-2700 & EKI-7000 Series

- Supports IEEE802.3 af/at PoE(+) standards
- Serves as power sourcing equipment (PSE)
- Designed with 10/100/1000Base-T and SFP
- Supports up to 685W power budget

### Industrial 15/30/60/90W PoE Injectors



#### EKI-2701 Series

- Supports IEEE802.3 at/af/bt standards
- Serves as power sourcing equipment (PSE)
- Operating temperature: -40~75 °C / -40~167 °F
- EKI-2701MP1-5G supports 10/ 100/ 1G/ 2.5G/ 5G multi-speed data transmission

### Smart Dual Channel 802.3bt Media Converters



#### IMC-595MPI

- Smart media converter with SFP uplink port and .bt PoE port x 2
- Configurable PoE power allocation with max. 180W power
- Configurable PoE behavior to reboot PD and notify link down

### Industrial Media Converters and Chassis



#### IMC-300 & IMC-318I Series

- Wide range of choices from 10/100Mbps to 10G
- Flexible power input DC/AC/USB/PoE
- Flexible Installation: Din-rail, wall-mount, chassis
- Easy plug-in for central management with Chassis IMC-318I





# Industrial Wireless Devices and Sensors

## Transforming Industrial Automation with Versatile Wireless Technology

With developments in wireless and cloud technologies, more and more remote monitoring applications have adopted cloud services for wide area management systems. To shorten the gap between the field site data and the cloud, Advantech provides wireless I/O and sensor modules that can get and pass data directly to the cloud by utilizing wireless technologies such as, Wi-Fi, 4G, LoRaWAN, NB-IoT/ LTE-M, and proprietary LPWAN through IoT protocols - MQTT, CoAP and LwM2M.

### Industrial Wi-Fi Access Points and Clients



#### BB-WLNN Series

##### Wi-Fi Dual Band Embedded Module

- Quick time to market and reduced integration costs
- 802.11a/b/g/n Wi-Fi radio (2.4 GHz, 5 GHz)
- WEP, WPA-PSK, WPA2-PSK and WPA2-enterprise security
- Small form factor module



#### ABDNA-ER-DP551(U) / ABDNA-ER-IN5010

##### Wi-Fi Dual Band Enterprise Ethernet Bridge/Router

- 10/100 Ethernet to Dual Band Wi-Fi
- Compact form factor
- Industrial metal case



#### EKI-6333AC/ EKI-136X Series/ EKI-9502G

##### 802.11AC Wi-Fi AP/ Bridge/ Client/ EN 50155 Router

- Supports 802.11 a/b/g/n/ac MIMO 2T2R
- EKI-136X Series support serial device to Wi-Fi or Lan to Wi-Fi variety function
- Supports secure access with WEP, WPA/WPA2-Personal, WPA/WPA2-Enterprise
- Wireless band 2.4G/5G selective/dual
- Provides web-based configuration

### Wireless I/O Modules



#### WISE-4471/ WISE-4671

##### Industrial NB-IoT/LTE-M IoT Wireless I/O Module

- Dual mode support with global coverage in NB-IoT and LTE-M
- Faster and easier deployment with existing infrastructures
- Supports direct public cloud service for IoT integration



#### WISE-2210 / WISE-4210

##### Industrial Proprietary LPWAN (Sub-G) IoT Wireless I/O Module

- Battery power for 5 years with 3 x 3.6V AA batteries
- Application-ready I/O combination with modularization design
- Supports MQTT & Modbus/TCP protocol



#### WISE-2200-M / WISE-4610 / BB-WSW

##### Advanced Industrial LoRaWAN IoT Wireless I/O Module

- Longer communication range with low power consumption
- Better penetration through concrete and steel with less interface
- One stop station with single and multiple I/O solution



#### WISE-4250

##### Industrial Dual Band 2.4/5GHz Wi-Fi IoT Wireless I/O Module

- Dual band 1T1R 2.4/5 GHz IEEE 802.11a/b/g/n/ac
- Fast roaming and smart band management technology
- Build-in higher security subsystem

### Wireless Sensor Modules



#### WISE-2410 Series

##### LoRaWAN Smart Condition Monitoring Sensor

- Compliant with ISO 10816 (guidelines for machine vibration evaluation)
- No power and communication wiring with LoRaWAN technology
- Computing onboard, directly transmits vibration characteristic values to application



#### EVA-2000 Series

##### LoRaWAN Smart Sensors

- EVA-2210: 3-Phase Current Meter with 3 x 75A Clamp-On CT
- EVA-2310: Temperature and Humidity Sensor
- EVA-2311: Temperature PT1000 Round Head Probe Sensor
- EVA-2510: Water Leakage Sensor



#### WISE-2460 / WISE-S100 / 96PD-THS16B

##### Smart Sensors

- Stack light OEE monitoring sensor
- High accuracy temperature and humidity sensor
- High frequency vibration sensor
- RS-485 Modbus data directly output
- Can be paired with any RS-485 supported wire/wireless I/O solutions



# Serial and USB Communication Solutions

## Connecting Your Legacy Serial Assets with the IoT World

Advantech serial communication products include industrial-grade Serial/USB to Serial Converters and USB Hubs/Isolators - ULI series, serial device servers - EKI-1500 series, and serial communication cards - PCI/PCIE 1600 series. The ULI converters and USB hubs feature surge/ESD/isolation/wide temperature functions with options for C1D2 and IEC 61850-3 certification. EKI-1500 serial device servers connect RS-232/422/485 devices, such as PLCs, meters and sensors to the internet for centralized communication. Additionally, the PCI/PCIE-1600 serial communication cards with RS-232/422/485 ports meet diverse industrial automation needs.

### Serial to Fiber Isolated Converters



#### ULI-210 Series

- Up to 2kV 3-way isolation and 10~48V<sub>DC</sub> power input
- Up to 115.2 kbps data rate and -40 ~ 80 °C operating temperature.
- Supports Modbus ASCII/RTU protocols
- ULI-211CI (BB-FOSTCDRI): rugged serial/MM ST converter with C1D2
- ULI-211E (BB-FOSTCDRI-PH-MT): IEC 61850-3 serial/MM ST converter
- ULI-212CI (BB-FOSTCDRI-ST): serial/SM ST converter
- ULI-213CI (BB-FOSTCDRI-SC): serial/SM SC converter

### RS-232 to RS-422/485/TTL Converters



#### ULI-220 Series

- Converts RS-232 to RS-422, RS-422/485, RS-485, TTL signals
- Various connector options: DB-9, terminal block, RJ-11
- Up to 2kV 3-way isolation and 10~48V<sub>DC</sub> power input
- 115.2 kbps ~ 460Kbps data rate and 0 ~ 70 °C / -40 ~ 80 °C operating temperature.
- Supports Modbus ASCII/RTU protocols
- ULI-223D (BB-422PP9R): RS-232 to RS-422 (DB-9) converter
- ULI-224TC (BB-485LDRC9): RS-232 to RS-422/485 (TB) isolated converter
- ULI-226D (BB-485SD9R): RS-232 to RS-485 (DB-9) converter

### RS-232/422/485/CANbus Repeater/Isolators



#### ULI-230 Series

- Extend additional distance: RS-232 15m; RS-422/485 1,200m
- Up to 2kV 3-way isolation and 10~48V<sub>DC</sub> power input
- Up to 115.2 Kbps data rate and -40 ~ 85 °C operating temperature
- ULI-232DS (BB-9SPOP2): RS-232 isolator with DB-9
- ULI-234TCI (BB-485OPDRI): RS-422/485 (TB) isolated repeater
- ULI-234TE (BB-485OPDRI-PH): IEC 61850-3 RS-422/485 (TB) isolated repeater

### USB to Serial Converters

USB 2.0



#### ULI-300 Series

- Adds a COM port to your PC via USB
- Up to 3kV isolation, powered by USB port
- Up to 921.6kbps data rate & -40 ~ 80 °C operating temperature
- ULI-321DC (BB-USO9ML2-A): USB 2.0 to RS-232 (DB-9) isolated converter
- ULI-341TC (BB-USOPTL4): USB 2.0 to RS-422/485 (TB) isolated converter
- ULI-361D (BB-485USB9F-2W): USB 2.0 to 2-wire RS-485 (DB-9) converter

### Industrial-Grade USB Hubs

USB 3.2 / 2.0



#### ULI-410 Series

- USB 3.2 Gen 1 SuperSpeed 5Gbps
- ESD protection up to 15kV (Level 4)
- Isolation protection up to 4kV
- Operating temperature: -40~80°C / -4~176°F
- ULI-414H (BB-USH204-B): 4-port USB 3.2 SuperSpeed hub
- ULI-417H (BB-USH207-B): 7-port USB 3.2 SuperSpeed hub
- ULI-414CI (BB-UHR304): 4-port USB 2.0 isolated hub, UL C1D2
- ULI-414HCL (USB-4630-BE): 4-port USB 3.2 isolated hub
- ULI-417HC: 7-port USB 3.2 isolated hub

### USB Isolators

USB 2.0



#### ULI-420 Series

- Up to 4kV isolation and 15kV / 8kV ESD protection for PCs, Laptops, Equipment
- Full (12Mbps) USB speed with high retention USB connectors
- Powered by USB port or 10-30V<sub>DC</sub> power input, -40 ~ 80 °C operating temp.
- ULI-421CL (BB-UH401): 1-port USB 2.0 isolator
- ULI-421C (BB-UHR401): 1-port USB 2.0 isolator
- ULI-422C (BB-UHR402): 2-port USB 2.0 isolator

### Serial Device Servers



#### EKI-1500 Series

##### 1/2/4/8/16-Port Serial Device Server

- Connect 1~16-port RS-232/ 422/ 485 devices directly to TCP/IP networks
- VCOM, TCP server, TCP client, UDP, and RFC2217 modes

### Console Server



#### EKI-1526NL-CS

##### 16-port Console Server

- RS-232 serial communication
- Cisco compatible pinout
- User authentication
- Secured out-of-band management

### Serial Communication Cards



#### PCI/PCIE-1600 Series

##### 2/4/8-Port Serial Communication Cards

- 15 kV (air) / 8kV (contact) ESD protection
- 3kV isolation protection
- PCI/PCIE-1600: 2/4/8-port RS-232/422/485, up to 921.6 kbps data rate
- PCI/PCIE-1680: 2-port CAN/ CANFD card, up to 8 Mbps data rate



# Industrial Gateways

## Connecting Legacy Devices to the IoT World

Advantech offers a wide selection of industrial gateways and cutting-edge data monitoring software tailored to your data management needs in different settings. Our gateways, equipped with advanced protocol conversion capabilities, act as bridges connecting various networks. They effortlessly link legacy devices to the cloud, making them an ideal solution for a myriad of industrial applications.



### Intelligent Communication Gateways

Edgeline is an IoT gateway software seamlessly linking devices to cloud platforms such as AWS, Azure, Google Cloud, and third-party systems. With 200+ PLC drivers, it connects to various devices, and enables smooth data flow across diverse protocols like MQTT, OPC UA, Modbus, IEC-61850 and more. The OpenVPN integration simplifies network setup for secure connections, preserving data integrity and confidentiality.

NXP



#### ECU-1370

- NXP i.MX8M Quad Core Cortex A53 1.3G CPU
- DDR4 4GB RAM, 32GB eMMC
- 1 x RS-232/485 isolated serial ports, 1 x CAN, 3 x 10/100/1000 Ethernet ports
- 24 DI and 6 DO (Relay)
- Operating temperature: -40~80 °C/ -40~176 °F

EdgeLink

NXP



#### ECU-150

- NXP i.MX8M Quad Core Cortex A53 1.3G CPU
- DDR4 2/4GB RAM, 16/32GB eMMC
- 2 x RS-232/485 isolated serial ports, 2 x 10/100/1000 Ethernet ports
- Modular design with optional second stack for increasing functionality

EdgeLink



#### ECU-1260

- Cortex-A35 Quad Core, 1GHz CPU
- 2GB RAM, 16GB eMMC
- 3 x RS-232/485 isolated serial ports, 1 x CAN, 2 x 100/1000 Ethernet ports
- Operating temperature: -40~70 °C/ -40~158 °F

### Fieldbus Gateways



#### EKI-1242IEIMS

##### Modbus RTU/TCP to Various Industrial Protocols Fieldbus Gateway

- Dual power inputs
- Supports Modbus RTU/TCP Client, EtherNet/IP Adapter, PROFINET IO-Device, OPC UA Server protocols
- Built-in real-time diagnostics
- I models support wide operating temperature ranges

EdgeLink



#### ECU-1252

- Cortex A9 600MHz CPU with 2G RAM
- 16GB eMMC system storage and 1 x Micro-SD Slot
- 2 x RS-232/485 isolated serial ports, 2 x CAN, 2 x 100/1000 Ethernet ports and 1x mPCIe for wireless expansion
- Operating temperature: -40~70 °C/ -40~158 °F

EdgeLink



#### ECU-1251 V2

- Cortex A9 600MHz CPU with 2G RAM
- 16GB eMMC system storage and 1 x Micro-SD Slot
- 4 x RS-232/485 isolated serial ports, 2 x 10/100 Ethernet ports, 2 x USB and 1x mPCIe for wireless expansion
- Operating temperature: -40~70 °C/ -40~158 °F

EdgeLink



#### ECU-1051

- Cortex A8 600MHz CPU with 256MB RAM
- Dual SIM slots for communication redundancy
- 2 x RS-232/485, 2 x 10/100 Ethernet
- Operating temperature: -40~70 °C/ -40~158 °F

### Modbus Gateways



#### EKI-1200 Series

##### 1/ 2/ 4-Port Modbus Gateway

- Supports redundancy-enhanced Modbus ID
- Integrates Modbus TCP and Modbus RTU/ASCII network
- I models support wide operating temperature ranges

### Intelligent Remote Terminal Units

EdgeLink



#### ADAM-3600

- TI Cortex-A8 (600MHz) with 256MB DDR3L
- Real-time Linux
- 4 x expansion slots
- SD slot for local data storage
- 2 x LAN ports with two MAC addresses
- 2 x wireless communication interface (mini-PCIe)
- 8 x DI, 8 x AI, 4 x isolated DO channels



#### ADAM-3651/ ADAM-3656

##### Digital I/O Expansion Module

- ADAM-3651: 8-ch DI module
- ADAM-3656: 8-ch DO module

#### ADAM-3617/ ADAM-3624

##### Analog I/O Expansion Module

- ADAM-3617: 4-ch AI module
- ADAM-3624: 4-ch AO module



#### ADAM-3668

##### 4-ch Relay Output Module

- 2-ch form A and 2-ch form C
- Contact rating: 0.3A@125VAC, 1A@30Vdc



#### ADAM-6700 Series

- RISC/Linux-based, Node-RED
- Multiple I/O & wireless connectivity
- Operating temperature: -40~70 °C/ -40~158 °F





# EtherCAT Control and I/O Solutions

Effortless Development, Quick Configuration, and Feature-Rich Solutions for Seamless Control

Advantech's EtherCAT Control solutions are distinguished by a blend of optimized real-time control, advanced programming capabilities, integrated software, compact and powerful hardware, versatile controllers, and flexible, scalable I/O solutions. This approach ensures efficient, reliable, and flexible control for industrial automation, catering to a wide range of user needs and applications.

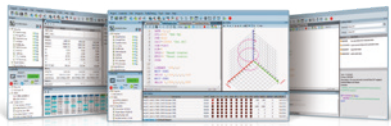
Get into Know EtherCAT Control Solutions



## ARM-Based Motion Control Solutions

NEW

### MotionNavi Designer



#### MotionNavi Designer

##### Low-Code IDE Motion Control Software

- Compatible with Windows OS, it enables EtherCAT SubDevice configuration, diagnostics, motion control testing, and trajectory analysis
- Streamlines application-specific code development, allowing easy coding, debugging, and execution on standalone motion controllers
- Features a BASIC-like syntax, supports multi-tasking on AMAX-354, and allows flexible data control and analysis tools for EtherCAT network quality and motion control

NEW

EtherCAT



### MotionNavi Designer

#### AMAX-354

##### 32-Axis EtherCAT Motion Controller

- Ultra compact size with 100(H) x 70(D) x 34(W) mm
- Provides high precise and low latency control
- Flexible I/O expansion with remote EtherCAT modules and local AMAX-5000 I/O expansion
- Supports MotionNavi Designer low-code environment for rapid development

NEW

EtherCAT



#### AMAX-324

##### 32-Axis EtherCAT Motion Controller with LCM & Motion I/O

- Up to 32-axis EtherCAT ARM-based motion controller
- 1 x Ethernet, 1 x EtherCAT, 1 x RS-232, 1 x RS-485, 1 x SD
- LCM for configuration, status monitor and self-diagnosis
- Local high speed Motion I/O provides 2 x Encoder In, 2 x LTC, 2 x CMP, 1 xMPG
- Supports MotionNavi Designer Low-code Development
- Supports PTP, linear and circle interpolation, Path table

## PCI Express Digital I/O Cards

NEW

EtherCAT



### MotionNavi API

#### AMAX-357

##### PC-Based 32-Axis EtherCAT Motion Controller

- Compact size for control panel space optimization
- Flexible I/O expansion with remote EtherCAT modules and local AMAX-5000 I/O expansion
- Supports MotionNavi Utility providing EtherCAT diagnostic tool to reduce downtime
- Supports C/C++, VS.NET, LabVIEW programming languages
- Integration of IT and OT application

EtherCAT



#### PCIE-1203/ PCIE-1203L/ PCIE-1203IO

##### EtherCAT PCI Express Master Cards

- Supports up to 64-axis, domain focus APIs, on board compare trigger, position latch and MPG function
- High precision motion and I/O control, no need to understand the complicated EtherCAT protocol
- Easy-to-use, rapid development, and wiring-saving
- PCIE-1203IO is an EtherCAT master card for EtherCAT I/O module access only - without motion control functionality. Typical applications include data collection in the field.



#### PCIE-1245/PCIE-1245E

##### Full / Economic 4-Axis Motion Control PCI Express Card

- Pulse output and Encoder input support CW/CCW,P/D,AB phase
- Memory buffer (10 K points) for trajectory planning
- Supports position latch and trigger
- Supports 1D & 2D position compensation
- Supports gantry mode by offering 1-D and 2-D dynamic error corrections
- Supports dynamic PWM output for velocity following

## Control Platforms

**NEW** EtherCAT**AMAX-5570S/AMAX-5570****Ultra-Compact Control Platform**

- Economic platform: Intel Atom® processor
- Full size mPCIe slot for wireless application
- BIOS optimized option for real-time capability (CODESYS enable)
- EtherCAT I/O, CAN bus of AMAX-5570 for smart manufacture
- iDAQ-964 Smart IO of AMAX-5570S for High speed data acquisition

## Programmable Edge Controllers

EtherCAT  
CODESYS**AMAX-657****Real-Time Soft-Logic Cabinet Controller**

- CODESYS Control Real Time Engine (RTE) & Visualization (Target & Web)
- Supports IEC 61131-3 programming languages (FBD, LD, IL, ST, and SFC) and PLCopen automation specification
- Upstream connectivity facilitates IT/OT integration (MQTT, OPC UA, and ODBC)
- CODESYS software control redundancy supported
- CANopen communication supported with CODESYS runtime

EtherCAT  
CODESYS**AMAX-658****Real-Time Soft-Logic Modular Controller**

- CODESYS control Real Time Engine (RTE) & visualization (target & web)
- Supports IEC 61131-3 programming languages (FBD, LD, IL, ST, and SFC) and PLCopen automation specification
- Upstream connectivity facilitates IT/OT integration (MQTT, OPC UA, and ODBC)
- Supports flexible AMAX-5000 slices I/O and AMAX-5400 LAN/CAN/COM I/O expansion
- CODESYS software control redundancy & cable redundancy supported

## Coupler Modules

**NEW**

EtherNet/IP

**AMAX-5072****Compact EtherNet/IP Coupler for AMAX-5000 I/O Modules**

- Supports EtherNet/IP EDS file import for PLC
- Supports up to 255 I/O modules
- Dual power input with diagnosis
- Supports EtherCAT cable redundancy connection for local I/O

**NEW**

Modbus

**AMAX-5070****Compact Modbus/TCP Coupler for AMAX-5000 I/O Modules**

- Supports Modbus/TCP & data streaming
- Supports up to 255 I/O modules
- Dual Power input with diagnosis
- Supports EtherCAT cable redundancy connection for local I/O

## Industrial Slice I/Os

EtherCAT

**AMAX-5000 I/O Series****Compact Modular EtherCAT Slice I/O**

- Removable push-in I/O terminal
- Smart power quality diagnosis
- Dual power inputs
- 2000 Voc isolation
- Supports isolated DI/DO, analogue (V/mV/ma, RTD, thermal couple), AO (V/ma), counter/encoder, timestamp module
- DC mode selectable

## Serial Communication Slice I/O

**NEW**

EtherCAT

**AMAX-5090****1-port Isolated RS-232/422/485 Communication EtherCAT Slice I/O**

- Software configurable RS-232/422/485
- Supports up to 2000VDC isolation protection
- Supports Modbus/RTU communication protocol
- Supports different mode for legacy serial device

## PWM Slice I/O

**NEW**

EtherCAT

**AMAX-5086****2-ch PWM with 2-ch Digital Input EtherCAT Slice I/O**

- Supports freq. from 1Hz to 125kHz with duty cycle 0~100%
- Supports up to 2000VDC isolation protection
- Equipped extra 2-ch DI for seamless integration
- Supports different load type : Ohmic, Inductive, Lamp Load

## EtherCAT Application I/O

**NEW**

EtherCAT

**AMAX-4270****4-CH Trigger & 4-CH Latch EtherCAT SubDevice**

- Application I/O for inspection and measurement
- 4-CH encoder & 4-CH position trigger & 4-CH position latch
- Max trigger frequency : 10KHz (support 1D & 2D trigger)
- Max latch frequency : 10KHz (edge rising/falling/both)



# IoT HMI

## Intuitive Machine Visualization Enhanced by Smart HMI Solutions

Advantech's IoT HMI solutions offer key advantages in machine and system control with the capability to connect to over 500 types of PLCs. This feature significantly enhances operational efficiency in various industrial environments. The interfaces, known for their intuitive touch controls and customizable features, are optimized for smart technology integration, enabling superior process management and efficient data exchange.

Test Your Project  
on a Simulation



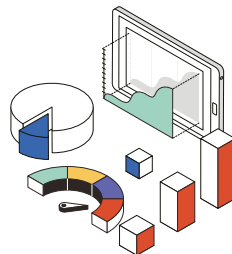
## HMI Navi

HMI Navi is powerful Open HMI software that encompasses an HMI Runtime Engine for HMI operations. Its HMI Engineering tool is designed with a user-friendly interface and offers solution-oriented screen objects for HMI project development.



### Object-Oriented

- Switch Button Object Unit
- Unlimited Internal Tags
- Schedule Table Control
- Macros Script Control
- Data Exchange
- Uplink Communication



### Data Visualization

- Lamps & Animated Display
- Historic Curve & Path Trend Graphic
- Bar Chart & Graphic Display
- Meter & Circular Display
- Pipeline & Path Display
- Rotation Indicator & Radar Chart



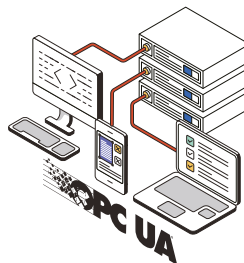
### Data Management

- Alarm Management
- Historical Data Logger
- Operation Data Logger
- Recipe Management
- Documentation CSV Format
- Documentation PDF Format



### Security Protection

- Project File Protection
- Screen Protection
- Due Date Protection
- Runtime Load Protection
- User Level Protection
- User Group Protection



### Data Exchange

- Breakpoint Resume
- OPC UA Server/Client
- VB Script User Coding
- JScript User Coding
- Browser/Media Container
- Database Connection

### Simplified 3-Step PLC Controller Integration

#### 1 Create A Project & Link

- Initiate a new project and create a new link
- Select the connection type (Serial/Ethernet)

#### 2 Select Your PLC Model

- Choose the PLC brand
- Select the PLC type/model

#### 3 Parameter Setup

- Configure baud rate transmission
- Set up the IP address/port/sub-link

## Operator Panels



### WOP-200K Series

#### General Operator Panel Installed with HMI Navi

- 4.3"/ 7"/ 8"/ 10.1"/ 12"/ 15"
- Operating temperature: -15~65°C/ 5~149°F
- Safety certification UL 61010
- IP66-rated waterproof front panel
- Conformal coating boosts motherboard lifespan by 80%
- Isolation power input design & 20W low power consumption

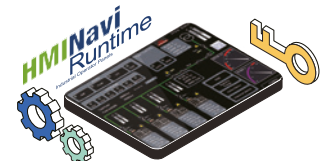


### WOP-200T Series

#### Advanced Operator Panel Installed with HMI Navi

- 7"/ 10.1"
- Operating temperature: -15~65°C/ 5~149°F
- Safety certification UL 61010 & C1D2
- Dual LAN ports design
- Conformal coating boosts motherboard lifespan by 80%
- Isolation power input design & 20W low power consumption

## Licensed Software



### HMI Navi Runtime

#### Runtime Engine Software

- Supports any x86 Windows platforms
- Supports 500+ PLC industrial communication protocols
- Supports cloud access via the MQTT protocol
- Compliant Food & Drug Administration Title 21 CFR Part 11
- Password protection for designs, macros, and upload/download operations





# Machine Vision Solutions

## Stay on Top of Machine Vision Analytics

Time management, ease of maintenance, and accuracy remain major demands for machine vision solutions at the edge. Edge computing solutions facilitate data processing at the source of data generation and serve as a decentralized extension of the cloud, data center, and campus networks. This eases the integration of machine vision and motion control in local field sites while lowering delay. Advantech provides comprehensive machine vision edge solutions covering intelligent platforms, HMI, and controllers.

### Image Sensing

## ICAM 500 Series

### Industrial AI Camera



- 8MP 45 fps SONY industrial-grade sensor
- NVIDIA Jetson AI system on module
- C-mount lens compatible
- HW ISP no GPU/CPU workload

### Why ICAM series?



#### AI Computing

Label, training, interface - all-in-one



#### Programmable Variable Focus Lens

16mm/12mm



#### Software Development Support Package



#### Web Based Utility



### Image Acquisition



#### Axion Series

##### 1- to 4-Port PCI Express Camera Link Frame Grabber

- Camera Link 2.0 compliant
- Half-Size x4 PCI Express Gen 2.0
- Supports base/medium/full/ 80-bit CL cameras
- Supports CL speeds up to 85 MHz
- Uses SDR Camera Link connectors
- Supports PoCL and non-PoCL cameras with SafePower
- Supports Windows and Linux



#### Claxon Series

##### 1- to 4-Port PCI Express CXP12 Frame Grabber

- Half-size, low-profile PCI Express
- CoaXPress 1.0/1.1/2.0 compliant
- Supports CXP3, CXP6, CXP12 camera, Micro BNC connector
- Supports CXP speeds from 3.25 to 12.50 Gb/s
- PoCXP, up to 13 Watts with safe power
- Acquires variable length frames from line scan cameras
- Triggers and encoders for external control of acquisition
- Supports Windows and Linux



#### Cyton Series

##### 1- to 4-Port PCI Express CXP6 Frame Grabber

- Half-Size PCI Express x8
- CoaXPress links, supports CXP-6
- StreamSync Buffer Manager DMA engine
- Can acquire up to 4 single link cameras
- Uses DIN 1.0/2.3 connectors
- Support both PoCXP and non-PoCXP cameras
- Triggers and encoders for external control
- Supports Windows and Linux



#### PCIE-1158

##### 8-port PCI Express USB Vision Frame Grabber

- 4 x USB 3.0 host controllers — Renesas  $\mu$ PD720202
- PCI Express Gen2 x4 interface, up to 2.0 GB/s
- eFuse power protection
- Protective shell prevents damage to components
- Supports Microsoft Windows 10

DAQnavi

# Data Acquisition Solutions

## Diverse Form Factors to Satisfy DAQ Requirements

Advantech offers a wide range of industrial data acquisition and control devices with various interfaces and functions. Based on PC technologies, from add-on cards and portable modules to signal conditioning and graphical software tools, Advantech's industrial I/O products are reliable, accurate, affordable, and suitable for a range of industrial automation applications such as measurement, laboratory operations, machine automation, production testing and much more.

### PCI Express DAQ Cards

### PCI Express Encoder Card



#### PCIE-1810/ 1816

##### 16-ch, 12/ 16-bit Multi-Function PCIe Card

- Sample rate: 500 kS/s, 1 MS/s
- Resolution: 12 /16-bit
- Analog and digital triggers
- Waveform generator for AO channels



#### PCIE-1805

##### 32-ch, 16-bit Analog Input PCIe Card

- Sample rate: 1 MS/s
- Resolution: 16-bit
- $\pm 10$  V to  $\pm 1$  V voltage measurement
- 0 ~ 20 mA or 4 ~ 20 mA current measurement
- Analog and digital triggers



#### PCIE-1884

##### 32-bit, 4-ch Encoder/Counter with Preload Position Compare FIFO PCIe Card

- Quadrature (X1, X2, X4), dual pulse (CW/CCW), signed pulse (OUT/DIR) modes
- Programmable trigger output (preload FIFO) for position comparison
- Single-ended or differential inputs
- Digital filter with selectable values



#### PCIE-1841/ 1841L/ 1812

##### 16/ 8/ 8-ch, PCIE-1841/L: 18-bit, PCIE-1812: 16-bit Simultaneous AI Multi-Function PCIe Card

- Sample rate: PCIE-1841/L: 1 MS/s/ch, PCIE-1812: 250 kS/s/ch
- Resolution: PCIE-1841/L: 18-bit, PCIE-1812: 16-bit
- Analog and digital triggers
- Waveform generator for AO channels (PCIE-1812 only)



#### PCIE-1802/ 1802L/ 1803

##### 8/ 4/ 8-ch, 24-bit Sound and Vibration Input PCIe Card

- Sample rate: PCIE-1802/L: 216 kS/s/ch, PCIE-1803: 128 kS/s/ch
- Resolution: 24-bit
- Dynamic range: PCIE-1802/L: 115 dB, PCIE-1803: 102 dB
- Wide input voltage range ( $\pm 0.2 \sim 10$  V)
- Built-in anti-aliasing filter



#### PCIE-1824

##### 32-ch, 16-bit Analog Output PCIe Card

- Resolution: 16-bit
- Update rate: static
- Output range:  $\pm 10$  V, 0 ~ 20 mA and 4 ~ 20 mA
- Synchronized output function
- High ESD protection (2,000 V<sub>oc</sub>)

### PCI Express Digital I/O Cards



#### PCIE-1730H/ 1756H/ 1758

##### 32/ 64/ 128-ch Isolated DI/DO PCIe Card

- 32/ 64/ 128-ch isolated DI/DO channels w/ 24 V compatibility
- Interrupt handling capability for all DI channels
- Software-selectable digital filter time for all DI channels
- 32-ch TTL DI/DO w/ 5 V compatibility (PCIE-1730H only)
- High-voltage isolation on all isolated DI/DO channels (2,500 V<sub>oc</sub>)



#### PCIE-1761H/ 1762H

##### 8/ 16-ch Relay and 8/ 16-ch Isolated DI PCIe Card

- 8/16-ch opto-isolated digital input channels
- 8/16-ch relay actuator output channels
- Interrupt handling capability for all DI channels
- Software-selectable digital filter time for all DI channels



#### PCIE-1763AH/ 1763DH

##### 16-ch Solid-State Relay (SSR) Output and 16-ch Isolated DI PCIe Card

- 16-ch isolated digital input with dry/wet contact options
- Interrupt and noise filter for all DI channels
- Suitable for both AC ( $> 80$  V<sub>ac</sub>) and DC low voltage load ( $< 60$  V) applications with frequent ON/ OFF switching
- Software-selectable digital filter time for all DI channels

## Modular DAQ Chassis and Modules

**NEW**



### iDAQ-934/ 938

#### 4/ 8-Slot USB 3.0 iDAQ Chassis

- USB 3.0 with SuperSpeed USB (5Gbps)
- 1 x upstream and 1 x downstream USB port
- LED indicators for status indication
- 2 x PFP for multi-purpose software-configurable trigger/clock settings
- 4/ 8 x iDAQ slots

**NEW**



### DAQ Modules

- iDAQ-731, 16-ch isolated DI and 16-ch universal isolated DO iDAQ module
- iDAQ-763D, 16-ch solid-state relay (SSR) DO iDAQ module
- iDAQ-817, 8-ch, 16-bit, 200 kS/s AI iDAQ module
- iDAQ-821, 4-ch, 16-bit, 10 kS/s/ch AO iDAQ module
- iDAQ-801, 4-ch, 24-bit, 256 kS/s/ch IEPE sensor input iDAQ module

- iDAQ-815, 8-ch, 24-bit, 400 S/s RTD input iDAQ module
- iDAQ-841, 8-ch, 16-bit, 1 MS/s/ch AI iDAQ module
- iDAQ-751, 48-ch TTL DI/O iDAQ module
- iDAQ-818, 8-ch, 24-bit Thermocouple iDAQ module
- iDAQ-871, 4-ch, 24-bit, 25.6kS/s/ch 3-in-1 Bridge Input iDAQ module
- iDAQ-873, 8-ch, 24-bit, 25.6kS/s/ch Quarter Bridge Input iDAQ module
- iDAQ-784, 4-ch Counter & Encoder iDAQ module

## DAQ-Embedded Computers



### iDAQ-964

#### 4-slot Industrial DAQ Chassis Module for AMAX-5500 Series

- PCIe interface connecting to AMAX-5000 series controllers
- LED status indicators
- 4 x iDAQ slots
- 2 x programmable function pin for timing signal (trigger, clock) input/output



### MIC-1810/ 1816

#### DAQ Platform w/ Intel® processors

- Intel® Celeron® processor 3955U/ Intel® Core™ processor
- MIC-1810: 16 x AI channels (sample rate: 500 KS/s; resolution: 12-bit), 2 x AO channels (update rate: 500 KS/s; resolution: 12-bit)
- MIC-1816: 16 x AI channels (sample rate: 1 MS/s; resolution: 16-bit), 2 x AO channels (update rate: 3 MS/s; resolution: 16-bit)
- 16 x isolated DI/O



### MIC-1842/ 1842L

#### High Speed DAQ Platform with Intel® Processors

- Intel® Celeron® processor 3955U/ Intel® Core™ processor
- 8/4 x simultaneous analog inputs, up to 20 MS/s, 12-bit resolution
- Supports digital and analog triggers
- 32-ch TTL digital I/O
- Onboard FIFO memory (16 K samples)

## USB DAQ Modules



### USB-5801

#### 4-ch, 24-bit USB 3.0 Sound & Vibration Input Module

- USB 3.0 with SuperSpeed USB (5Gbps)
- 1 x upstream and 1 x downstream USB port
- 4 x 24-bit simultaneous sampling analog inputs up to 192kS/s
- IEPE excitation for every channel
- 1 x tachometer for revolution speed measurement
- Built-in USB hub



### USB-5817

#### 8-ch, 16-bit USB 3.0 Analog Input Module

- USB 3.0 with SuperSpeed USB (5Gbps)
- 1 x upstream and 1 x downstream USB port
- 16-bit resolution with 200kS/s sampling rate
- $\pm 275$  V high common-mode voltage range
- Measuring and output error  $\leq \pm 0.1\%$
- Built-in USB hub



### USB-5830/ 5856

#### 32/ 64-ch USB 3.0 Isolated Digital I/O Module

- USB 3.0 with SuperSpeed USB (5Gbps)
- 1 x upstream and 1 x downstream USB port
- Built-in USB hub
- 2,500 V<sub>DC</sub> isolation protection
- Level 3 ESD and surge protection

## USB DAQ 2.0 Modules



### USB-4711A/ 4716

#### 200 kS/s, 16-bit, 16-ch Multifunction USB Module

- Supports USB 3.0 SuperSpeed
- Bus-powered
- 16 analog input channels
- 12/16-bit resolution AI



### USB-4750/ 4761

#### 32-ch Isolated Digital I/O USB Module

- Compatible with USB 1.1/2.0
- Bus-powered
- 16 isolated DI and 16 isolated DO channels
- High voltage isolation on all channels (2500 V<sub>DC</sub>)
- 8 Relay output (USB-4761)

## DAQ Software Development Kit

**DAQNavi**



### DAQNavi/SDK

#### DAQ Software Development Kit

- Supports multiple OS: Windows (32-bit and 64-bit), Linux
- Open development environment: C++, .NET, C#, Java, Python, LabVIEW
- Pre-defined scenario application examples with source code
- Express VI and Polymorphic VIs support in LabVIEW environment



# Secured Cloud I/O Solutions

## Maximizing Distributed Asset Management Efficiency in IoT

Advantech's IoT Ethernet I/O solutions, including the ADAM-200PN/5000/6000/6200/6300 series, are designed for monitoring the condition of equipment, the environment, and key infrastructure assets. The ADAM-200PN series feature IP67 machine-mount I/O that integrates real-time PROFINET with mainstream industrial IoT Ethernet. The ADAM-5000 series offers a modular design, enabling users to customize solutions with a variety of I/O sub-modules. The ADAM-6000/6200 series represents secured cloud I/O with support for MQTT, SNMP, RESTful API, etc. The ADAM-6300 series is an innovative OPC UA I/O, offering high I/O density and daisy-chain support.

### Secured Cloud I/Os



#### Cloud-based Device Management Solutions for High Density & Highly Distributed Assets

##### Security

TLS, X.509 certificate, cipher suites, IP whitelisting, protocol disabled

##### Device Management

Network setting, I/O channel configuration, UUID

##### OTA Updates

Firmware certificate and configuration mass deployment

##### I/O Control

I/O value periodically updated, alarm notification



MQTT  
SNMP



#### ADAM-6200 Series

- Daisy-chain Ethernet I/O modules
- Cloud management: configuration, monitoring, and firmware updates
- Daisy chain connectivity with auto-bypass protection
- Supports HTML5, JavaScript, XML
- Supports GCL/ P2P/ RESTful API
- Group configuration capability
- Supports security MQTT with TLS

#### Module Selection

- ADAM-6217: 8AI
- ADAM-6224: 4AO/ 4DI
- ADAM-6250: 8DI/ 7DO
- ADAM-6251: 16DI
- ADAM-6256: 16DO
- ADAM-6260: 6Relay
- ADAM-6266: 4Relay/ 4DI



MQTT  
SNMP



#### ADAM-6000 Series

- Cloud management: configuration, monitoring, and firmware updates
- Embedded web server
- Data stream function to push data
- Supports GCL/ P2P/ RESTful API
- Supports C#.NET and VB.NET
- Supports security MQTT with TLS

#### Module Selection

- ADAM-6015: 7RTD
- ADAM-6017: 8AI/ 2DO
- ADAM-6018+: 8TC
- ADAM-6024: 6AI/ 2AO/ 2DI/ 2DO
- ADAM-6050: 12DI/ 6DO
- ADAM-6051: 12DI/ 2DO/ 2 Counter
- ADAM-6052: 8DI/ 8DO (source)
- ADAM-6060: 6DI/ 6Relay
- ADAM-6066: 6DI/ 6Power Relay

### OPC UA Ethernet I/Os



OPC UA



#### ADAM-6300 Series

- Uniquely-designed remote I/O with OPC UA protocol
- Directly links to SCADA and cloud, accelerating OT and IT convergence
- Security certificate and encryption
- Cost effective high I/O density
- Supports Modbus and daisy chain

#### Module Selection

- ADAM-6315: 8 RTD/ 6DI/ 8DO
- ADAM-6317: 8AI/ 11DI/ 10DO
- ADAM-6350: 18DI/ 18DO
- ADAM-6360D: 8SSR/ 14DI/ 6DO
- ADAM-6366: 6Relay/ 18DI/ 6DO

### Ethernet / RS-485 Modular I/Os



#### ADAM-5000 Series

- 4/8-slot intelligent modular I/O system
- Supports Modbus/GCL/Soft Logic
- Built-in watchdog timer for system auto-reset

#### Module Selection

##### Main Unit

- ADAM-5000/485 & 5000E: RS-485
- ADAM-5000L/TCP & 5000/TCP: Ethernet
- ADAM-5630 & 5630E: Soft Logic

##### Modules

- ADAM-501x: AI/TC/RTD
- ADAM-502x: AO
- ADAM-505x: DI/O
- ADAM-506x: Relay
- ADAM-508x: Counter/Frequency
- ADAM-5091: 4 serial

### RS-485 I/Os



#### ADAM-4100 Series

- Support Modbus protocol and ASCII command
- Micro USB for power and data transmission
- Wide operating temperature range (-40 ~ 85 °C/ -40 ~ 185 °F)
- High protection level: 4-kV surge, 4-kV EFT, 8-kV ESD
- High common mode voltage: 200 Vdc
- Power input: 10~48Vdc

#### Module Selection

- ADAM-4115: 6RTD
- ADAM-4117: 8AI
- ADAM-4118: 8TC
- ADAM-4150: 7DI/ 8DO
- ADAM-4168: 8Relay



#### ADAM-4000 Series

- Support Modbus protocol and ASCII command
- Watchdog timer
- ±35 Vdc over voltage protection
- 3,000 Vdc voltage isolation

#### Module Selection

- ADAM-4015: 6RTD
- ADAM-4017+: 8AI
- ADAM-4018+: 8TC
- ADAM-4024: 4AO/ 4DO
- ADAM-4051: 16DI
- ADAM-4055: 8DI/ 8DO
- ADAM-4068: 8Relay
- ADAM-4080: 2 Counter

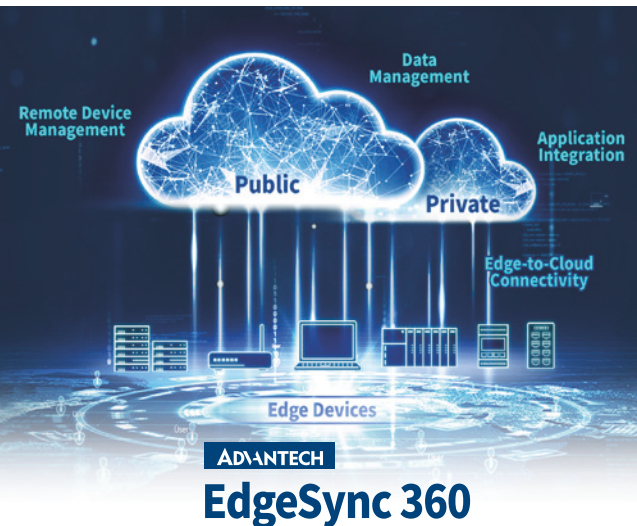


#### ADAM-200PN Series

- PROFINET ports support RT mode / MRP / I&M
- Independent access of device data via IoT platform
- IP67-rated zinc housing is very rugged and resistant to vibration, dust, oil, and water
- UL C1D2 certification for harsh industrial environments
- M12 plug-and-play connectors reduce installation time and wiring efforts

#### Module Selection

- ADAM-217PN: 6AI+2AIO
- ADAM-219PN: 8AI/TC/RTD
- ADAM-250PN: 16DIO



# EdgeSync 360 for IoT Device and Data Orchestration

Connect, Manage, and Analyze Devices and Data through Edge as a Service

EdgeSync 360 is Advantech's Edge as a Service, featuring a comprehensive suite of software products that connect, manage, and analyze devices and data, augmenting the value in various industrial applications. At its core, EdgeSync 360 is powered by a robust set of software and centralized services, including EdgeLink, DeviceOn, WebAccess, and EdgeHub.

Get into Know  
EdgeSync 360



## Centralized Management



### EdgeHub

#### Cloud Service for Device & Data Management

- Instant device onboarding facilitated by a unified edge agent
- Secured architecture supporting multiple tenants on SaaS
- Remote monitoring and control of devices
- OTA updates for firmware, applications
- Data aggregation via customizable web dashboards or APIs



EdgeHub  
Information

## Edge Management



### DeviceOn

#### AI Orchestration in Private and Public Cloud

- Hosted by user in on-prem environment, AWS, or Azure
- Manages over 10,000 AIoT edge devices
- Out-of-band mgmt. via IPMI/iAMT/iBMC/EdgeBMC
- Supports x86/RISC/NVIDIA Jetson
- Supports Windows/Linux/Android



DeviceOn  
Information

## Field Management



### WebAccess

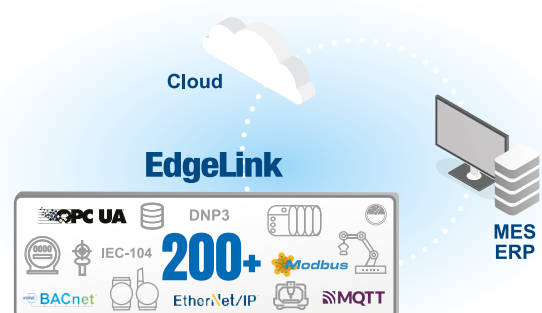
#### SCADA for Real-Time Operation

- Millisecond-level data acquisition
- 2D and 3D visualization
- Data reporting and analysis
- Redundant SCADA architecture for system backup
- Data integration with third-party systems and services



WebAccess  
Information

## Edge Connectivity



### EdgeLink

#### IoT Gateway Software for Multi-Protocol Conversion

- Connections with over 200 PLC and I/O modules
- Event management and easy logic programming tools for preprocessing collected data
- Data publishing through multiple protocols
- Optimal choice for IEC 61850, OCPP, DLMS applications



EdgeLink  
Information



ADVANTECH  
**WISE-IoT**

# Intelligent Factory

Boost Operational Excellence with Proactive Maintenance, Energy Sustainability, Smart AI, and Proactive Insights

A suite of digital solutions that transform manufacturing by using a low-code/no-code IoT cloud platform, enhancing equipment effectiveness (FactoryOEE) and ensuring environmental, health, and safety excellence (EHS) for streamlined operations.



Know More

## Cloud Solution

### One-Click Solution: Your Gateway to Digital Transformation

Empower your business with over 16 applications for predictive maintenance and EHS management through a user-friendly, low-code/no-code platform, enabling seamless adoption without the hassle of major infrastructure overhaul.

- Cost-effective solution with low upfront investment.
- Scalability and flexibility with cloud-based infrastructure.
- Easy to deploy and manage remotely.



#### FactoryOEE & EHS SaaS Starter Package

**9803ITEHS00**

- Includes 5 licenses of FactoryOEE/ EHS cloud subscription for first year
- Includes 150 parameters for monitoring OT data (PLC, sensors, etc.)

#### Optional

##### ECU-1051 with Cloud Starter Package

**IFS-RTM-E1051OT2C**

- TI Cortex A8/ 256 MB RAM/ 1GB Nano Flash/ Linux/ EdgeLink
- Includes 5 licenses of FactoryOEE/ EHS cloud subscription for first year
- Includes 150 parameters for monitoring OT data (PLC, sensors, etc.)

## On-Premises Solution

### Maximize Efficiency: Lightweight, No-Code Embedded Solution

Offering live analytics, utilizing the efficient FactoryOEE and EHS applications, suitable for diverse equipment and facility management, securing effective operations.



#### FactoryOEE & EHS Edge Starter Package

**9804ENWRK00**

- Works with any Advantech IPC hardware, perpetual license
- Min. requirements: Intel® Celeron® processor / 8GB RAM / Windows 10 or Linux
- Starting with 1 license for FactoryOEE & EHS and 30 parameters





# Intelligent Energy Management Solution

Empowering Enterprises for a Greener Future

Advantech's iEMS Suite technology offers a comprehensive smart energy solution for corporate carbon asset management (ISO 14064/ISO 14067), energy management (ISO 50001), HVAC and air compressor efficiency, and motor efficiency. It is the ideal partner for global enterprises on their journey to carbon neutrality, providing solutions for carbon and energy management in their pursuit of sustainability.



Know More

## Carbon Management

CarbonR



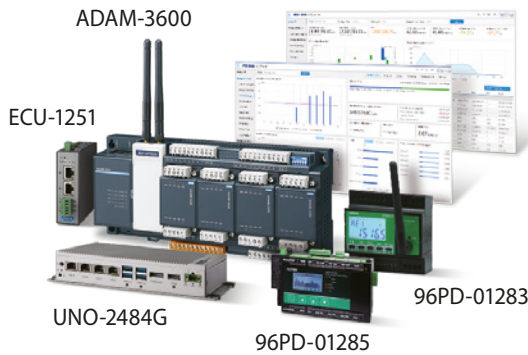
ECOEnterprise **Add-on**



ECOWatch



Bulletin **Add-on**



## Critical Equipment

HVAC



Compressor



Management



MachineUnit



## eCommerce Platform for Solutions

### WISE-Marketplace

Experiencing Abundant IoT Solutions with Effortless Purchase and Deployment



Know More

#### We support

Hybrid deployment with ease  
(Public Cloud, private cloud, hybrid Cloud)

Technical support  
across 27+ countries

Lead generation &  
co-marketing exposure



#### We offer

Scalable IoT platforms and  
development toolkit

60+ industrial  
applications

20+ vertical solutions including manufacturing,  
energy management, city services & retail,  
healthcare, etc

Regional Service & Customization Centers

<b>China</b>	Kunshan 86-512-5777-5666	<b>Taiwan</b>	Taipei 886-2-7732-3399	<b>Netherlands</b>	Eindhoven 31-40-267-7000	<b>Poland</b>	Warsaw 00800-2426-8080	<b>USA</b>	Milpitas, CA 1-408-519-3800
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Worldwide Offices

<b>Asia Pacific</b>		<b>Asia Pacific</b>		<b>Europe</b>		<b>Americas</b>	
<b>Taiwan</b>		<b>Japan</b>		<b>Netherlands</b>		<b>United States</b>	
Toll Free	0800-777-111	Toll Free	0800-500-1055	Eindhoven	31-40-267-7000	Cincinnati	1-888-576-9668
Taipei	886-2-7732-3399	Tokyo	81-3-6802-1021	Breda	31-76-523-3100	Milpitas	1-408-519-3800
Taichung	886-4-2372-5058	Osaka	81-6-6267-1887	<b>Germany</b>		Irvine	1-800-866-6008
Kaohsiung	886-7-392-3600	Nagoya	81-052-291-4860	Munich	49-89-12599-0	Ottawa	1-800-346-3119
<b>China</b>		Nogata	81-949-22-2890	Düsseldorf	49-2103-97-855-0	Chicago	1-513-742-8895
Toll Free	800-810-0345	<b>Korea</b>		Amberg	49-9621-9732-100	Boston	1-800-866-6008
Beijing	86-10-6298-4346	Toll Free	080-363-9494/5	<b>France</b>		<b>Canada</b>	
Shanghai	86-21-3632-1616	Korea HQ (Seoul)	080-363-9494/5	Paris	33-1-4119-4666	Toronto	1-800-866-6008
Shenzhen	86-755-8212-4222	<b>Singapore</b>		<b>Italy</b>		<b>Brazil</b>	
Kunshan	86-512-5777-5666	Singapore	65-6442-1000	Milan	39-02-9544-961	Toll Free	0800-770-5355
Hong Kong	852-2720-5118	<b>Malaysia</b>		<b>UK</b>		São Paulo	55-11-5592-5355
		Kuala Lumpur	60-3-7725-4188	Newcastle	44-0-191-262-4844	Itajuba	55-35-3623-5949
		Penang	60-4-537-9188	London	44-0-208-317-1380	<b>Mexico</b>	
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		Bangkok	66-02-2488306-9	Madrid	34-91-668-86-76	Mexico City	1-800-467-2415
		<b>Vietnam</b>		<b>Sweden</b>		Guadalajara	52-33-3169-7670
		Hanoi	84-24-3399-1155	Stockholm	46-0-864-60-500	<b>Middle East and Africa</b>	
		Hochiminh	84-28-3836-5856	<b>Poland</b>		<b>Israel</b>	
		<b>Indonesia</b>		Warsaw	48-22-31-51-100	Kadima-Zoran	072-2410527
		Jakarta	62-21-751-1939	<b>Russia</b>		<b>Turkiye</b>	
		<b>Australia</b>		Moscow	7-495-783-80-02	Istanbul	90-212-222-0422
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		Melbourne	61-3-9797-0100	<b>Czech Republic</b>			
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		Bangalore	1-800-425-5070	<b>Ireland</b>			
		Pune	91-94-2260-2349	Galway	353-91-792444		

