

ADVANTECH

A+ Embedded Solutions

Advantech N. America | 2024 H1



Industrial Motherboards

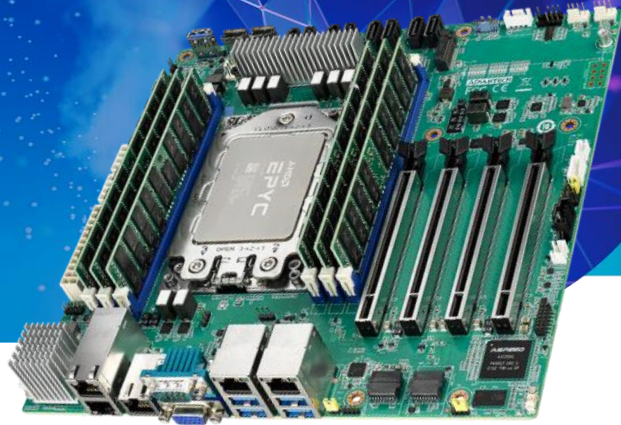
AIMB



Micro-ATX

AIMB-592

EPYC™ 7003 series



64-Core AMD EPYC™ Industrial MicroATX Motherboard

Driving Next-Generation Workloads at Edge

Benefits

- Maximize AI computing with high-speed technology
- Ultimate performance powers workloads at the edge
- High throughput connectivity to cloud
- Remote management capability

Features

- 64-Core AMD EPYC™ 7003 • 768GB DDR4
- Four PCIe x16 slots • Dual 10GbE • Dual 2.5GbE • IPMI 2.0

Diagram



Mini-ITX

AIMB-288E

Industrial Motherboard



GPU-accelerated THIN Mini-ITX

Performance breakthrough with 14th Gen Intel® Core™ Desktop and ARC A370M integration

Phase In 2023 Q4

Longevity 2028 Q4

Features

CPU and GPU Accelerated Computing

- 14/13/12th Gen Intel® Core™ Desktop Processor, 24 Cores and DDR5 memory
- Intel Arc A370M integration, FP32 Performance 4.198 TFLOPS
- CPU & GPU integration ready to use

Versatile I/O and expansion

- 2x GbE, 6x USB 3.2 Gen1x1, 2x COM for Camera and sensor
- M.2 M-key for NVMe storage, fast data transmission
- M.2 B-Key for 4G/LTE wireless connectivity
- 3 x 4K displays

1U THIN All-in-One Kit, ready to use

- Kit integrated with CPU, GPU, memory, NVMe and QFCS2.0 cooling system
- H: 42.1mm(<1U) and 24V DC-input ease system design
- 52.7dB low noise friendly to quiet environment

Software Support

- DeviceOn remote management
- Windows10 & Window11
- Ubuntu22.04
- ROS2 & Edge AI SDK



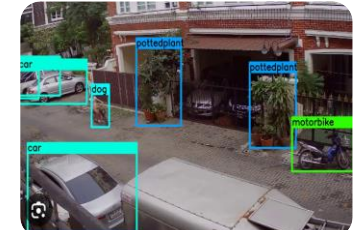
Applications



Medical Imaging



AMR



Smart City

Materials



[AIMB-288E Website](#)



[AIMB-288E Video](#)



[Brochure](#)



[Embedded Design-in Service](#)



[AIMB Website](#)



Mini-ITX

AIMB-279

Industrial Motherboard



Latest Generation Mini-ITX

Empowered by 14th Gen Intel® Core™ Desktop Processor and super speed I/O technology

Phase In Q1 2024

Longevity 2034 Q4

Features

Extreme Computing Performance

- 14/13/12th Gen Intel® Core™ Desktop Processor
- 24 Cores, 65W CPU TDP
- DDR5 96GB 5600MHz

Super Speed I/Os

- PCIe16 Gen4 (16.0 GT/s)
- 4 ports USB3.2 (2 in coast line/2 internal)
- 1GbE vPro LAN; 1 port with 2.5GbE
- 3 x 4K displays
- M.2 M-key for NVMe, E-Key for Wi-Fi

Software Support

- DeviceOn remote management
- Windows10 & Window11
- Ubuntu22.04
- ROS2 SDK & Edge AI OpenVINO SDK

Reliability design for long time operation

- 12~24V Wide range DC power input
- EMC level 4 protection(8K/15KV) by system
- IEC-60068-2 compliance design validation
- Smart fan management, resolve CPU heat with dynamic fan speed

DeviceOn

EdgeAI
SDK

OpenVINO



Applications



Endoscope



Surgical Robot



Digital Measurement

Materials



[AIMB-279 Website](#)



[Brochure](#)



[Embedded Design-in Service](#)

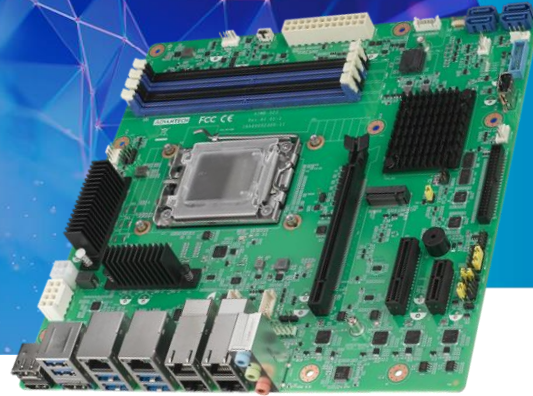


[AIMB Website](#)

Micro-ATX

AIMB-523

RYZEN™ Embedded 7000 series



AMD Embedded Ryzen Industrial MicroATX Motherboard

Moving Toward Next-Gen Visual Computing

Phase In 2024 Q2

Longevity 2030

Benefits

- Maximize computer vision applications with high-speed connectivity
- High performance processor with high-speed interfaces
- Expandability for imaging processing

Features

- AMD RYZEN™ 7003 ▪ DDR5 ▪ M.2 M-key (NVMe)
- 6 x 2.5GbE LAN ▪ 8 x USB 3.2 ▪ PCIe x16 Gen5 slot
- OS Windows 11, Windows Server, Ubuntu

Applications



Vision Guided Automation



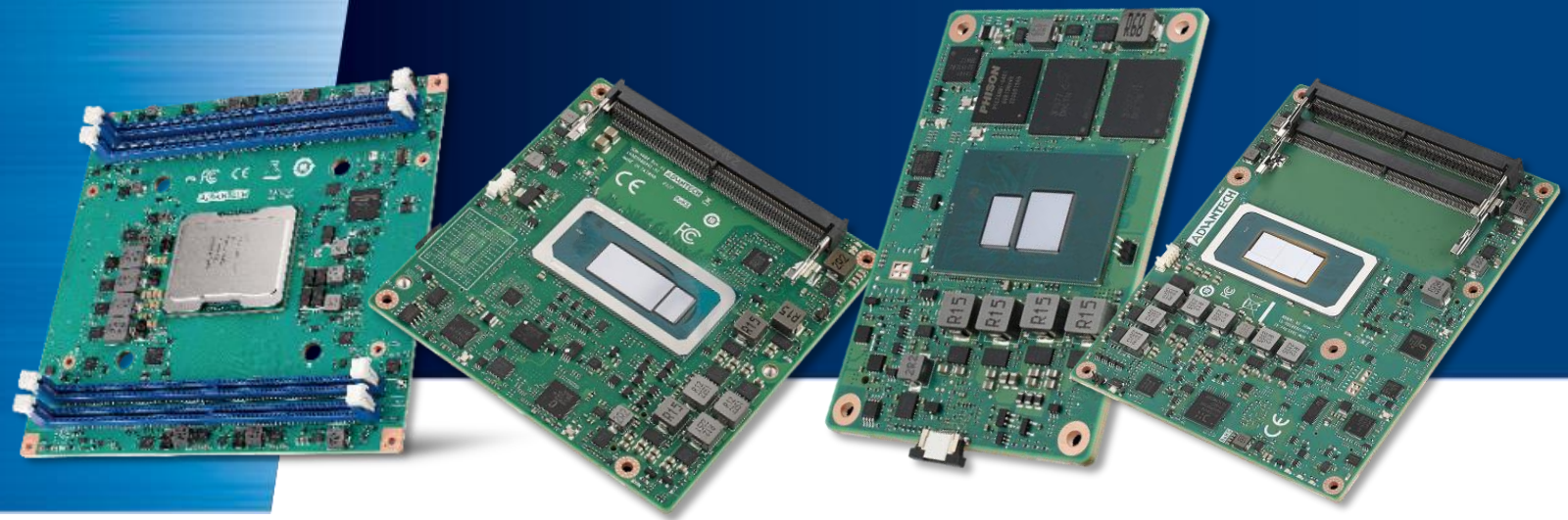
Semiconductor TEM



Medical Imaging

Industrial Motherboards

SOM



COM Express T10 R3.1 Mini

SOM-7533R

Intel® i3-N305 & Atom® x7000E series



intel

intel
ATOM

Efficient Power for Portable, Rugged Edge

Boost Performance & Power Savings with High Mobility

Phase In

Q1 2024

Longevity

2033

Features

Tiny & Powerful Than Ever

- Support up to 8C/12W, 1.4x CPU & 3.5x AI performance than x6000E series
- New gen 12 LP GFX up to 32EU, 2x GFX
- Single-CH LPDDR5 4800MT/s up to 16GB, support IB ECC

High Speed & Low Latency I/O

- 4 x PCIe Gen3 x1, configurable 1 x PCIe Gen3 x4
- 2.5G LAN support TSN
- USB3.2 Gen2, SATA3, CAN Bus

Rugged & Reliable

- TPM 2.0, wide-range voltage support, follows IPC-A-610G standards
- Native wide temperature range support (-40 ~ 85°C) & wide power input

Easy Deployment

- On-board eMMC
- DeviceOn for remote management & OTA(Over-The-Air) SW updates

Applications



Portable Medical Device



Military



Transportation

Materials



[Website](#)



[Datasheet](#)

COM-HPC® Server Size D

SOM-D580

Intel® Xeon® D-2700 Series



intel



Extended Temperature COM-HPC® Server D Module Enable Edge Server Evolution and Time-to-market

Phase In Q4 2023

Longevity 2032

Features

Mass Data Processing

- Up to 20 Cores, 30MB LLC Cache, 118W TDP
- Quad channel DDR4-3200 RDIMM/LRDIMM up to 512GB (Both ECC & Non-ECC)

High Bandwidth I/O Acceleration

- 8 x 10GbE or 4 x 25GbE BASE-KR support
- 32 x PCIe Gen4 & 18 x PCIe Gen3 for flexible expansion

Easy Remote Management Deployment

- Embedded controller with native IPMB
- BMC reference design

Rugged Outdoor Application Usage

- Native wide temperature range support (-40 ~ 85°C)
- QFCS 2.0, advanced thermal solution: slim, lightweight & efficient

Applications



5G Base Station



In-Vehicle Radar



Cloud Storage

Materials



[Website](#)

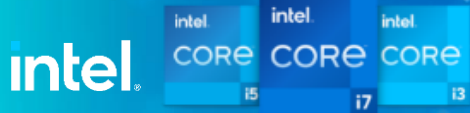


[Datasheet](#)

COM Express T6 R3.1 Compact

SOM-6884 A1/A2

Intel® 13th Gen Core™ Mobile Series



Flexible Native AI Solution at the Edge

Elevating Visual Brilliance & Operational Efficiency

Phase In A1: Q3 2023

Longevity 2033

Phase In A2: Q2 2024

Features

Optimized Computing Perf. & Efficiency

- Up to 14 cores, 20 threads, 96 EU, +6-9% operating, +1.5x AI perf.
- Different TDP SKU available: 45W, 28W & 15W
- 4 Independent displays, up to 8K resolution.

Flexible I/O & Memory for multiple usage

- Up to 64GB DDR5 (A1 version) / LPDDR5 (A2 version)
- Up to 1 x PCIe Gen4 x8 & 2 x PCIe Gen4 x4, USB4, 2.5G LAN

Advanced Low-profile thermal solution, QFCS

- Thin, Light & Silent Thermal Solution to release 100% performance without throttling @ 60°C
- 29.2mm QFCS for 45W TDP SKU; 19mm QFCS for 28W & 15W TDP SKU

Fast and Secure Boot solution

- Slim boot loader/Boot guard/Secure boot
- 1 sec. Fast Boot for BIOS booting

Applications



Medical Image



Machine Vision



Military (For A2)

Materials



[Website](#)



[Datasheet](#)



[Press Release](#)



[eDM](#)

COM Express T6 R3.1 Basic

SOM-5885

Intel® 14th Gen Core™ Mobile Series

intel



1st COMe Basic with Integrated NPU

Accelerate Graphics & AI Computing Performance

Phase In

Q2 2024

Longevity

2034

Features

Brilliant Computing Power

- Up to 14 cores, +24% CPU perf. vs 12th Gen
- Up to 96GB DDR5 5600 SODIMM

Excellent Xe LPG Graphics Performance

- New gen. GFX support up to 128 EU, 1.9X Gfx growth vs 12th Gen
- Intel AI boost & Integrated NPU, SoC total reach AI performance up to 32 TOPS
- 4 independent Displays, Up to 8K DDI

Next Gen. I/O Technology

- 1 x PCIe Gen4 x8 + 2 x 4 PCIe Gen4, all PCIe support up to Gen4
- USB4 reference design, 2.5G LAN

Safe & Reliable

- Advanced QFCS cooler, option with Radiation Optimized Solution
- Dual BIOS failsafe for FW back-up
- Discrete TPM2.0, Intel® Boot Guard, Intel® TXT

Applications



Ultrasound



Endoscopy



Surgical Robot

Materials



[Website](#)



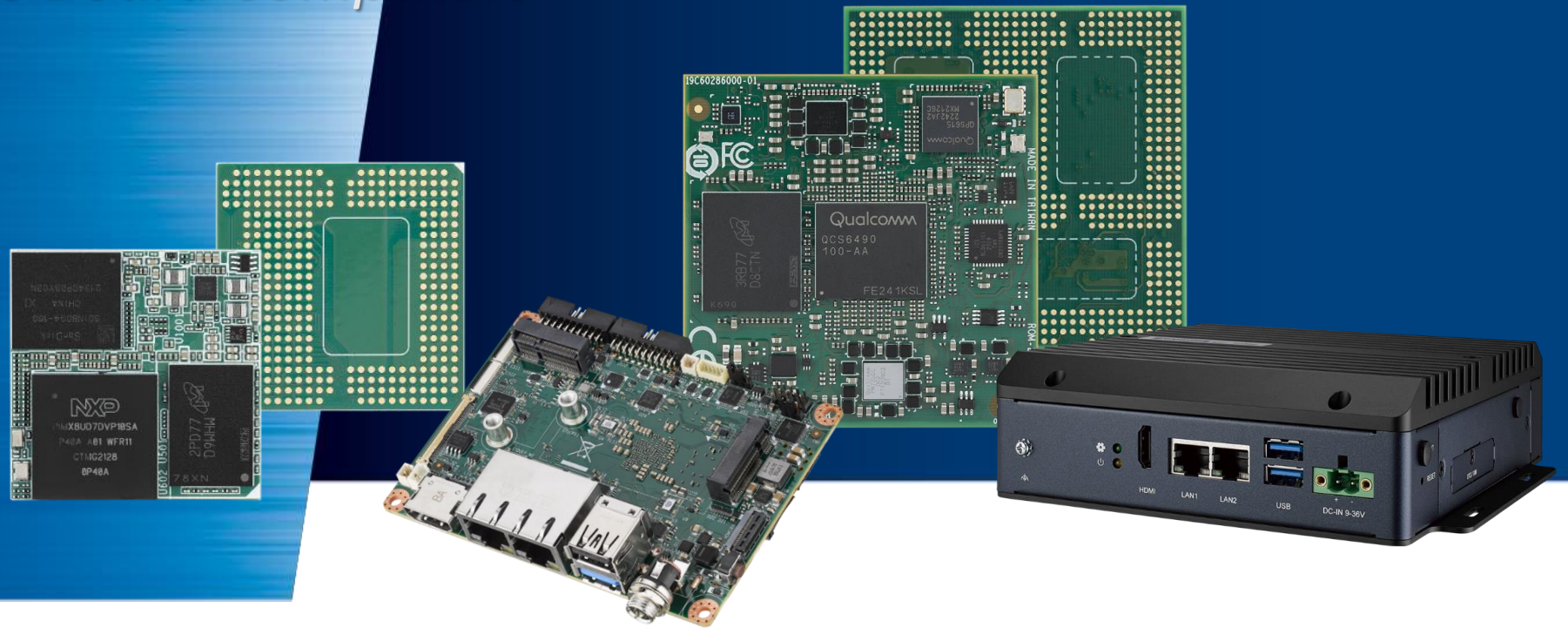
[Datasheet](#)



[Press Release](#)

Embedded Single Board Computers

MIO



Embedded Single Board

MIO-5377

12/13th Gen Intel® Core™ i Processors

intel



ubuntu®



8-Core High-performance AI Integration 3.5" Embedded Single Board

Core-I Level Performance & Flexibility with AI
Acceleration Ability

Phase In May 2022

Longevity Mar 2031

Features

Computing Performance with Integrated AI

- 3.5" (146x102 mm) SBC with up to 96EUs for parallel AI workload
- Optional MXM GPU module card through USB 4 (Type C)

Multiple & High-speed I/O and Sensors Within One Main Board

- 1 x USB 4 (Type C), 1 x USB 3.2 (Type C), 4 x USB 3.2, 2 x USB 2.0, 2 x GbE
- 2 x RS-232/422/485, 2 x RS-232 (4 wire), Max. 1Mbps
- 3 x I2C (1Mbps), 2 x CANBus

Support Indoor/Outdoor and Reliable Design

- Temp. -40 ~ 85 °C
- 12-24 VDC wide range power input (extend to 9-36V by power module)
- TDP 15W/ 28W, FAN/ FANless
- Low-profile active cooler (Board + cooler less than 42mm(1U) height)

Ubuntu Certified

- Hardware compatibility certified by Canonical for enhanced reliability

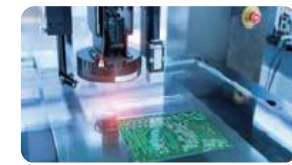
Applications



Patrol Robot



Industrial AGV/AMR



AI Vision Inspection

Materials



[Datasheet](#)

Embedded Single Board

MIO-4370

Intel® 12th/ 13th Gen Core™ i Processors



16-Core Low Power Consumption
4" Embedded Single Board
Compact High-performance Efficiency Balance

Phase In Mar 2023

Longevity Mar 2031

Features

Native AI Computing via Redundancy Technology

- Core i9/i7/i5 -TE (35W) Up to 8P + 8 E Core for best performance per watt
- Intel® Xe 32 Eu & PCIe x 4 Gen.5
- Dual TSN 2.5GbE & Intel® TCC reduces jitter & latency

Wide Sensor Interface Type & High-Speed I/O Throughput

- Dual integrated CANBus, high-speed 1Mbps UART & I2C

High-Throughput Connectivity to Cloud

- Dual 2.5GbE LAN high-bandwidth & Wi-Fi 6/LTE connectivity empowers big data cloud services

Remote Management & Monitoring

- WISE-DeviceOn features remote access and efficient OTA operations
- Out-of-Band watchdog timer, temperature, & power manageability

Ubuntu Certified

- Hardware compatibility certified by Canonical enhances reliability

Applications



FA CNC



Service Kiosk



Service Robot

Materials



[Datasheet](#)



[Press Release](#)



[Case Study](#)

3.5" SBC

MIO-5154

Affordable Innovation and Capability

intel



Cost Efficiency with Flexibility

3.5" SBC w/
Intel® Core™ i3-N305, Intel® N-series (Alder Lake-N)

Phase In Feb 2024

Longevity Jan 2033

Features

Scalable Performance

- Intel® Core™ i3-N305 Processor, Intel® Processor N-series
- DDR5-4800 up to 16GB
- Dual GbE, 6 UART, and 6 USB

Embrace standardized thermal solution

- Utilizes CPU heatsink with spring screws and thermal conduction
- Lighter in Form, Lighter on Cost-effectiveness

Enhanced Connectivity and Display Precision

- Flexible on expansion with three M.2 slots
- Offering high resolution display simultaneously: LVDS + HDMI + DP.

Board Intelligent – Boot-Guarantee

- Out-of-band system monitoring on voltage, temperature, and control power sequence
- Standard BIOS option for 7,000+ times power cycle

Applications



Kiosk



Gaming



Medical

Materials



[Website](#)



[Datasheet](#)

PICO-ITX 2.5" SBC

MIO-2364

Compact in size, uncompromised performance

intel



High Integration and Optimal Design

2.5" Pico-ITX w/
Intel® Core™ i3-N305, Intel® N-series, Intel Atom®
x7000E (Alder Lake-N)

Phase In Feb 2024

Longevity Jan 2033

Features

Make compact in size

- Size : 100 x 72 mm (3.9" x 2.8")
- Weight : 75g

Offer uncompromised performance

- 8-Core up to Intel Core® i3-N305, 3.8Ghz
- Latest DDR5 (Better Performance & Longevity)

Adopt the latest Integration and Innovation design

- Upgraded connectors with a more robust design.
- Integrates POE (Power over Ethernet) Extension.

Embedded Software Design-in Service

- Embedded BIOS service, such as customization, maintenance, long-term preservation
- Security-Chain from HW & FW layer, OS layer, to communication layer

Applications



Traffic
Surveillance



Signage



Medical

Materials



[Website](#)



[Sales Kit](#)



[Datasheet](#)

Motherboards and Platforms

DPX



DPX-E145

11th Gen Intel® Core™
SOC CPUs



Cost-Effective Gaming Platform

Industry Standard Connectors for Easy
Cabinet Integration

Phase In Q3 2022

Longevity Q4 2030

Features

- 11th Gen Intel® Core™ SOC CPUs
- CPUs up to Dual 3.0 (3.9) GHz, Quad core 2.8GHz (4.4) GHz
- Intel® Iris Xe integrated graphics
- Four 4k monitor support
- Comprehensive gaming features
- Passive cooled system up to 28W
- 12V DC single input or ATX power



Digital I/O
32/32



Expansion
I²C



DPX® Security suite: Media Validation Toolkit, TPM support, DPX® security features, and BIOS customization



Battery Backed
SRAM 8MB



7 x USB 2.0
2 x USB 3.0



DPX®-Software: Embedded OS, DPX® Diagnostics, DPX®-Connector DPX® SAS



4 x DP++ 1.2



9 x COMs: ccTalk,
RS232, ID003,
RS485, and TTL



Enclosure Metalwork
Optional



M.2, SATA DOM,
HDD, SSD, CFast,
and USB



On-board Micro
Controller PuC

Applications



VLT



Regulated Gaming

Materials



[Sales Kit](#)



[Flyer](#)



[Video](#)

DPX-S451

Ryzen™ Embedded
R2000 Series



Highly Integrated Gaming Platform

Four DisplayPort Ports and Graphics Card Support

Phase In Q2 2023

Longevity Q1 2030

Features

- High-performance AMD Ryzen™ embedded R2000 processors
- Quad and dual core APUs up to 3.35 (3.7) GHz
- Radeon™ VEGA GPU with up to 8 x compute units
- Supports 4 x independent 4k monitors
- Comprehensive gaming features
- 12V DC single input or ATX power
- Full featured driver API for I/O and security



Digital I/O
32/32



Expansion I2C,
PCIe x 16 and
Golden Fingers



DPX Security suite: Media
Validation Toolkit, TPM Chip
Support. DPX security features
& BIOS customization



Battery Backed
SRAM 8MB



8 x USB 2.0
3 x USB 3.0



DPX Software: Embedded OS,
DPX Diagnostics, DPX –
Connector, DPX- SAS



Displays 4 x DP++
1.2



10 x COMs: ccTalk,
RS232, ID003,
RS485, TTL, & 4 x
DP++ 1.2



Enclosure S2000



Graphics Cards
PCIe x 16 Format



M.2, SATA DOM,
HDD, SSD, Cfast,
& USB



On-board Micro
Controller PuC

Applications



Slot Machines



Regulated Gaming

Materials



[Sales Kit](#)



[Flyer](#)



[Video](#)

DPX-M270

8th & 9th Gen Intel® Core™
i7/i5/i3



CE FCC



Modular Gaming Platform Embedded Multi-Media Gaming Board

Phase In

Q1 2021

Longevity

Q2 2028

Features

- 8th/9th Gen Intel® Core™-i7/i5/i3 CPUs 8,6,4,2 core
- 2 x 260-pin SO-DIMM up to 32GB DDR4 2666 MHz SDRAM
- Supports 3 x display outputs (2x DP++, HDMI)
- PCIe x16 Gen 3.0 graphics card slot
- Modular Expansion Port - Edge connector
- Storage 2 x SATA with 1 x M.2
- Secure boot support
- RS232, ccTalk, TTL, ID003, I2C, intrusion, and DIs



Displays

2 x DP++ v1.2
1 x HDMI 1.4b
(3 simultaneous for Q370,
2 simultaneous for H310)



Graphics
Cards
PCIe x 16
Format



Expansion I²C, PCIe
x 16 and Sidebus
modular expansion



Onboard:

8 x USB 2.0
4 x USB 3.0
Via Golden Fingers:
2 x USB 2.0



6 x COMs: ccTalk,
RS232, ID003, TTL



M.2, SATA DOM,
HDD, SSD, and USB



DPX® Security suite: Media
Validation Toolkit, TPM support,
DPX® security features, BIOS
customization



DPX®-Software: Embedded OS,
DPX® Diagnostics, DPX®-
Connector DPX®-SAS



Enclosure
M1000/M2000



On-board Micro Controller
PucLite

Applications



Arcade Gaming



Sports Betting

Materials



Sales Kit



Flyer



Video

DPX-J100

Ryzen™ Embedded V & R Series



JAMMA Gaming Platform

Passive cooling for the lower APUs

Phase In Q1 2022

Longevity Q1 2029

Features

- High-performance AMD Embedded V&R SOC APUs
- Quad and dual core APUs
- Radeon™ VEGA GPU with up to 8 compute units
- Supports up to 3 x independent monitors
- Comprehensive gaming features
- 72 + 20 Pin JAMMA harness connectors
- Optional enclosure



Digital I/O
24/29



Expansion
I2C, Mini PCI



DPX® Security suite
(as below) +iButton



Up to 2MB of
battery backed
FRAM



6 x USB 4 x 2.0 -
2 x 3.1/2.0



DPX® -Software: Embedded OS,
DPX®Diagnostics, DPX®-
Connector DPX®-SAS



1 x DP++, 1 x HDMI
and 1 x VGA



6 x Coms –
RS232/485 Tx/Rx



Optional Enclosure



Onboard audio
amplifier, line out,
& digital SPDIF out



SATA DOM, SSD,
HDD, M.2, USB, &
CFast



Onboard Micro
Controller.

Applications



Arcade Gaming



Regulated Gaming

Materials



Sales Kit



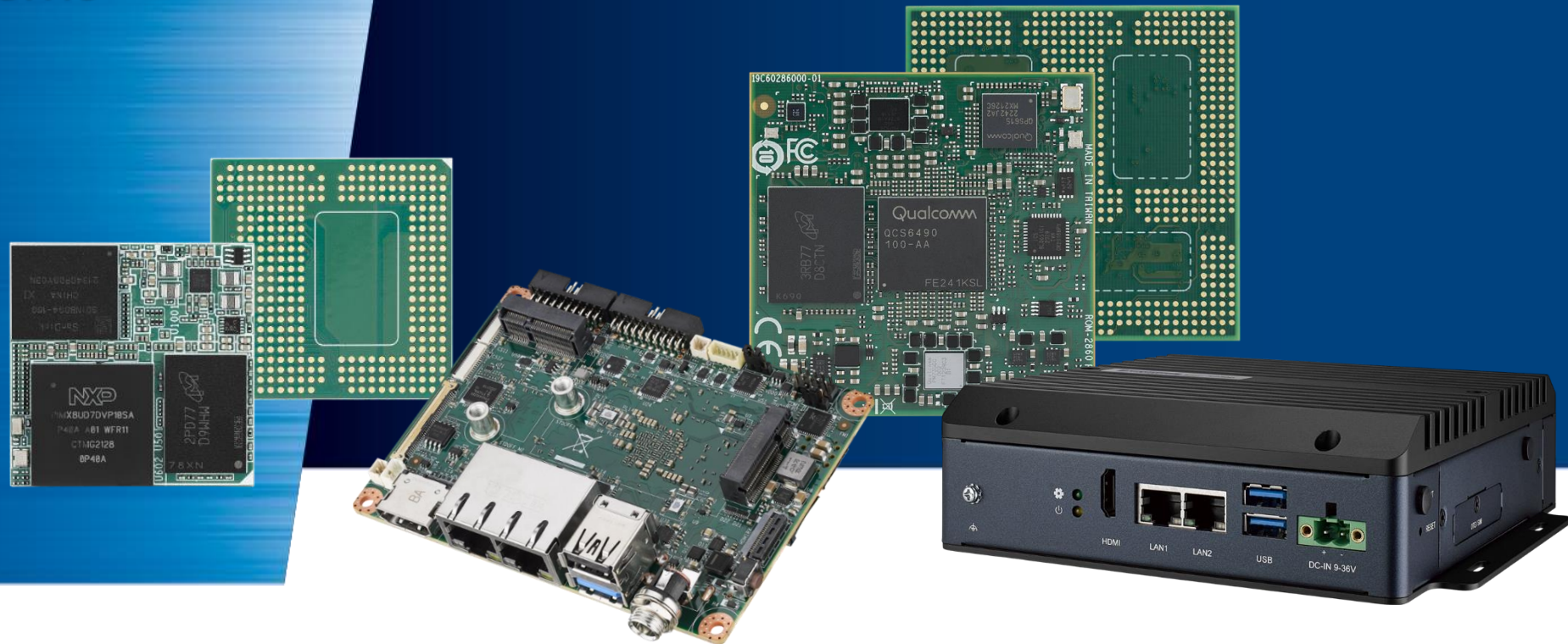
Flyer



Video

Boards and Systems

RISC



ROM-2620

i.MX 8ULP Compute-on-Module



yocto
PROJECT



Revolutionize Edge Computing

Compact, Powerful, and Secure: Redefining the Landscape of AIoT Applications.

Phase In Dec 2023

Longevity Dec 2033

Features

Advanced Computing Architecture and Energy Efficiency

- Featuring two Arm Cortex-A35 cores for robust processing, an Arm Cortex-M33 core for real-time response, and specialized DSPs for efficient edge processing and acceleration.
- Advanced 28nm FD-SOI process technology and NXP's Energy Flex architecture, achieves remarkable power efficiency in both static and dynamic modes, ensuring optimal performance while minimizing energy consumption.
- Offers 3D/2D GPUs and 4-lane MIPI DSI Parallel display interfaces, catering to industrial HMI graphics needs and providing a comprehensive solution for diverse applications.

Reliable and Miniaturized Design:

- The compact size of 30 x 30mm fulfills the space requirements of IoT applications, providing a concise solution for edge computing
- LGA surface-mount package enhances resilience to vibration, shock, and mechanical stressors, making it suitable for deployment in harsh industrial environments.

Enhanced IoT Security with Preconfigured Software

- Integrates NXP's High Assurance Boot (HAB) technology into the AIM-Linux software service, ensuring that only signed software images from developers can be executed on the SOC, enhancing the security of the system..
- Incorporate NXP EdgeLock secure enclave into the i.MX 8ULP, providing a silicon root of trust and a robust security architecture. This safeguards edge devices against physical and network attacks, simplifying the implementation of system-wide security intelligence for IoT applications.

Applications



Building Safety/Security



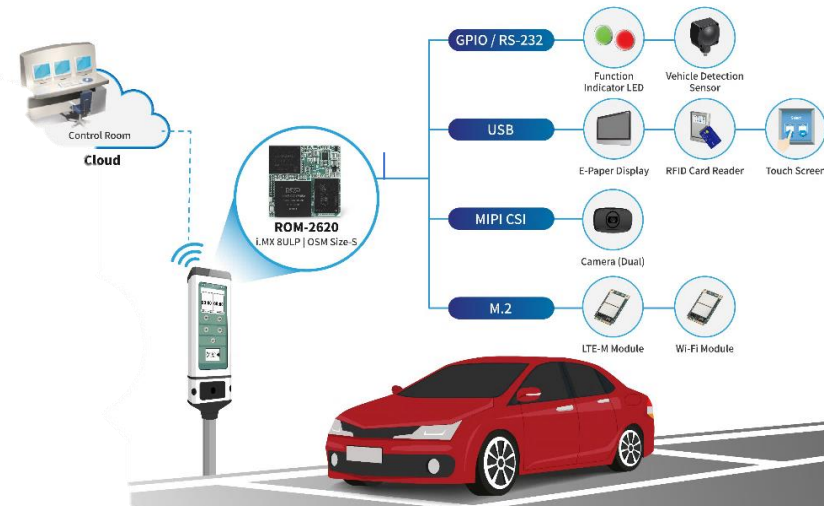
Heating Ventilation, & Air Conditioning (HVAC)



Renewable Energy

Diagram

Smart Parking Meter



ROM-5722

i.MX 8M Plus Computer-on-Module



Real-Time Inference and Responsiveness at The Edge

A Compact and Superior Native AI Platform

Phase In Dec 2022

Longevity Nov 2032

Features

Energy-Efficient Edge Inference

- AI-native heterogeneous SoC, dual/quad cores A53 up to 1.8GHz
- Advanced GPU/VPU performance
- Neural network accelerator provides up to 2.3 TOPS

Seamless Capture and Streaming

- 2 x MIPI-CSI and USB 3.0 for camera input
- 2 x embedded ISP for image enhancement
- H265 4Kp30 video decode

High-Speed Interfaces and Expandable I/O Design

- 2 x GbE Ethernet, PCIe Gen3, up to 2 x CAN-FD
- Multiple display interfaces: HDMI, LVDS, and MIPI-DSI
- Stable wireless connectivity and application-oriented I/O design

AI-Ready and Robotic-Oriented Developing Environment

- Windows 10 IoT Enterprise, Yocto Linux, and Android
- eIQ AI SDK integrated leveraging Tensorflow Lite, armNN and OpenCV
- ROS2 environment integrated

Applications



Medical Imaging



Factory Automation



Service Robot

Materials



[Datasheet](#)



[Sales Kit](#)



[Developer Center](#)



[AIM-Linux Community](#)

Single Board Computer

RSB-3810

2.5" Pico-ITX with MediaTek Genio 1200



Disruptive solution for high-end AIoT markets

Better performance with lower power*

*Comparing with the X86 2.2GHz (2020) CPU

Phase In Nov 2023

Longevity Nov 2033

Features

Performance-efficient edge inferencing

- A dual-core AI processing unit (APU) at 4.8TOPS
- 8-cores A78 / A55 with 6nm advanced process
- 8 watts

Seamless image processing

- 3x MIPI-CSI and USB3.0 for camera input
- Embedded star light grade ISP
- H265 4K60 video capture

Low-latency transmission and Expandable I/O design

- 4K90 video processing & GbE TSN
- Highly integrated 5G and Wi-Fi 6 networking
- Application-oriented UIO40-Express I/O expansion

AI-ready developing environment

- Ubuntu, Yocto Linux, and Android
- NeuroPilot AI SDK
- ROS2 environment integrated

Applications



Smart Agriculture



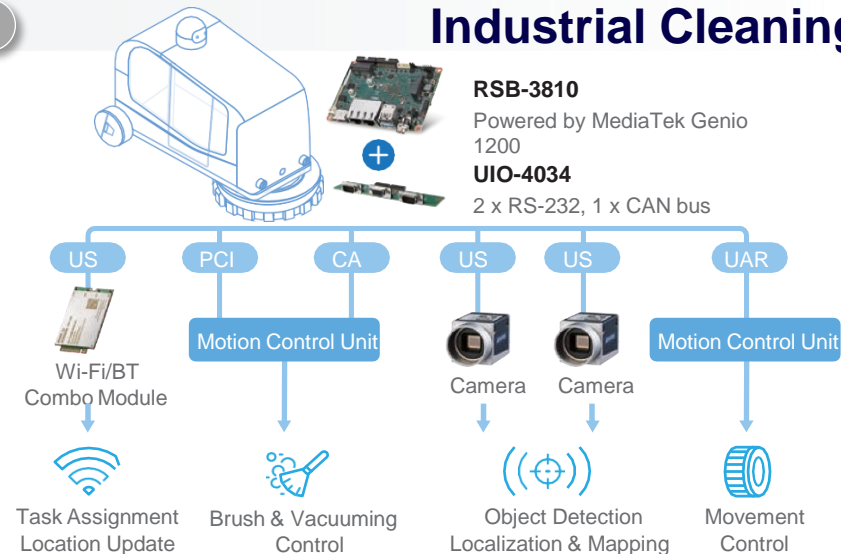
AI-Assisted Healthcare



AGV/AMR

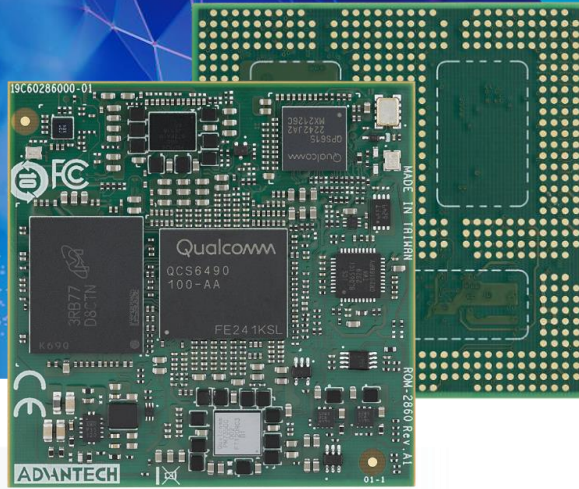
Diagram

Industrial Cleaning Robot



ROM-2860

QCS6490 Computer-on-Module



Unleashing On-Device AI

Redefined Power and Precision in a Compact, Cutting-Edge Package

Phase In Q2 2024

Longevity Q2 2034

Features

High-Performance Processing

- Qualcomm® Kryo™ 670 CPU with eight ArmV8 cores, operating at up to 2.7GHz. This high-performance processor allows efficient and powerful computation
- The Qualcomm® Hexagon processor, capable of delivering up to 13 Tops, empowers robust on-device AI computing for immediate machine vision. This significantly enhances operational efficiency.
- Equipped with an Image Signal Processor (ISP) and Video Processing Unit (VPU), the ROM-2860 supports 4K60 video decoding and pre-processing

Network and I/O Connectivity

- Support Qualcomm GNSS and 5G technologies through optional M.2 modules. This ensures low-latency and effective.
- Provides essential I/O options for AIoT applications, including 2 x GbE (Gigabit Ethernet), 1 x USB 3.2 Gen2, 2 x PCIe, 1 x MIPI-DSI, and 1 x eDP. These interfaces facilitate seamless connectivity and integration with various sensors and peripherals.

Compact Design and Outdoor Durability

- Featuring an ultra-thin OSM with surface mount technology assembly, this design enhances space efficiency, facilitating seamless integration into confined spaces.
- Designed with high-vibration tolerance to withstand outdoor, ruggedized environments. This durability ensures the reliable and continuous operation of the application under challenging.

Applications



Robotics / Automation



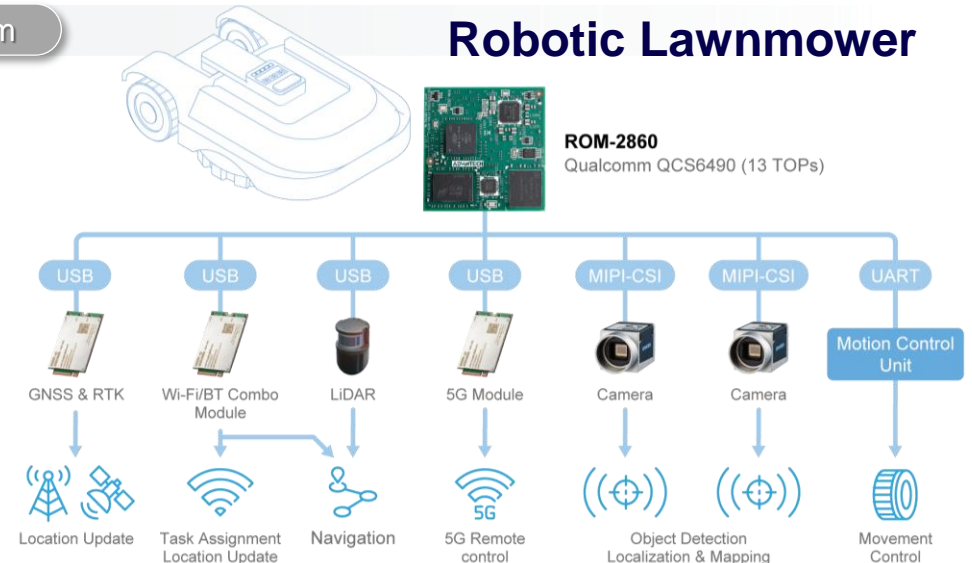
AMR / Drone



HMI / AIO

Diagram

Robotic Lawnmower



Barebones PC

EPC-R7300

Jetson Orin-Compatible
Industrial Barebones PC



The Extreme AI Computing

Enjoy four times higher AI performance*

*Comparing with the Jetson Xavier NX series

Features

Ready-to-use barebones PC: BUILD & SCALE FAST!

- Production carrier board for easily prototype and mass-deploy for edge AI
- NVIDIA Jetson Orin Nano and NX modules compatible
- Max.100 TOPs (INT8) AI capability

Lightweight, industrial grade design for diverse environment

- Wide operating temperatures: -20 ~ 60 °C and power input: 9 ~ 36V
- High vibration tolerance: 3.0 Grms
- Compact and Lightweight: 173 x 152 x 50 mm, 1.4Kgs

Expandable I/O design fulfills diverse application requirements

- M.2 Expansions for boot and wireless connectivity: Key M for NVMe, Key E & Key B for wireless
- Application-oriented UIO40-Express I/O expansion
- Connecting edge devices and peripherals via USB, RS-485, GPIO, CAN, LAN

AI-ready developing environment

- Ubuntu BSP
- NVIDIA JETPACK SDK for AI developments
- Advantech ROS2 Suite

Applications



Intelligent
Surveillance



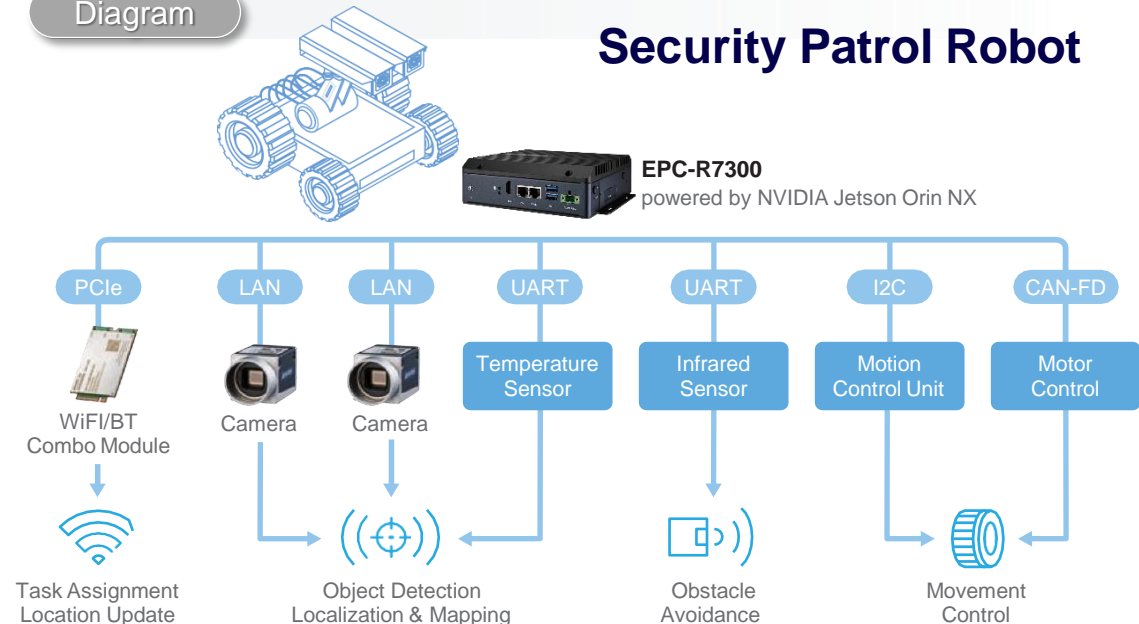
AMR



Factory
Automation

Diagram

Security Patrol Robot



Embedded Systems

ARK



Embedded System

ARK-2251

13th Gen Intel® Core™ i processor
Modular Fanless Box PC

CE FC CCC UL CB BSMI



Performance Boost for Embedded PCs: 13th Gen Intel® Core™ i Processor High-performance and Modular Design with Flexibility

Phase In Dec 2023

Longevity Dec 2030

Features

Performance Boost Solutions

- Performance Optimization by hybrid architecture with P-Core and E-Core
- Iris Xe® high performance graphics up to 96 EUs
- Dual Channel DDR5 up to 64GB

Rugged and Secured Design

- 12-24V DC wide range power input, -20-60 °C of operating temperature
- Option 2.0 TPM module
- One internal USB 2.0 port for security dongle

Diverse I/O and Expansion

- 3 x LAN ports, 6 x USB, 6 x COM, 2 x CANBus/8-bit DIO
- Optional PoE power module for two PoE support
- Supports iDoor modules for I/O extension

Applications



Kiosk



AOI Inspection



AMR

Materials



[Datasheet](#)

Embedded System

ARK-3533

12/13th Gen Intel® i3/i5/i7/i9
LGA1700 Fanless Box PC

CE FC CCC UL CB BSMI



Edge Computer for Kiosk and Robotics Applications

Compact, High-Performance for AIoT Applications

Phase In Dec 2023

Longevity Dec 2029

Features

24-Core Desktop Performance

- 12th/13th Gen Intel Core i processor, up to 24 cores with UHD 770 high performance graphics
- Dual Channel DDR5 SO-DIMM 4800, up to 64GB
- 3 x 2.5Gb LAN ports and 1 x 1Gb LAN

Rugged Multi-Functional Design

- 9-36VDC wide range power input, -30-60°C of operating temperature
- IP40 mechanical design
- Optional TPM 2.0 module

20+ I/O for Application Integration

- 4 x LAN, 4 x USB 3.2, 4 x USB 2.0, 8 x COM, and 2 x HDMI
- Optional IO: 8bit DIO and 2 x CANBus
- Optional expansion kit for 2 x PCI slot

Applications



Manufacturing Equipment



Self Service Kiosk



AMR/Robotics

Materials



[Datasheet](#)



[Press Release](#)

Embedded System

ARK-1125

11th Gen Intel® Core™ i processor
Din-Rail Fanless Box PC

CE FC CCC UL CB BSMI



Palm Size Box PCs for Edge Application: Intel Atom® Processor X and N-series Strong and Smart

Phase In Feb 2024

Longevity Feb 2031

Features

Essential Performance in Compact Size

- ARK-1125C with x7211E (Dual Core) and ARK-1125H with N200 (Quad Core)
- Supports DDR5 memory up to 16GB
- High speed 2.5Gb Ethernet ports and PCIe NVMe storage

IO Interface meets Application needs

- Equipment builder: ARK-1125C with COM x 4, USB x4 and GPIO
- IoT Gateway &Kiosk: ARK-1125H with LAN x 2 + 4K HDMI x 2
- M.2 B/E key for wireless expansion

Rugged and Reliable Design

- -30-60 °C operating temperature
- IP40 mechanical design
- TPM on board

Applications



Factory Automation



Kiosk



Edge Gateway

Materials



[Website](#)
ARK-1125H



[Website](#)
ARK-1125C

Edge Intelligence Systems

AIR, EI



EI-53

Powered by Intel® 13th Gen Celeron/i5/i7



DeviceOn



Ideal Edge Computing System

Powerful Edge Computing for Factory Automation

Phase In Q4 2023

Longevity Q3 2030

Features

Balance between Compact and powerful

- Intel 13th gen. Core i7/i5/Celeron up to 14 Watt with 10 Cores
- Dual Channel DDR5 SO-DIMM 5200Mhz, up to 64GB
- 2x LAN(Up to 2.5G)

Design fit to outdoor for wide temperature and voltage

- AL alloy top cover
- 12-24V DC wide range power input, safety with Class B heavy industrial certification
- -20-60°C of wide operating temperature

Rich I/O for Industrial Application

- Dual 4K lockable HDMI 2.0b, 4096x2160 resolution
- 1x Intel GbE, 1x Intel 2.5GbE, 1x DIO, 3x RS-232/422/485, 6 x USB 3.2/2.0
- Expansion M.2 for 5G, WIFI and NVME
- B-Key 3042/3052m M key 2280 and E key 2230

Focus on robotic AMR Application

- Remote monitoring and management supported by DeviceOn
- Ubuntu certified system with Desktop 22.04 LTS 64bit
- Support robot-oriented application with robotic SDK

Applications



Smart City/Retail



Factory Automation



Smart Energy

Materials



[Website](#)



[Datasheet](#)

AIR-030

Powered by NVIDIA Jetson AGX Orin



Edge AI
SDK



Latest Powerful Edge AI System

High-end and ready-to-deploy for robotics and AI inferencing

Phase In Jun 2023

Longevity Dec 2030

Features

Scalable AI Performance Up to 275 TOPs

- Adopt latest NVIDIA Jetson AGX Orin 32GB/64GB SoM
- Arm Cortex-A78AE CPU up to 12 cores
- NVIDIA Ampere™ GPU, 2048 NVIDIA® CUDA® cores, 64 Tensor cores

Versatile I/Os and expansion slots for device connectivity

- 4x USB3.2, 1x Type C, 3x 2.5GbE(optional PoE), 4x COM, 1x CANBus, 1x DIO
- Support WI-FI, 5G via M.2 for ultra-speed data transmission
- Expanable extension layer for multi-function cards via PCIe x 16 slot

Pass IEC 61000-6-4 Heavy Industry Certificate Reliable Design

- Rugged and reliable design fanless AI system
- Support 9-36V wide power input and -10-60 °C operating temp. fit to outdoor
- Compliance with IEC 61000-6-2 and IEC 61000-6-4 for heavy industry certificate

Ready-to-Use AI Deployment System

- Pre-load Ubuntu 20.04, JetPack 5.1 SDK and Edge AI SDK compatible
- Offering the hardware-software integrated system

Applications



Patrol Robot



Industrial Robotics



Real-time AI Analytics

Materials



[Datashheet](#)



[Sales Kit](#)



[Product Video](#)

AIR-510

NVIDIA Certified Industrial Edge System



Advanced AI-assisted Medical Imaging

Robust graphical computing for enhanced image processing and on-premise AI applications at the edge

Phase In | Mar 2024

Longevity | Mar 2033

Features

NVIDIA-Certified Workstation with RTX 6000Ada

- Empowered by Intel Gen 13th Processor to provide up-to 24 cores
- NVIDIA Certified with RTX 6000 Ada to provide 91.1 TFLOPS (FP32) AI computing power

Plentiful I/O and Flexibility for AI-assisted Medical Imaging

- 2x PCIe x4 slot for extra add-on cards.
- Supports 9x USB Ports, 2 x LAN, 3 PCIe slots, and 6 x COM to support cameras, sensors, and medical image related peripherals

Industrial-Grade System Certification

- EMC compliance with IEC 61000-6-2 and IEC 61000-6-4 certificate
- Safety compliance with IEC-62368 CB/UL certification

Off-the-shelf AI Deployment Workstation

- Allow to pre-load Windows Ubuntu OS
- Compatible with NVIDIA pre-trained AI models
- Advantech Edge AI SDK Suite to evaluate the AI model efficiency.

Applications



Medical Imaging



Blood Analysis



Industrial Robotics

Materials



[Website](#)

Edge AI Inference System

AIR-150

Empowered by Hailo-8 AI accelerator



Edge AI
SDK
HAILO



Compact AI Inference System

26 TOPS AI for smart access control & security

Phase In Q1 2024

Longevity Q3 2030

Features

13th Intel Platform with AI Built-in

- Intel 13th Gen. Core i5/i3 with Iris Xe graphics
- 26 TOPS AI capability delivered by Hailo-8 AI module
- Well thermal design for CPU and AI computing

Friendly AI Development with Rich SW Toolkits

- Quickly build up runtime environment by Edge AI SDK
- Simple operation to convert AI models by Dataflow Compiler
- Easily deploy pre-trained AI applications by TAPPAS

Suitable for Industrial Usage

- -20~60°C wide operating temperature
- 12-24V wide voltage support
- IEC standard 61000-6-2 / 61000-6-4 Heavy Industry certification
- 1st Energy Star edge AI compact system

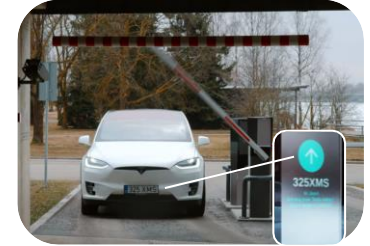
Applications



Airport Express



Workforce Safety



Parking Lot Management

Materials



[Datasheet](#)

Digital Signage

DS



Mini PC

DS-410

Palm-Sized 4K Digital Signage

intel



Palm-Sized 4K DS Player with HDMI + VGA + COMs I/O

Phase In | Apr 2023

Longevity | Mar 2028

Features

Palm-Sized For Modern Architecture

- Size: 124 x 116 x 26 mm
- Weight: 0.41 kg

Fanless Design

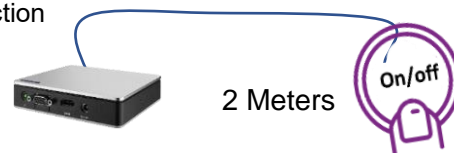
- Low TDP CPU : Intel Atom® J6412, 2.0Ghz (10 nm Process)
- Dual Channel DDR4 on Board (Better Playback Performance)

Mall, Self-Service Kiosks, Gaming, Chain-Stores, & Hotel Applications

- Signage CMS Support
- For Embedded or kiosk : 2 Meter cable with RS232, Power button.

File-Security+Anti-Hacker / Power on/off Cable (by option)

- For Public space/ Government/ conference who needs to fix data authority.
- MP3/ MP4/ MMA / AVI , ...etc. Multimedia file protection



Applications



Kiosk



Signage

Materials



Product Video



Datasheet

Slim Signage Player

DS-085

4K Digital Signage with 11th Gen Intel® Core™

intel



8K TV Wall & 8K LED Wall

4 x HDMI, Slim digital signage

Phase In Jan 2022

Longevity Dec 2026

Features

Intel® 10nm CPU Technology

- i7 1165G7 / i5 1135G7 / i5 1145G7E / i3 1115G4E / Celeron 6305E

HDMI CEC for Remote Controllers

- HDMI CEC (Consumer Electronics Control) support
- Control electronics via a TV remote controller.

19 mm Form Factor Fits Into TVs

- 19 mm, Ultra thin than competitor
- Intel® iRISxe graphics

4 x HDMI 2.0 8K High-Resolution TV Wall

- Resolution up to 8k: 7680 x 4320 by HDMI 2.0 x 4
- HDMI TV Screen shot & Signal Drop notice by Device ON-DS Page

Applications



Flight Information



Signage TV Wall



Retail

Materials



[Website](#)



[Datasheet](#)

Mini PC

DS-450

Palm-Sized 4K Digital Signage

intel



Palm-Sized 4K DS Player with HDMI x 2 + COMs I/O

Phase In | Dec 2023

Longevity | Mar 2028

Features

Palm-Sized For Modern Architecture

- Size: 160 x 115 x 44 mm
- Weight: 0.8 kg

Active cooling with PWM support

- Low TDP CPU : Intel Atom® J6412, 2.0Ghz (10 nm Process)
- Dual Channel DDR4 on Board (Better Playback Performance)
- Average surface temperature is 38 degrees

Various I/O to fulfill all kinds of peripherals demand

- HDMI x 2, USB x 6, COM x 2, RJ-45 x 2, External PWR On/Off
- Bundle with DeviceOn for display loss alert.

File-Security & Anti-Hacker Protection

- For Public space/ Government/ conference who needs to fix data authority.
- MP3/ MP4/ MMA / AVI , ...etc. Multimedia file protection.

Applications



Meeting Room



Kiosk



Signage

Materials



[Website](#)



[Datasheet](#)

Slim Signage Player

DS-082

4K Digital Signage by AMD Ryzen V1000/R1000



8K TV Wall & 8K LED Wall

4 x HDMI, Slim Digital Signage

Phase In Jan 2021

Longevity Dec 2025

Features

AMD Ryzen Platform CPU

- V1605B / R1606G
- VEGA core up to 11 CU, VP9 10bit, H.265 10bit

HDMI CEC for Remote Controllers

- HDMI CEC (Consumer Electronics Control) support
- Control electronics easily using a TV remote

19 mm Form Factor Fits Into TVs

- 19 mm, ultra thin than competitor
- Intel® iRISxe graphics

4 x HDMI 2.0, 8K High-Resolution TV Wall

- Resolution up to 8k: 7680 x 4320 by 4 x HDMI 2.0
- HDMI TV Screen shot & signal drop notice by Device on DS Page

Applications



Flight Information



Signage TV Wall



Retail

Materials



[Website](#)



[Datasheet](#)

Rugged Systems

TS



Ruggedized System

TS-207

Rugged system w/ IP65 for outdoor

intel

intel.
CORE



Natively Ruggedized System for Harsh Environments

Phase In Apr 2023

Longevity Jul 2036

Features

Powerful, Intelligence, and Silence

- 11th Gen Intel Core U/Celeron with native AI integration
- Low maintenance thanks to its fanless design
- 4 ports PoE LANs for surveillance*

Born for Rugged Applications

- MIL-STD-810H & IEC 60721-3-5 compliant for anti-vibration and shock resistance
Comprehensively protected with IP65 rating for water and dustproofing
- M12 circular and related connectors are all lockable

Reliability and Durability

- Operating temperature range of -40 to 70°C and wide range of power input
- Isolated power inputs, as well as serial and GPIO ports
- 3 years warranty and 10 years longevity support.

Applications



Logistics



Natural Resources



Defense

Materials



Website



Datasheet



Sales Kit

intel. OpenVINO WISE-DeviceOn Edge⁺



*Project based support

Ruggedized System

TS-206

Fanless system for in-vehicle

intel

intel.
CORE



Building Safer Services for Public Utility

Phase In Aug 2020

Longevity Dec 2030

Features

Excellent Performance

- Intel Core™ i5-6300U/ i7-6600U (Sky Lake family)
- Up to 4K 24Hz resolution through lockable HDMI
- Edge AI for multiple video streams (*with VEGA-330 Myriad™ X)

Strong Expansion Capability

- 4 PoE ports to support IP cameras/surveillance
- Wireless, LTE, and SSD support through 4 mPCles
- GPS tracker and G-sensor capability for fleet management

Reliable for 24/7 In-Vehicle Use

- Extended fanless operating temperature range of -20°C to 60°C
- Isolation-protected I/O and power-in
- Intelligent vehicle power ignition management
- Certified as E-mark, ISO-7637-2, CCC, and UL

intel. WISE-DeviceOn Edge⁺ 

Applications



Traffic



Transport



Public Safety

Materials



[Website](#)



[Datasheet](#)

Ruggedized System

ARK-2250R

Fanless system for railway



Natively Ruggedized System for Harsh Environments

Phase In Oct 2018

Longevity Dec 2030

Features

Specific Design for Railways

- EN50155, EN50140 and EN50121 railway certifications
- Wide range of power inputs from DC24, 72 to 110V
- M12 and other connectors which are lockable and designed to prevent vibration

Reliable Support

- Operating temperature range of -40 to 70°C (in compliance with EN50155 TX)
- IEC61373 certified for vibration and shock during operation
- 10 years of longevity support

Stackable Extension Design

- Easy maintenance with a removable 2.5" drive bay.
- Supports up to 8 GbE PoE and an 2nd 2.5" drive bay with extended modules
- Full-size miniPCIe and M.2 2230 for RF/AI module expansion."

Applications



Surveillance



Rolling Stock



Railway

Materials



[Website](#)



[Datasheet](#)



*Project based support

Software Distribution

SW



Microsoft Acronis

Windows IoT Enterprise



Windows 10 IoT Enterprise LTSC

For smart devices with security and critical platform updates over a 10-year support lifecycle.

Phase In Ready

Longevity Nov 2031

Features

Advanced Security Features

- Device Guard: ensure only signed and trusted applications run on the device
- BitLocker: encrypt the entire Windows OS for enhanced data security.
- Windows Defender: provide real-time protection against malware and security threats

Flexible Deployment Options

- Supports a wide range of device types, including ruggedized and low-power devices
- Supports various processors, including x86, x64, ARM and more
- Enables deployment across cloud, edge, and on-premises environments

Long-term Support and Updates

- Provides 10 years of support for each release, with security updates and bug fixes
- Offers stability and reliability as updates are only delivered every 2-3 years
- Ideal for mission-critical devices that require uninterrupted operation

Support by Advantech Power Suite

- Protect IoT device from unauthorized modifications
- Prevent unauthorized devices from accessing system data
- Flexibly manage Windows Update settings
- Support one-click backup and restore of Windows OS image

Applications



Industrial Automation



Retail



Medical

Materials



[Website](#)

Windows Server IoT



Windows Server IoT 2022

For the most demanding edge computing workloads

Phase In Oct 2022

Longevity Mar 2032

Features

Advanced multi-layered security

- Apply secured-core server for advanced multi-layer threat protection
- Securely connect to critical assets with the latest in network security innovation.
- Protect data-in-use with confidential computing

Hybrid capabilities with Azure

- Use improved tools for hybrid server management with Windows Admin Center
- Extend Azure services to on-premises using Azure Arc
- Easily migrate file servers with improved Storage Migration Service

Flexible application platform

- Enhance container deployment with smaller images and simplified authentication.
- Modernize .NET apps with Windows Admin Center's new containerization tool.
- Scale containerized apps with Kubernetes by enhanced network policies.

Support by Advantech Power Suite

- Enables convenient remote monitoring and management of server machines, including remote power on/off, temperature and fan speed monitoring, voltage monitoring, and logging hardware logs for troubleshooting and fault resolution

Applications



Factory Automation



Energy Management



Fleet Management

Materials



[Website](#)

SQL Server IoT



SQL Server IoT 2022

Azure-enabled with continued performance and security innovation

Phase In Oct 2022

Longevity Jan 2032

Features

Seamless analytics over on-prem operational data

- Break the wall between operational and analytical stores
- Near real-time latency between SQL Server and Synapse Analytics
- Analyze all your data using both Spark and SQL runtimes in Synapse

Visibility over your entire data estate

- Automatically scan on-prem SQL Server IoT to capture metadata
- Classify data with Microsoft Information Protection sensitivity labels and custom classifiers
- Set up and control specific access rights to SQL Server

Industry-leading performance and availability

- Process real-time IoT data at scale, ensuring highly available services for critical application
- Accelerate query performance with no code changes
- Multi-master writes for users across multiple locations

Most secure over the last 10 years

- Use a cryptographically hashed ledger to detect tampering by malicious actors
- Establish digital trust in a centralized system using blockchain technology
- Attest to other parties that data integrity has not been compromised

Applications



Manufacturing



Transportation



Surveillance

Materials



[Website](#)

Backup & Recovery

Acronis

Acronis Cyber Protect 15 Backup
Superior Backup: The most secure, easy, and reliable backup for businesses

Phase In Ready

Longevity TBD

Features

Comprehensive Backup Capabilities

- Full Image Backup: Safeguard the entire device with a comprehensive backup.
- Complete protection: any system to any storage (physical/virtual to local disk/NAS/SAN)
- Backup Scheduling: Automate regular backups for continuous data protection.

Flexible Recovery Options

- Universal Restore: Recover to different hardware, migrate, or recover from failure.
- Anytime, Anywhere Recovery: Retrieve data anywhere via Acronis Cloud or a bootable device
- Granular Recovery: Retrieve specific files from backups without restoring the entire system

Centralized Management

- Centralized and remote management
- Policy-based group management
- Central storage deduplication

SECURE- Acronis Active Protection

- AI Detection: Prevents ransomware attacks in real-time using machine learning.
- Behavioral Analysis: Blocks unauthorized actions, preventing damage by monitoring suspicious behavior
- Immediate Response: Halts ransomware, alerts user to prevent file encryption

Applications



Industrial Automation



Retail



Semiconductor

Materials



[Website](#)

Industrial Wireless

AIW



AIW-170

- WiFi 6E + BT 5.3
- M.2 2230 E-Key form factor
- WiFi: PCIe interface, BT: USB interface



Phase In Dec 2023

Longevity 2028

Features

Wi-Fi 6E support up-compatible with Wi-Fi 7

- Qualcomm QCN6856 chipset
- Additional 6GHz support
- Both AP/STA support (DBDC included)

Industrial grade temperature support

- Operating temperate range: -40~85°C

Compatible with Arm-based platform

- Driver integration with Nvidia and NXP platforms
- Windows/Linux OS support



Multiple certificate support

- FCC/CE/IC/TELEC/KC/NCC certification available

MIT manufacturing

- Suitable for customers who prefer non- made-in-China products

Applications



AGV



Medical



Robotic

EWM-W179

- WiFi 6 + BT 5.2
- M.2 2230 A/E-Key form factor
- WiFi: PCIe interface, BT: USB interface



Phase In Ready

Longevity 2028

Features

Standard M.2 key A/E design

- Realtek 8852BE chipset
- PCIE for Wi-Fi & USB for BT

Compatible with Arm-based platform

- NXP i.MX8/ Nvidia Jetson Orin NX/RK3568
- Windows/Linux 4.14 or later/Android 7 or later



Multiple certificate support

- FCC/CE/IC/RCM/KC/TELEC/NCC/SRRC certification available

Commercial temperature range support

- Operating temperature range: 0~70°C

Applications



AGV



Medical



Robotic

AIW-343

- LTE Cat.4
- Full Sized mini-PCIe form factor
- USB Communication Interface, with SIM slot



Phase In Ready

Longevity 2026

Features

Most popular LTE Cat.4 module on market

- Qualcomm MDM9207 chipset
- LTE Cat.4 with 3GPP Rel.10

Integrated AIWTool software service

- Easy installation
- Auto-reconnect function
- Connectivity Status Monitoring

NA/EU/JP 3 SKU

- Support RF certification: FCC, PTCRB, CE-RED, GCF, NCC, JATE, TELEC and RCM

SIM slot alone with module

- SIM slot design makes module easier for testing in early evaluation process, no extra adaptor board needed

MIT manufacturing

- Suitable to customer who is sensitive on China made products

Applications



EV Charger



Medical



Kiosk

AIW-356

- 5G Sub 6
- M.2 3052 B-Key form factor
- USB Communication Interface



Phase In Q1 2024

Longevity 2028

Features

5G mobile broadband module for Industrial IoT application

- Qualcomm X62 Chipset
- 3GPP Rel.16

Entry level 5G module to extend biz

- Easy installation
- Auto-reconnect function
- Connectivity Status Monitoring

NA/EU/JK/CN 4 SKU

- Support RF certification: FCC, PTCRB, CE-RED, GCF, JATE, TELEC, KCC and CCC

JP certification with antenna filing

- Compatible 5G module + antenna kits solution, saving customer time and money

Integrate AIWTool software service

- Easy installation
- Auto-reconnect function
- Connectivity Status Monitoring

Applications



Robotic



Medical



Edge Computing

Industrial Display Systems

IDS



IDP31-150

15" XGA bezel less touch monitors



100% Flat Fronted Touch 15" Industrial Grade Monitor

Waterproof, ultra-high-brightness designs for outdoor kiosk applications

Phase In Nov 2022

Longevity Nov 2025

Features

Rugged Design

- IP67 rated front design for dust and water proof
- Wide temperature support from -20~70C
- 6H hardness of cover glass

Superior optical performance

- 1024 x 768 XGA resolution
- Backlight brightness of 500nits and 1200nits
- Wide View area of 178(H) and 178(V)

Easy integration with multiple options

- Bezel-less design for contemporary outlook
- Multiple integration of panel mount and VESA mount
- Slim and light weight

Multiple signal interfaces and Easy operation

- HDMI for signal input, USB for touch , DC 12V input
- Projective touch integrated for multi-touch
- Glove available for touch operation

Applications



Self-Service Kiosk



Automation

Materials



[Website](#)



[Datasheet](#)

IDP31-215

21.5" FHD bezel less touch monitors



100% Flat Fronted Touch 21.5" Industrial Grade Monitor

Waterproof, ultra-high-brightness designs for outdoor kiosk applications

Phase In Mar 2021

Longevity Mar 2025

Features

Rugged Design

- IP67 rated front design for dust and water proof
- Wide temperature support from -20~60C
- 6H hardness of cover glass

Superior optical performance

- 1920 x1080 FHD resolution
- Backlight brightness of 250nits and 1200nits
- Wide View area of 178(H) and 178(V)

Easy integration with multiple options

- Bezel-less design for contemporary outlook
- Multiple integration of panel mount and VESA mount
- Slim and light weight

Multiple signal interfaces and Easy operation

- HDMI for signal input, USB for touch , DC 12V input
- Projective touch integrated for multi-touch
- Glove available for touch operation

Applications



Self-Service Kiosk



Automation

Materials



[Website](#)



[Datasheet](#)

IDK-2110W

10.1" WXGA high brightness touch panel kit



Ultra High Brightness 10.1" Touch Panel Kit

1500nits Ultra-high-brightness designs for outdoor kiosk applications

Phase In Mar 2024

Longevity Mar 2027

Features

Superior optical performance

- 1280 x 800 WXGA resolution
- Ultra backlight brightness 1500nits
- Wide View area of 170(H) and 170(V)

Rugged design

- Projective capacitive touch integrated
- Wide temperature support from -20~60C
- 6H hardness of cover glass

Maximum design flexibility

- Panel kit solution with LVDS interface
- USB interface for touch function
- Backlight power input 12V

EMI solution

- CS10V support for EMI immunity solution

Applications



Self-Service Kiosk



Parcel Locker

IDK-1107WP

7" WXGA industrial touch panel kit



Industrial Grade 7" Touch Panel Kit

Integrated Projective touch display kit provides efficient touch operation experience

Phase In Mar 2022

Longevity Mar 2025

Features

Superior optical performance

- 800 x 480 WXGA resolution
- Premium brightness 500nits
- Wide View area of 178(H) and 178(V)

Rugged design

- Projective capacitive touch integrated
- Wide temperature support from -20~60C
- 6H hardness of cover glass

Maximum design flexibility

- Panel kit solution with LVDS interface
- USB interface for touch function
- Backlight power input 12V

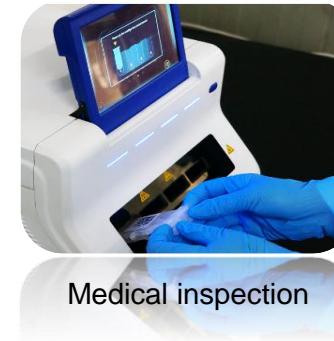
EMI solution

- CS10V support for EMI immunity solution

Applications



Drone



Medical inspection

Materials



[Website](#)



[Datasheet](#)

Industrial Memory

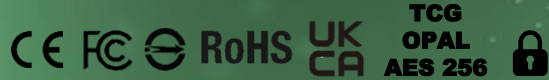
SQF



SQFlash

SQF-C8M 930

M.2 2280 (M Key)
PCIe/NVMe Gen.4 SSD



Market 1st Wide Temperature M.2 4TB with High Speed Gen.4x4 support

High Sequential & Random Speed of M.2 SSD 480GB / 960GB / 1.9TB / 3.8TB

Phase In Q2 2023

Longevity Q4 2026

Features

High Performance High Capacity

- Compliant with PCIe Gen. 4x4 interface and NVMe 1.4
- 2X+ performance enhancement compare with Gen.3 product
- Max. Sequential Read achieve 7.2GB/s, and Random Read IOPS @4K achieve 750K

Data Stability and Power Management

- AES-256 support and TCG-OPAL compliant, Data encryption and decryption protection
- PMIC design to ensure stable power supply and power failure protection

Separate cooling solution, Enhance high temperature stability

- Wide temperature range support, (0~70°C) and (-40~85°C)
- Heat-spreading design with Industrial thermal solution
- Support LDPC with RAID ECC, to enhance error-correct capacity

Multiple Software Support

- Exclusive Device-On/SQ Manager, Real-time monitor operating temperature, and data analytics
- Access to SMART data for special application needs
- SQErase tool support, make sure critical data is really erased by request.

Applications



Real-time Surveillance



High-image processing



Bio-Sciences

Materials



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SQFlash

SQF-CU3 EU-1

2.5" U.3 (SFF-TA-1001)
PCIe/NVMe SSD



Edge Ultra Speed PCIe Gen.4x4 with 3D TLC High Endurance Solution

U.3 SSD Universal Form Factor with U.2 Size Speed
1.9TB / 3.8TB / 7.6TB / 15.3TB / 30.7TB



Phase In Q4 2022

Longevity Q4 2026

Features

Ultra Performance

- Compliant with PCIe Gen. 4x4 interface and NVMe 1.4
- More than 10 x performance enhancement compared with SATA III products
- Sequential Read achieve 7,000MB/s, and Random Read IOPS @4K achieve 1,600K

Excellent Reliability

- AES-256 support and TCG-OPAL compliant, Data encryption and decryption protection
- PMIC design to ensure stable power supply and external voltage anomaly protection
- Ultra-high Quality of Service (High performance) achieve 99.999%

Better Durability and Low Latency

- Various temperature range support, (0-70 °C)
- Lower latency compared to SATA SSD, access and read/write data more quickly
- Support LDPC with RAID ECC, to enhance error-correct capacity

Universal Mainstream Platform and Integration Continuity

- Supports High performance related platforms in the market
- Access to SMART data for special application needs
- SQ Manager tool support, make sure critical data is really erased by request

Applications



Real-Time
Surveillance



AI Analytics



Flight Information

Materials



[Brochure](#)



[News](#)

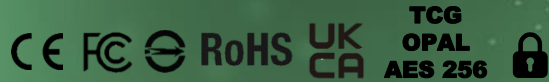


[SQ Manager
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SQFlash

SQF-C8M 730

M.2 2280 (M Key)
PCIe/NVMe Gen.4 SSD



High Performance Low Power PCIe Gen.4x4 with 3D TLC BiCS5 solution

Common Form Factor & Temperature Range of M.2 SSD
256GB / 512GB / 1TB / 2TB / 4TB

Phase In Q2 2023

Longevity Q4 2026

Features

High Performance

- Compliant with PCIe Gen. 4x4 interface and NVMe 1.4
- 2X+ performance enhancement compare with Gen.3 product
- Max. Sequential Read achieve 4.9GB/s, and Random Read IOPS @4K achieve 700K

Security & Excellent Power Management

- AES-256 support and TCG-OPAL compliant, Data encryption and decryption protection
- PMIC design to ensure stable power supply and external voltage anomaly protection
- Support LPM (ASPM/APST) setting by request. Max. power consumption is around 5.3W

Better Durability and Various Temperature Level

- Various temperature range support, (0~70°C), (-20~85°C) and (-40~85°C)
- Meet the reliability required for general-purpose applications. Max. capacity achieve to 4TB on (0~70C)
- Support LDPC with RAID ECC, to enhance error-correct capacity

Multiple Software Support

- Exclusive Device-On/SQ Manager, Real-time monitor operating temperature, and data analytics
- Access to SMART data for special application needs
- SQErase tool support, make sure critical data is really erased by request.

Applications



Kiosk



Automation



Gaming Consoles

Materials



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Industrial Memory

SQR

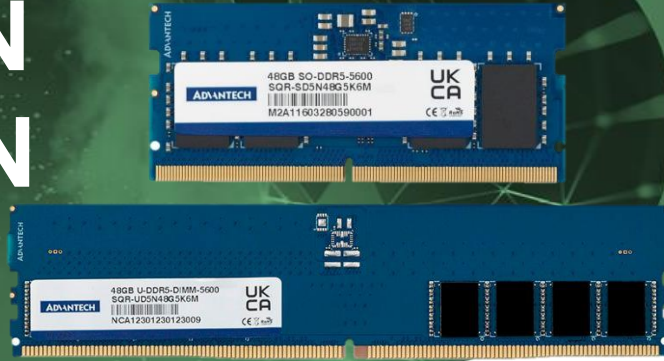


SGRAM

SQR-SD5N

SQR-UD5N

Industrial memory



NEW Generation DDR5 5600 48GB

Higher Speed, Larger Capacity, for Edge Computing
8/16/24/32/48GB

Phase In Q3 2023

Longevity 2025

Features

High Performance

- Data rate 5600MTs, 50% faster compared to DDR4
- Capacity up to 48GB
- Independent Dual-channel Transfer increase performance

DDR5 Evolution

- PMIC Adopted for better power supply and higher signal integrity
- On-die ECC Support, detect and correct the error before sending data to the CPU to enhance system stability.
- DDR5 On board PMIC 1.1V. Reduced 20% less power than DDR4 1.2v to increased power efficiency

Software support

- Exclusive SGRAM Manager software to monitor DRAM dynamic operating temperature
- Dram Temperature alarm setting
- Compatible with Device-On, Real-time monitoring system data analytics

Reliable solution

- Original Samsung/Micron IC
- Conformal coating/Side Fill/Heatsink/SPD write protection for customization service
- Lifetime Warranty

Applications



High-Image Processing
Medical



HPC



Networking

Materials



[Website](#)



[Micron x
Advantech
Video](#)



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Software
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SGRAM

SQR-YD4N

Industrial memory

2 Mounting
Holes Design



Military Grade Rugged ECC DIMM

DDR4 3200 (0°C ~ 85°C)

Anti-Shock & Vibration 16/32GB

Phase In Q1 2021

Longevity 2024 Q4

Features

Reliability

- US Military MIL-STD-810G shock 40G Certification
- 3 year Longevity & Original IC fixed die
- Native Wide Temperature Option (-40~85°C)

Hardware Feature

- 2 Mounting Holes Design to locked DRAM on MB Resists Shock & Vibration
- Anti-Sulfuration Protection Against Harsh Environments
- 30μ" Chamfer edge Gold Finger

Software Support

- Exclusive SQ Manager software to monitor DRAM dynamic operating temperature
- Dram Temperature alarm setting
- Device-On, Real-time computing and data analytics

Plus Service

- Conformal coating/Sidefill/Heatsink for customization service
- SPD protection
- Limited Lifetime Warranty

Applications



Military



Transportation



Aerospace

Materials



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SGRAM

SQR-SD4N

Industrial memory



Industrial Grade DDR4 3200 (0°C ~ 85°C)

Reliability, Stability and Durability
4/8/16/32GB

Phase In Q1 2020

Longevity Q4 2024

Features

Reliability

- Original Samsung, Micron IC adopted
- 3 year Longevity
- Fixed die

Hardware Feature

- Anti-Sulfuration Protection Against Harsh Environments
- 30μ" Chamfer edge Gold Finger
- Thermal Sensor in EEPROM to detect the temperature through SQ Manager software

Software Support

- Exclusive SQ Manager software to monitor DRAM dynamic operating temperature
- Dram Temperature alarm setting
- Device-On, Real-time computing and data analytics

Plus Service

- Conformal coating/Sidefill/Heatsink for customization service
- SPD protection
- Limited Lifetime Warranty

Applications



Kiosk



Gaming



Automation Applications

Materials



[Website](#)



[Micron x Advantech Video](#)



[SQ Manager Software Introduction](#)

Electronic Paper Display

EPD

ePaper Display

EPD-210

2.9" Battery-less ePaper

- 296 x 128 pixels , 66.9 x 29.06 mm ,112 dpi
- NFC ISO/IEC 15693 type : ePaper image / User data read and write 320 bytes
- Energy harvesting from NFC reader

Software Support:

- Supports Windows 10 IoT LTSC
- EPD-210 NFC agent: user interface for manual operation and the template contains one image and 2 data fields
- EPD-210 C # utility for factory automation: single image or fixed template with 6 dynamic data fields (template customizable)

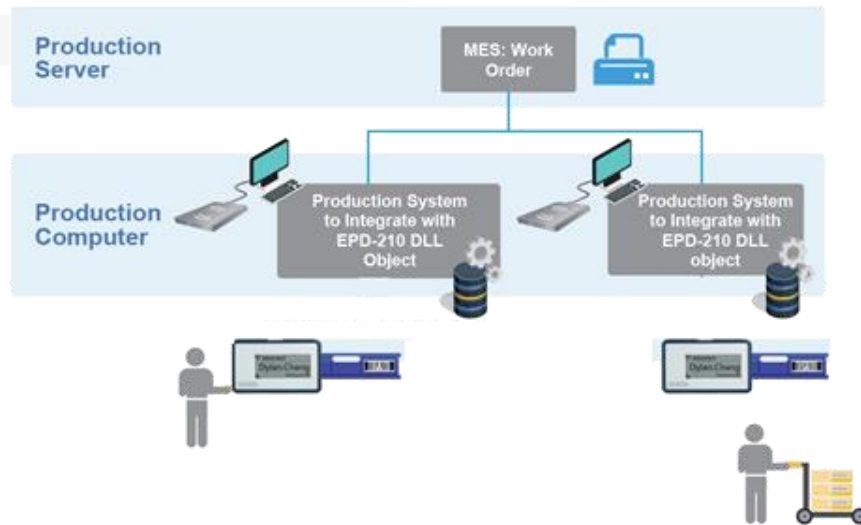
Features

- ARM Cortex-M3 Core Processor , ST25 NFC
- ISO/IEC 15693 , ISO/IEC 14443 Support
- Battery battery-less / IP57
- Operation Temp. 0 ~ 40 °C (32 ~ 104 °F)
- EPD-210 SW/HW are bundled with EPR-210 as the standard offering

Architecture

Device List :

- NFC agent
- EPD-210
- EPR-210 (NFC reader)



Applications



Cleanroom WIP Plate



Smart Logistic Plate



Smart Factory Logistic Box



Smart Name Plate



Semicon-Wafer Cassette



Smart Luggage Plate

ePaper Display

EPD-662, EPD-660, EPD-66x

13.3" Battery-less ePaper

- Screen Size 285 x 213 mm
- Resolution 1600x1200 pixels

Software Support:

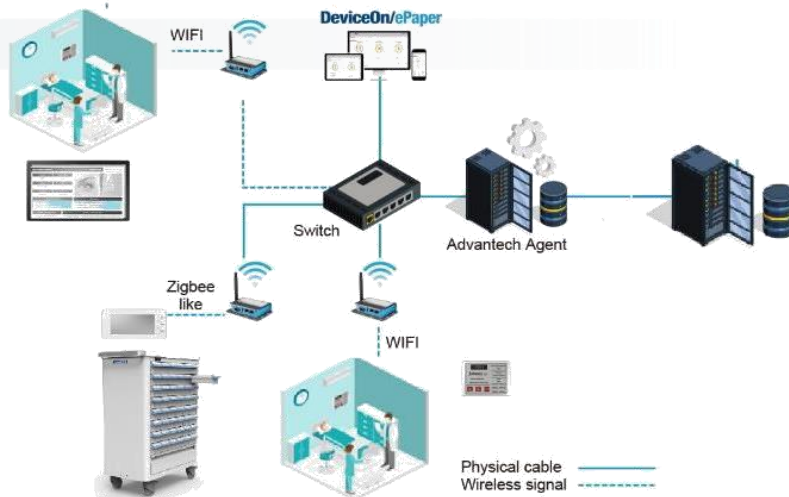
- DeviceOn/ePaper in Ubuntu 18.04 for full features and functions
- Dispatcher in Windows 10 IoT LTSC for limited features and functions
 - ✓ Device monitoring, task retry, image push
 - ✓ Image should be prepared by customer's host
 - ✓ Connects up to 20 pcs EPD

Features

- ARM Cortex-M4 Core Processor
- IO: 5 buttons and 2 color LED
- Supports IEEE 802.11b/g/n
- Computer Drive and Control EPD via 2.4G Wi-Fi

Architecture

- Device List :
- DeviceOn/ePaper
 - EPD-66x



Applications



Smart Hospital



Smart Bulletin Board



Smart Meeting Room



Smart Campus



Smart Menu / Recipe



Smart Hospital

EPD-333

5.6" 7-colors of black, white, red, yellow, blue, green, and orange ePaper

- ZigBee Like IEEE802.15.4 to support ultra low power consumption
- Screen Size 125.4 x 99.5 mm, Resolution 600 x 448 pixel

Software Support:

- DeviceOn/ePaper in Ubuntu 18.04 for full features and functions
 - ✓ Device Management: monitoring and remote control
 - ✓ Service Management: FW OTA and image delivery
 - ✓ Image generator to design the outlook of image template
 - ✓ Rich RESTful API

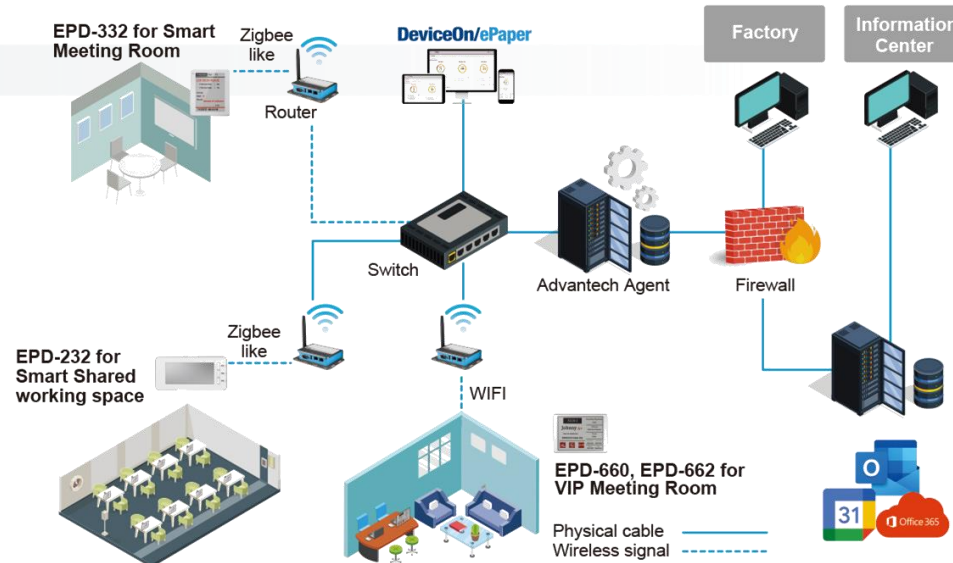
Features

- 5.6" 7 colors ePaper with 2480mAh battery capacity
- Ready SW Agent for Outlook/O365 & Google Calendar
- Color ePaper to show more booking information
- Monitoring meeting usage for office management
- Easy for people to find the meeting location and meeting room owner in different time slots

Architecture

Device List :

- DeviceOn/ePaper
- WISE-3240
- EPD-333



Applications



Smart Conference and Meeting Rooms

ePaper Display

EPD-258

25.3" ACeP >30k colors (ACeP+, E-Ink Gallery Plus Display)

- Wi-Fi 802.11 a/b/g/n/ac (2.4G/5G)
- Open Frame Design / DC-in
- Resolution 3200x1800 , Ratio 16:09

Software Support:

- DeviceOn/ePaper in Ubuntu 18.04 for full features and functions
- Dispatcher in Windows 10 IoT LTSC for limited features and functions
 - ✓ Device monitoring, task retry, image push
 - ✓ Image should be prepared by customer's host
 - ✓ Connects up to 20 pcs EPD

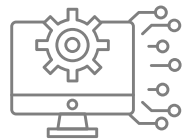
Features

- CPU 1.3GHz quad core A35 /Android 11
- RAM / ROM 2GB DDR3 / 16GB EMMC
- Battery Capacity 18650 Li-batteries *4pcs (Prepared by customers)
- Power Supply 20V/45W AC/DC Adaptor
- Computer Drive and Control EPD via Wi-Fi

Architecture

Device List :

- EPD-258
- SW Dispatcher



Ethernet



Wi-Fi



SW Dispatcher push image to EPD



Applications



Smart Menu



Smart Bulletin Board



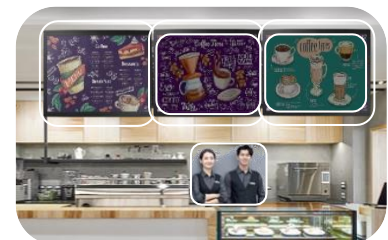
Smart Bulletin Board



Smart Campus



Smart Menu / Recipe



Smart Menu

EPD-230, EPD-232

2.9" Black/White/Red ePaper

- ZigBee Like IEEE802.15.4 to support ultra low power consumption
- Screen Size 79 x 36.7 mm
- Resolution 296 x 128 pixels

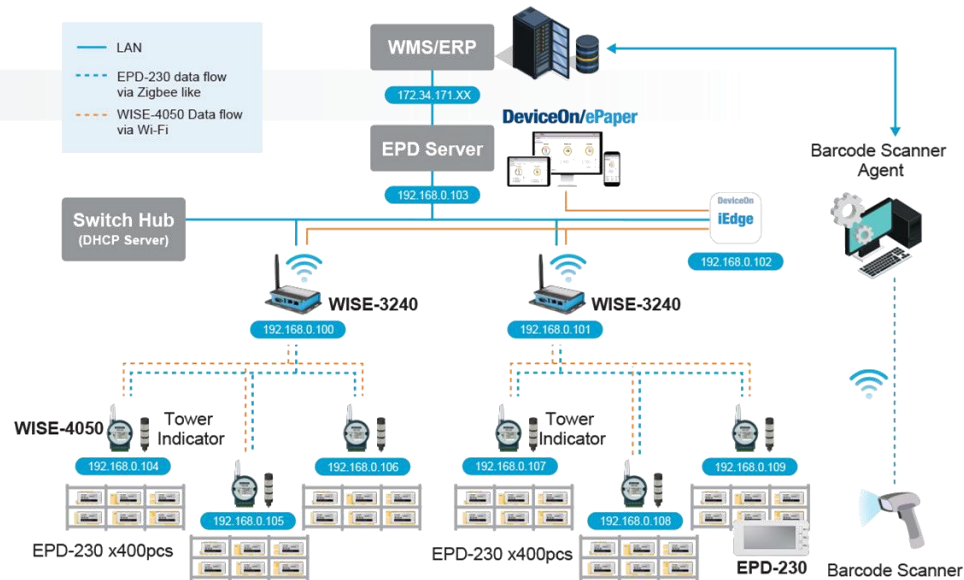
Software Support:

- DeviceOn/ePaper in Ubuntu 18.04 for full features and functions
 - ✓ Device Management: monitoring and remote control
 - ✓ Service Management: FW OTA and image delivery
 - ✓ Image generator to design the outlook of image template
 - ✓ Rich RESTful API

Features

- 2.9" black and white color ePaper with 2480mAh battery capacity
- Button and LED to switch 3 different pages for different orders
- Easily maintains stock status
- LED indicators for easy to locate items

Architecture



- Device List :
- DeviceOn/ePaper
 - WISE-3240
 - EPD-230

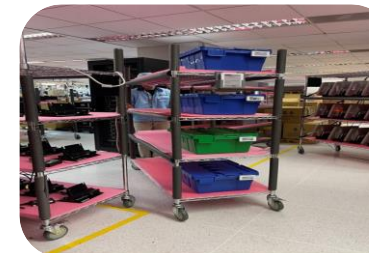
Applications



Warehouse Management



Warehouse Pick to Light



Factory WIP Run Card



Pharmacy Management

Co-Creating the Future of the IoT World

