DFI Desire For Innovation

intel. partner Titanium IoT Solutions

Driving Mission-Critical Technology with Rugged Edge Innovation

Achieve Unmatched Defense Performance with DFI's Embedded IoMDT Lineup

www.dfi.com

Your Trusted Leader in Embedded IoMDT Platforms

Over 40 years of embedded expertise & Edge AIoT for defense

In the critical domain of defense, AI is transforming technology, redefining mission effectiveness, and boosting operational precision for the future. The defense sector faces rising demands for robust, dependable, and long-lasting technologies that can endure extreme environments and operate seamlessly under mission-critical conditions.

With over 40 years of expertise, DFI is a trusted provider of agile edge AI computing platforms, offering one-stop ODM services and commercial off-the-shelf products tailored for defense applications. Our diverse product lineup includes ruggedized systems, compact high-performance small-form-factor devices, and VPX-based architectures, ensuring adaptability across various deployment scenarios.

Built for strict compliance, seamless interoperability, and uncompromising durability, DFI's advanced capabilities empower defense applications to drive technological evolution and embrace open innovation. Strengthened by a strategic partner network and state-of-the-art technologies, DFI continues to lead the way in advancing next-generation mission-critical infrastructure.

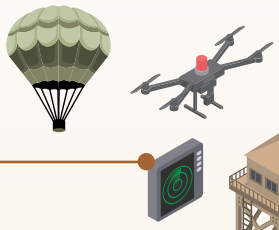
DFI's Comprehensive Portfolio of Defense

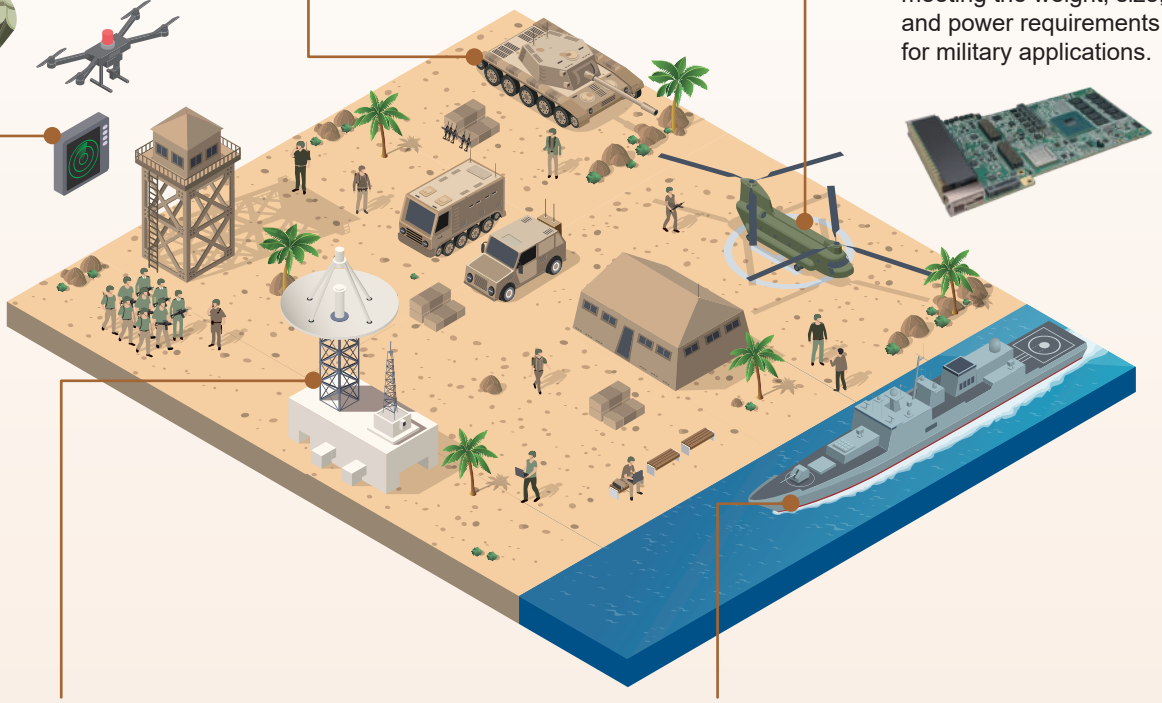
Real-time Tactical Systems Design Experience

I/O-optimized, rugged, and designed for real-time edge AI computing, processing LiDAR and sensor data for unmanned vehicles.

VPX Design Experience

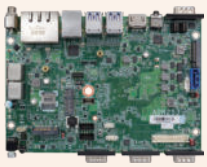
Extensive VPX design expertise, focusing on meeting the weight, size, and power requirements for military applications.





Single Board Computers (SBCs)

Wide-range defense form factors (4", 3.5", 2.5", 1.8", PICMG 1.3) with compact size and rich I/O for seamless integration.



System-on-Modules (SoMs)

Wide-range form factors for defense: COMe Mini, Compact, Basic, COM HPC, SMARC, Qseven, OSM.

Ruggedized Systems

IP67/69K-rated, I/O-optimized, and rugged mechanical design, making it ideal for extreme maritime environments such as unmanned surface vessels.

Comprehensive One-Stop Solution for Defense Needs

From zero to one, covering all edge IoT military domains to meet the needs of defense

DFI's rugged embedded computing portfolio supports a wide range of defense applications, including aircraft failure prediction, mission safety enhancement, and real-time data sharing. Designed with environmental and security considerations in mind, these technologies are always built to meet specific requirements and standards.

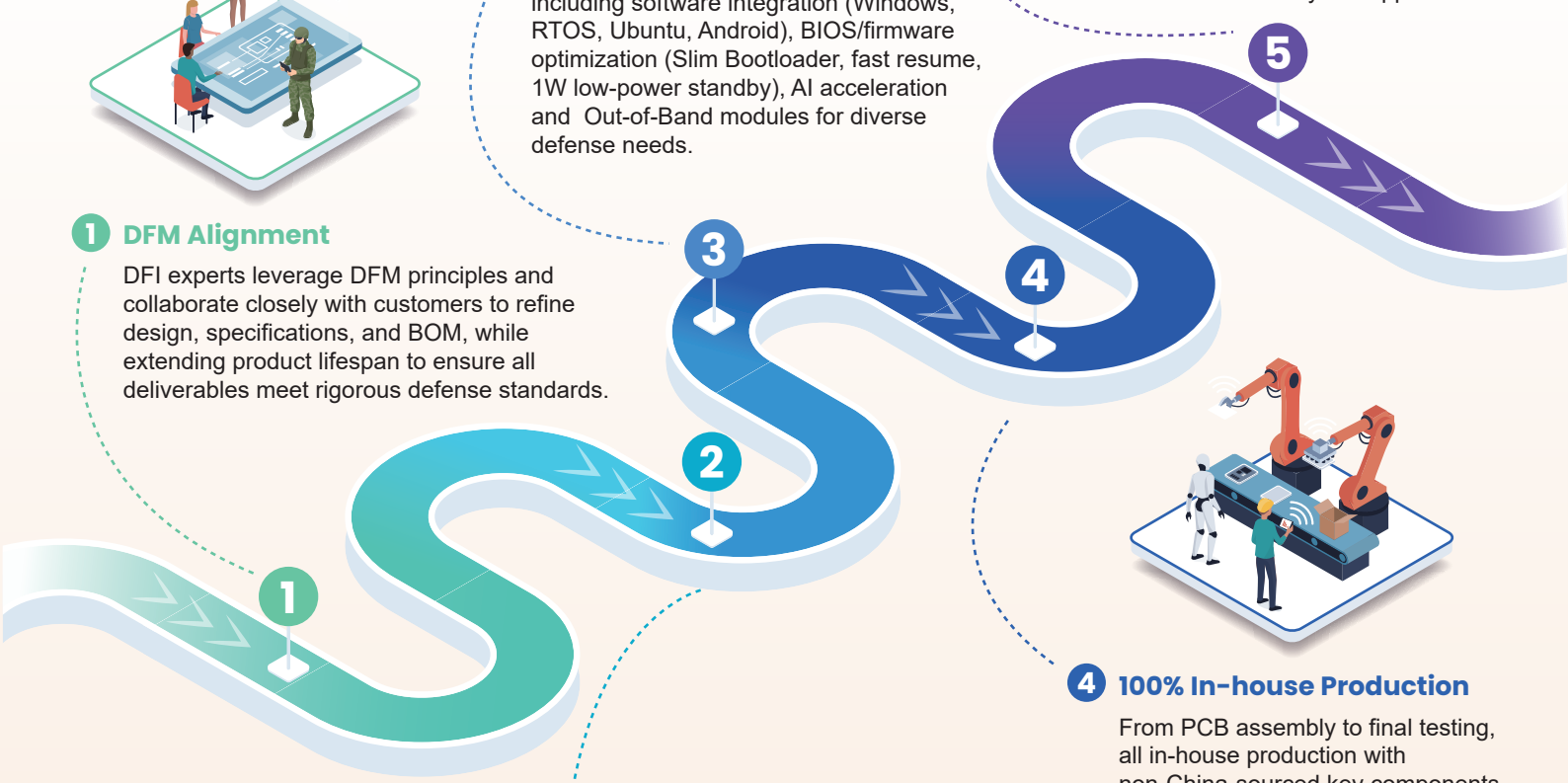
As the defense industry demands more durable and reliable equipment for harsh environments, DFI leads with agile edge AI computing, offering a comprehensive one-stop service to address the evolving needs of the sector.

5 After Service

Strong post-production support with long-term availability, repairs, upgrades, re-order fulfillment, and BOM control for defense's continuous lifecycle support.

3 Value-Added Technology

Providing value-added technologies, including software integration (Windows, RTOS, Ubuntu, Android), BIOS/firmware optimization (Slim Bootloader, fast resume, 1W low-power standby), AI acceleration and Out-of-Band modules for diverse defense needs.



1 DFM Alignment

DFI experts leverage DFM principles and collaborate closely with customers to refine design, specifications, and BOM, while extending product lifespan to ensure all deliverables meet rigorous defense standards.

4 100% In-house Production

From PCB assembly to final testing, all in-house production with non-China-sourced key components ensures supply chain stability, risk mitigation, and reliable product quality for defense applications.

2 Tailored Customization & Rigorous Validation

Delivering not only commercial off-the-shelf products but also tailored offerings—including custom x86/ARM-based platform, prototyping, rigorous power and signal validation, performance optimization, and certification to meet industry standards—we are committed to building the most resilient, quality-driven products.

Flexibility, Ruggedization and Custom Designed Experiences

Rugged and fueled by unparalleled flexibility, agility, and unwavering reliability

DFI understands the importance of durability and continuous productivity in challenging environments. We offer rugged, customizable options for defense applications, providing reliable capabilities for data collection and communication. Whether for unmanned vehicles, armored vehicles, or radar systems, DFI offers a variety of rugged features and customization options with flexible connectivity based on high quality.
Our product defect rate is consistently below 1,000 dppm, proudly the lowest in the industry. Our products are rigorously tested to withstand harsh conditions and can be certified to customer specifications. With durable products, customers benefit from long-lasting performance, reducing TCO over time.

Wide Temperature

- -40°C~85°C Durability
- Optimized Thermal Solution

Wide Voltage

- 9-36V DC Input
- Over Current Protection

IP67/69K Rated Protection

- Dust/Particles Protection
- Water Protection

Anti-Vibration/ Shock

- Stable/Reliable Performance
- IEC60068
- Frequent Vibration/ Shock Resistance

Conformal Coating

- Parylene/ Conformal Coating
- Excellent Adhesion
- Corrosion Resistance

Marine Design

- IEC60945
- Power isolation Anti-noisy
- High radiation

Mission Critical

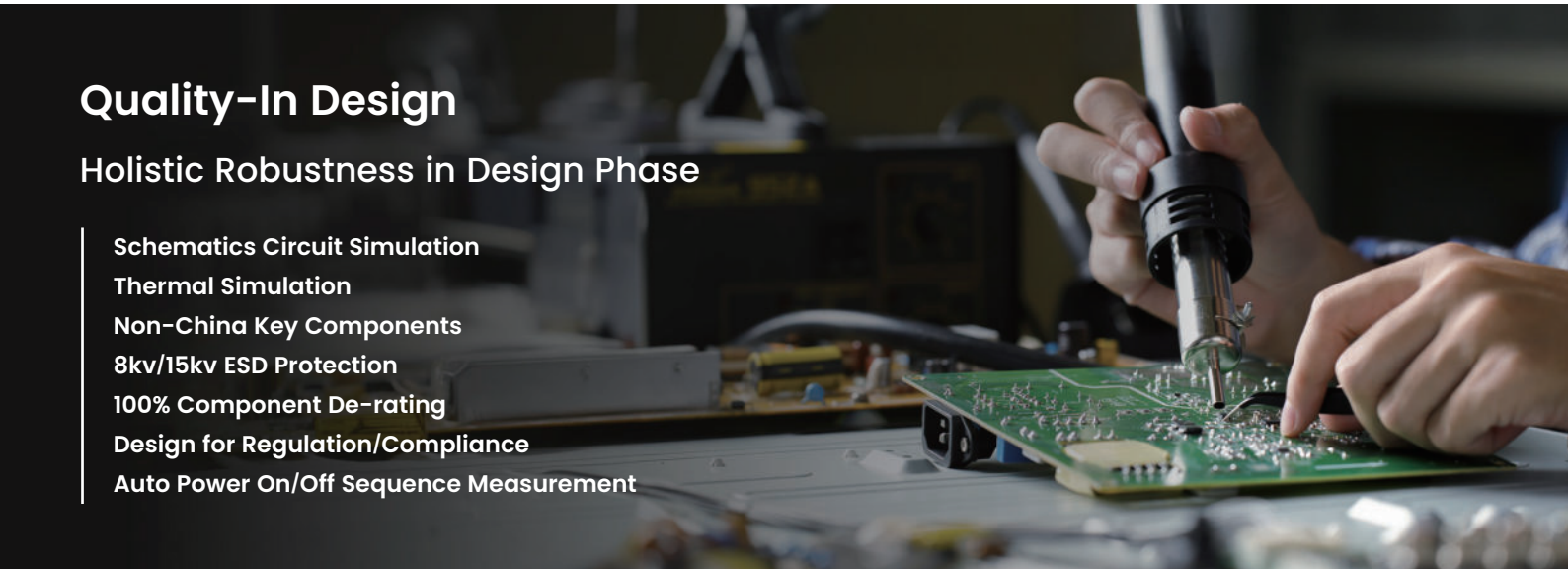
- Fast Boot Capability
- HALT Test

MTBF

- Exceed 100,000-hour MTBF

Qualified

- ISO 9001, IPC J-STD-001, IPC-A-610, MIL-STD, CE, UL, FCC-Class B, IEC62443-4-1, ISO27001 and more



Quality-In Design

Holistic Robustness in Design Phase

Schematics Circuit Simulation
Thermal Simulation
Non-China Key Components
8kv/15kv ESD Protection
100% Component De-rating
Design for Regulation/Compliance
Auto Power On/Off Sequence Measurement

Navy Use Case

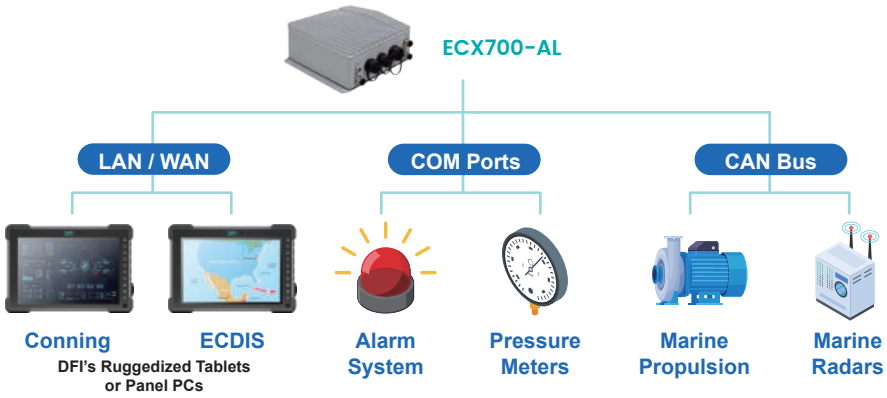
Unmanned Surface Vessels' IoT Gateway: Real-Time Monitoring, and Control

Explore More
DFI Industrial Computers

Explore More
DFI Industrial Panel PCs & Displays

Challenges

The maritime environment is extremely harsh, and DFI's ruggedized systems have successfully entered the western markets, being deployed in defense unmanned vessel projects.



Use Case

ECX700-AL | Ruggedized System

- Intel® Atom® Processor E3900 Series Apollo Lake Quad Core CPU
- Intel® Gen9 Graphic Performance
- Extreme Ruggedized design to IEC 60068-2-64 & -40°C~70°C wide temperature
- Rich I/O help integrators meet the demand for various applications
- To fulfill wireless transmission, an external SIM slot reduces the difficulties to change SIMs, and the high gain antenna ensures the quality of the signal
- Various applications: Industrial automation, Outdoor application
- Waterproof & Dustproof design conforming to IP67/ IP69K
- Long-term Promise of 15-Year CPU Life Cycle Until Q4' 31 (Based on Intel IOTG Roadmap)

Related Models

ECX700-ADP | Ruggedized System

- Intel® Alder Lake-P Processor i5-1245UE/ i7-1265UE
- Intel® Iris® Xe Graphic Performance
- Extreme Ruggedized design to IEC 60068-2-64 & -20°C~70°C wide temperature
- Rich I/O help integrators meet the demand for various applications
- To fulfill wireless transmission, an external SIM slot reduces the difficulties to change SIMs, and the high gain antenna ensures the quality of the signal
- Various applications: Industrial automation, Outdoor application
- Waterproof & Dustproof design conforming to IP67

JUR101-TGU | Ruggedized Tablet

- 11th Gen Intel® Core™ Processors
- High Brightness Sunlight-Readable 10.1 Screen
- ALL-DAY usability with hot swap capability (2 removable Li-Ion battery)
- Optical bonding enhances both visibility and strength
- Chemically-strengthened Dragontrail™ High Ion-Exchange (HIE™) cover glass for excellent impact and scratch resistance
- Adjustable LED backlit keys and 8x programmable function keys
- Ultra Rugged design to meet MIL-STD-810H (Full IP65)

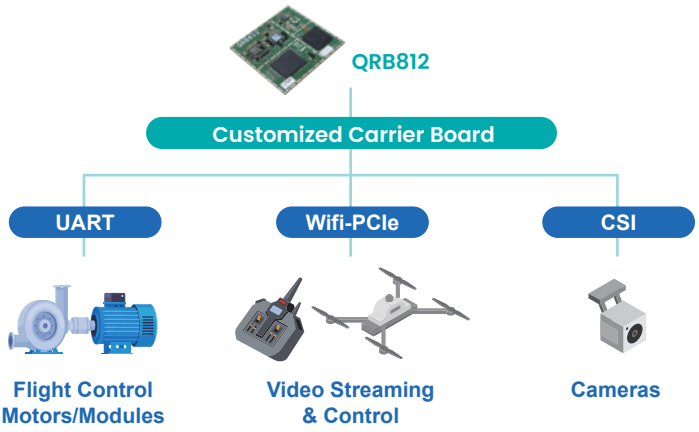
Air Forces Use Case

Core Computing for UAVs: Real-Time Capture and Communications

Explore More
DFI Sytem-On-Modules

Challenges

Drone endurance is crucial, requiring a low-power, high-performance system to maximize battery life. With using SoM, which ensures easy maintenance and future upgrades. Additionally, the system must be rugged and reliable, capable of operating in extreme temperatures, humidity, and vibrations for stable long-term performance.

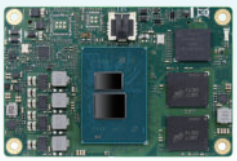


Use Case

QRB812 | OSM

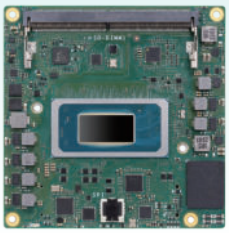
- Qualcomm QRB5165 Processor, 8x Kryo 585 2.84Ghz
- 8GB LPDDR5 memory down
- Dual Displays: 1 4-lane MIPI-DSI, 1 USB-C DP
- Multiple Expansion: 2 PCIe x2 (Gen3), 1 PCIe x1 (Gen3), 2 USB 3.1 Gen2, 6 MIPI-CSI
- Application: For Automation AMR, Robotic or Drone

Related Models



ASL9A2 | COMe Mini

- Intel® Atom® Processor Amston Lake Series
- Dual Channel LPDDR5 4800MHz up to 16GB
- 1 LVDS/eDP, 1 DDI (HDMI/DP++) ; Supports dual displays: DDI + LVDS/eDP
- Multiple expansions: 4 PCIe x1, 1 SMBus, 1 I2C, 1 eMMC
- Rich I/O: 2 USB 3.1, 8 USB 2.0
- High Speed Ethernet: Supports 100M/1000M/2.5Gbps



MTH968 | COMe Compact

- Intel® Core™ Ultra Processor (Meteor Lake: U/H-series)
- Dual Channel DDR5 5600MHz SODIMM up to 96GB
- Multiple Displays: 1 VGA + 1 LVDS/eDP + 2 DDI
- Supports 4K / 2K resolution
- Multiple Expansion: 8 PCIe x1, 2 PCIe x4, 1 PCIe x8, 1 I2C, 1 SMBus, 1 LPC/eSPI, 2 UART
- Rich I/O: 1 Intel 2.5GbE, 2 USB 4.0, 4 USB 3.2, 8 USB 2.0, 2 SATA 3.0

ICD970 | COMe Basic

- 3rd Gen Intel® Xeon® Processor D-1700 Family
- Default 2 260-pin DDR4 2666 SO-DIMM, dual channel mode up to 64GB, 3rd DIMM
- by request(SDPC mode by request to support DDR4 2933MHz)
- Support extended operating temperature: -40°C to 85°C
- 10GBASE-KR: Support up to 4 x 10GbE Mac ports
- Multiple Expansion: 1 PCIe x16 (Gen4), 2 PCIe x8 (Gen3), 1 SMBus, 1 I2C, 1 LPC, 2 UART (TX/RX)
- Rich I/O: 2 Intel GbE, 4 USB 3.0, 4 USB 2.0, 2 SATA 3.0
- 15-Year CPU Life Cycle Support Until Q1' 37 (Based on Intel IOTG Roadmap)

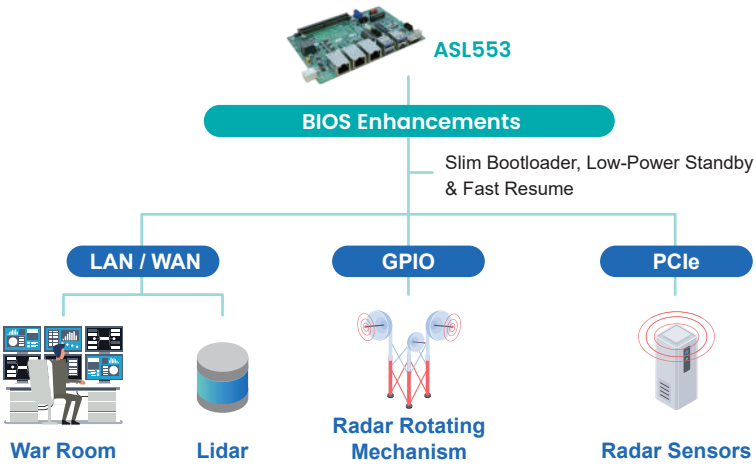
Army Use Case

Quality For Army Communication: Radar Control Systems, and More

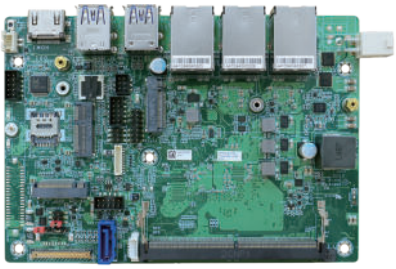
Explore More
DFI Industrial Motherboards

Challenges

Any defense communication system must not only be compact and easy to integrate but also require fast recovery and startup while ensuring optimal power efficiency to meet the rapid advancements and urgent challenges in defense technology.



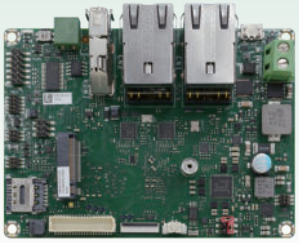
Use Case



ASL553 | 3.5″ SBC

- Intel® Atom® Amston Lake Processors 3.5" SBC
- 1 DDR5 SO-DIMM
- 4K High Resolution: Supports 4K/ 2K resolution
- Triple Display: 1 HDMI, 1 Type-C DP Alt. Mode, 1 LVDS/eDP(Opt.)
- Rich I/O Connectivity: 3 2.5GbE LAN, 4 USB 3.2, 2 USB 2.0, 1 SATA
- Multiple Expansion: 1 M.2 M Key, 1 M.2 B Key, 1 M.2 E Key
- Supports wide temperature up to -40°C~85°C

Related Models



M93053 | 2.5″ SBC

- NXP i.MX93 platform, target on entry level application
- Wide Voltage support 9~36VDC
- Two GbE Lan for automation application
- CAN bus support
- M.2 3042 support
- 15-Year CPU Life Cycle Support Until Q2' 38 (Based on NXP Roadmap)

RPP051 | 2.5″ SBC

- Small form factor 2.5" Pico-ITX for space-limited applications
- 13th Generation Intel® Core™ Processors
- 1 DDR5 4800MHz SODIMM up to 32GB
- Supports 4K/2K resolution
- Dual Independent Displays: DP++ + eDP
- Multiple Expansion: 1 M.2 E key, 2 M.2 B key
- Rich I/O: 1 Intel 2.5G LAN, 1 COM, 2 USB 3.1 Gen 2, 2 USB 2.0

In-Demand System-on-Modules Lineup

Released | Update BIOS | Developing | Planning

~2025 — 2026 — 2027

HPC

RPS9HC | Size C
- Intel® Raper lake S
- COM-HPC client, size C

BLS9SHC | Size C
- Intel® Bartlett Lake S series
- COM-HPC client, size C

BLS9SHC | Size C
- Intel® Bartlett Lake S 12P series
- COM-HPC client, size C

RPP9HA | Size A
- Intel® Raptor Lake P, 28W

PTH9HA | Size A
- Intel® Panther Lake H, 28W

PTH9HM | Mini Size
- Intel® Panther Lake U, 15W

COMe

MTU9A2 | Mini
- Intel® Core Ultra, U7/5 (Meteor Lake U/H)

MTH968 | Compact
- Intel® Core Ultra, U7/5 (Meteor/Arrow Lake U/H)

MTH966 | Compact
- Intel® Core Ultra, U7/5 (Meteor Lake U/H)
- Memory down

PTH960/968 | Basic/Compact
- Intel® Panther Lake H, 45W

SMARC

ASL600
- Intel® Amston Lake series, up to 8C

SMC6490
- Qualcomm QCS6490

IQ6000
- Qualcomm QCS615 (IQ6 series)

IQ9000
- Qualcomm QCS9075 (IQ9 series)

8MP000
- NXP i.MX8M Plus, up to 4C

F95000
- NXP i.MX95 series, up to 6C

OSM

QRB812
- Qualcomm QRB5165

AIM6490
- Qualcomm QCS6490

AIM510
- Mediatek Genio 510

In-Demand Single Board Computers Lineup

Released | Update BIOS | Developing | Planning

~2025 — 2026 — 2027

2.5″/1.8″ (x86)

TWLF51 | 1.8″
- Intel® Twin Lake series, up to 8C

ASL/TWL051 | 2.5″
- Intel® Amston/Twin Lake series, up to 8C

Next gen. 2.5″ SBC
- Intel® Wildcat Lake U, 15W

4″/3.5″ (x86)

IRN556 | 3.5″
- Intel® Amston/Twin Lake

MTH556 | 3.5″
- Intel® Core Ultra, U7/5 (Meteor/Arrow Lake)

MTH253 | 4″
- Intel® Core Ultra, U7/5 (Meteor Lake U/H)

Next gen. 3.5″ SBC
- Intel® Panther Lake U, 15W

Next gen. 3.5″ SBC
- AMD V4000

Next gen. 3.5″ SBC
- Intel® Nova Lake U/H

HPT551 | 3.5″
- AMD Ryzen 8000 series

2.5″/1.8″ (ARM)

M93053 | 2.5″
- NXP i.MX93 series, up to 2C

QCS051 | 2.5″
- Qualcomm QCS6490

4″/3.5″ (ARM)

M95553 | 3.5″
- NXP i.MX95 series, up to 6C

In-Demand Edge AI Systems & Servers Lineup

Released | Developing | Planning

Released ——— 2025~

Intel® Atom

ECX700-AL

- Intel® Atom Apollo Lake
- IP67/IP69K grade, wide temperature
- Variety I/O applications
- WiFi/LTE/CAN BUS for options

EC700-ASL

- Intel® Amston Lake
- LPDDR5 on board, 2/3 LAN
- OOB/TPM/TSN
- Win 11

ECX700-ASL

- Intel® Atom Amston Lake
- IP67/IP69K grade, wide temperature
- Variety I/O applications
- WiFi/LTE/CAN BUS for options

Intel® Core

VC500-CMS-MXM

- 10th Gen Intel® Xeon®/Core™ Processors
- MXM GPU Slot Support
- 4x M12 PoE or 2x 10G SFP+ ports

ECX700-ADP

- IP67 rugged system on Intel® Alder Lake-P Processor i5-1245UE/i7-1265UE
- supporting -20°C to 70°C operating
- MIL-STD-810G

ODM Project

- IP54 rugged system
- 11th Generation Intel® Processor
- MXM Support
- 4x M12 10GbE

Intel® Xeon

RM645-ICX610

- 4U Short-depth Rackmount Edge Server
- 3th Gen Intel® Xeon® processor
- Up to DDR4 512GB
- 3 PCIex16, 3 PCIex8, 1 M.2 2280 M-key

RM646-ERX810

- 4U Short-depth Rackmount Edge Server
- Dual 5th/4th Gen Intel® Xeon® processors
- Up to DDR5 1024GB
- Up to 3 double-width PCIe GPUs

RM810-ERX810

- 1U Rackmount Edge Server
- Dual 5th/4th Gen Intel® Xeon® processors
- Up to DDR5 1024GB
- 1 PCIex16, 1 M.2 2280 M-key

In-Demand Panel PCs/ Displays Lineup

Released | Developing | Planning

Released — 2025~

KS Series

KS101-BT
- Intel® Atom E3800 series
- 10.1" 1280x800
- P-Cap Touch

KS150-BT
- Intel® Atom E3800 series
- 15" 1024x768
- P-Cap Touch

KS156-AL
- Intel® Atom Apollo Lake
- 15.6" 1366x768
- P-Cap/Resistive Touch

KS215-EHL (EHL173)
- Intel® Atom E3800 series
- 15" 1024x768
- P-Cap Touch

KS101-EHL (EHL556)
- Intel® Elkhart Lake
- 10.1" Panel 1280x800
- P-Cap Touch
- 9-36V

KS156-EHL (EHL173)
- Intel® Elkhart Lake
- 15.6" Panel 1920x1080
- P-Cap Touch
- 9-36V

KS156-TGU (TGU173)
- Intel® Tiger Lake Core i
- 15.6" Panel 1920x1080
- P-Cap Touch
- 9-36V

KS215-TGU (TGU173)
- Intel® Tiger Lake Core i
- 21.5" Panel 1920x1080
- P-Cap Touch
- 9-36V

KS150-ADN (ADN173)
- Intel® Alder Lake N
- 15" Panel 1024x768
- P-Cap/Resistive Touch
- 9-36V

KS156-ADN (ADN173)
- Intel® Alder Lake N
- 15.6" Panel 1024x768
- P-Cap/Resistive Touch
- 9-36V

KS170-ADN (ADN173)
- Intel® Alder Lake N
- 17" Panel 1280x1024
- P-Cap/Resistive Touch
- 9-36V

KIT Series

KS057R-FS
- NXP iMX6
- 5.7" Panel LVDS 640x480
- Resistive Touch
- Open frame (optional)

KS070-FS
- NXP iMX6
- 7" Panel LVDS 1024x600
- P-Cap Touch

KS070-M8M
- NXP iMX8
- 7" Panel LVDS 1024x600
- P-Cap Touch

KIT070P-M8M (M8M051)
- NXP iMX8
- 7" Panel LVDS 800x480
- P-Cap Touch
- Open frame Design

KIT101P-M8M (M8M051)
- NXP iMX8
- 10.1" Panel LVDS 1280x800
- P-Cap Touch
- Open frame Design

KIT121P-M8M (M8M051)
- NXP iMX8
- 12.1" Panel LVDS 1024x768
- P-Cap Touch
- Open frame Design

KIT070P-ADN (ADN553)
- Intel® Alder Lake N
- 7" Panel LVDS 1024x768
- P-Cap Touch
- Open frame Design

KIT101P-ADN (ADN253)
- Intel® Alder Lake N
- 10.1" Panel LVDS 1280x800
- P-Cap Touch
- DFI OOB function
- Open frame Design

KIT121P-ADN (ADN253)
- Intel® Alder Lake N
- 12.1" Panel LVDS 1024x768
- P-Cap Touch
- DFI OOB function
- Open frame Design

KIT070P-Monitor
- 7" Panel LVDS 800x480
- P-Cap Touch
- VGA/HDMI/USB Type B
- Open frame Design

KIT101P-Monitor
- 10.1" Panel LVDS 1280x800
- P-Cap Touch
- VGA/HDMI/USB Type B
- Open frame Design

KIT121P-Monitor
- 12.1" Panel LVDS 1024x768
- P-Cap Touch
- VGA/HDMI/USB Type B
- Open frame Design

Industrial Display

IDP070-MS (500 NITS)
- 800x480 resolution
- WIFI display
- Signal input: HDMI/VGA
- PCT or resistive touch
- Metal Housing

IDP156-MS (400 NITS)
- 1366x768 resolution
- WIFI Display
- Signal input: HDMI/VGA
- PCT touch
- Metal Housing

IDP150-ME (300 NITS)
- 1024x768 resolution(4:3)
- Signal input: HDMI/VGA
- PCT touch
- Metal Housing
- 9-36V input by request

IDP170-ME (250 NITS)
- 1280x1024 resolution(4:3)
- Signal input: HDMI/VGA
- PCT touch
- Metal Housing
- 9-36V input by request

IDP190-ME
- 1280x1024 resolution(4:3)
- Signal input: HDMI/VGA
- PCT touch
- Metal Housing
- 9-36V input by request