





# Fueling the Future of the Smart Energy Sector

DFI's Rugged and Flexible Edge AI Computing Lineup Drives Innovation for the Energy of Tomorrow

www.dfi.com

# Plan the Energy Production with DFI Edge AloT Innovation

## About DFI

DFI, a subsidiary of QISDA Group (ranked among the 2018 Top 100 Global Technology Leaders), was established in 1981 and has since become a global leader in high-performance computing products for a wide range of embedded industries. In addition to offering Commercial off-the-shelf (COTS) products, DFI also specializes in ODM/OEM design services, creating customized services to meet the unique needs of each customer. These tailored capabilities are reflected in DFI's industrial-grade AloT offerings, which combine innovation and quality to enhance energy infrastructure reliability, extend lifecycles, and ensure 24/7 performance.



## **Comprehensive One-Stop Service**

## 01 DFM Alignment

DFI experts leverage DFM principles and work closely with customers to refine designs, specifications, and BOMs, while extending product lifespans to ensure every delivery meets rigorous standards.

### 02 Tailored Customization & Rigorous Validation

Delivering not only commercial off-the-shelf products but also tailored offerings—including custom x86/ARM-based platforms, 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.

## **05** After Service

Comprehensive post-production support with long-term availability, including repairs, upgrades, re-order fulfillment, and BOM management, ensuring continuous lifecycle support for diverse energy applications.



### 04 100% In-house Production

All in-house production, from PCB assembly to final testing, with key components sourced outside of China, ensures supply chain stability, risk reduction, and consistent product quality for smart energy applications.

### 03 Value-Added Technology

Offering value-added technologies such as software integration (Windows, RTOS, Ubuntu, Android), BIOS/firmware optimization (Slim Bootloader, fast resume, 1W low-power standby), Al acceleration, and Out-of-Band modules to meet the diverse needs of smart energy applications.

## DFI Delivers Premium Edge Al Platforms for the Global Energy Market

## **Tailored for a Variety of IoT Energy Applications**

With the rapid growth of IoT, the energy industry has become a key focus. DFI's Industrial Edge AI platforms seamlessly integrate sensing, real-time control, monitoring, and remote communication, meeting the stringent demands of energy applications worldwide.

We offer durable, reliable, and flexible embedded AloT platforms in various sizes and configurations to support the needs of energy automation.



# Flexibility, Ruggedized & Custom Design for Extreme Applications

## Powered by Flexibility, Agility, and Reliability

DFI offers flexible embedded computing platforms for energy applications that require strict design and performance standards, especially for reliable operation in extreme environments.Widely adopted across energy management, smart grids, renewable energy, and oil and gas sectors, our AloT platforms with ruggedized design optimize operational efficiency, extend equipment lifespan, and provide ongoing support to ensure the stability and security of energy systems.

## DFI's Edge AloT Platforms Feature a Broad Range of Ruggedized Designs





## Global Reach, Driven by DFI's Unmatched Design, Manufacturing, and Service Excellence



DFI deepens its 'Global Reach, Local Agility' strategy by integrating Qisda Group resources to strengthen supply chain flexibility and local production service capabilities. Additionally, we assess the potential impact of geopolitical and tariff changes on operations, optimizing manufacturing and logistics layouts to reduce overall operational risks. At the same time, we actively strengthen collaboration with local supply chain partners and customers, providing more efficient and integrated technical support and services, accelerating the implementation of AI applications, and solidifying market competitiveness.



## **High-Demands Models**



#### EC900-8MM | Ultra Compact Fanless System

Compact IoT gateway with NXP i.MX8M Mini, built for ultra-low power edge use with flexible I/O and dual M.2 slots

- Ultra low power NXP i.MX8M Mini IoT Gateway (max. 6.4W)
- · LPDDR4 3200MHz memory down, up to 8GB
- Yocto 3.3 supported
- 2 GbE LAN, 2 USB, 4bit DIO, RS422, RS485, 2x M,2 slots • 9~36VDC in

ECX700-ADP | Ruggedized System



#### IP67/69K fanless system with 12th Gen Intel® Core™ i7, -20°C~70°C, M12 I/O, SIM slot, 9-36V DC input for extreme

- edae applicatio • IP67/69K Extreme Rugged System with 12th gen. Intel® Core i7
- processor Fanless at -20 ~ 70°C operating temperature
- · HDMI, 2 GbE, 2 USB 3.2, 2 CAN bus/ 2 COM at M12 D-coded connectors

Compact AI system with Jetson Orin Nano™/NX, 4 GbE (2x

PoE optional), rich I/O, triple M.2, and 9–36V DC for edge

Compact NVIDIA<sup>®</sup> Jetson Orin Nano<sup>™</sup> / NX embedded system

Four RJ45 GbE ports and optional 2x PoE
 Multiple Expansions: 1 M.2 2230 E-Key, 1 M.2 2280 M-Key,

1 M.2 3042/3052 B-Key • Rich I/O: Audio, RS232/485, CAN bus, 2 USB 3.2, DIO, HDMI

EC633-RPS | Embedded Fanless System

and rich I/O for high-performace industrial edge computing

• Expandable embedded system with 14th Gen Intel<sup>®</sup> Core™processor,

•2 2.5GbE, 4 GbE(or 2 GbE, 2 PoE), 10 COM, 5 USB 3.2(Gen2x1),

• Multiple Expansion: 5 M.2 slots, 1 mini-PCIe slot (full size) Supports 2 PCIe x8 and 1 PCIe x4, up to 300W PEG card

· External accessible SIM slot

Al computing

• DC in 9~36V

up to 65W TDP

1 USB Type-C

DC in 9~36V

X6-ORN | AI Inference System



#### EC700-ASL | Ultra Compact Fanless System

- Ultra slim fanless system with Intel<sup>®</sup> Atom x7000, LPDDR5, TSN-ready 2.5GbE, and wide-temp support for edge use
- Ultra slim Intel<sup>®</sup> Atom x7000 fanless embedded system
   8GB/16GB LPDDR5 4800 Memory down
- 2 2.5GbE ports with TSN support
- 1 VGA, 1 HDMI, 1 USB type C, 4 COM, DIO, 3 USB 3.2, Audio
- -40°C~60°C operating temperature

#### ECX700-AL | Ruggedized System

- IP67/69K fanless system with Intel® Atom® E3900, -40°C~ 70°C operating range, M12 I/O, LTE/Wi-Fi support, and 9–36V DC input
- IP67/69K Extreme Rugged System with Intel® Atom® E3900 Processor Fanless at -40°C~70°C operating temperature
- HDMI, 2 GbE, 2 USB 3.0, 2 CAN bus/ 2 COM at M12 D-coded
- connectors Optional LTE and Wifi integrated with external accessible SIM slot
- DC in 9~36V

#### EC600-RPS | Embedded Fanless System

High-performance fanless system with Intel® Core™, DDR5 memory, extensive I/O, and 5x M.2 expansion for industrial edge applications

- Expandable embedded system with 14th Gen Intel® Core™ processor, up to 65W TDP Supports DDR5 SODIMM-4800 up to 64GB
- 2 2.5GbE, 4 GbE(or 2GbE, 2 PoE), 10 COM, 5 USB 3.2(Gen2x1),
- 1 USB Type-C Multiple Expansion: 5 M.2 slots, 1 mini-PCIe slot (full size)
- Up to -20°C~70°C operating temperature and DC in 9~36V

EC70A-MTH | Ultra Compact Fanless

- Ultra compact fanless system with Intel® Core™ Ultra processor, up to 64GB LPDDR5/x, triple LAN, rich I/O, wide-temp support, and versati le M.2 expansior
- Compact fanless system with Intel<sup>®</sup> Core<sup>™</sup> Ultra processo
- Dual Channel LPDDR5/x 6400MHz memory down up to 64GB
   2.2.5GbE, 1 GbE, 5 USB 3.2, 1 USB-C, 4 COM, HDMI

System

- -20°C~70°C fanless opearting temperature 1 M.2 M Key, 1 M.2 B Key, 1 M.2 E Key multiple expansions

### RM646-ERX810 | Edge AI Server

Expandable fanless system with Intel\* Core<sup>1</sup>

Supports DDR5-4800 SODIMM up to 64GB

4U Edge AI server with dual Xeon\* CPUs, 1024GB ECC RAM. triple GPU, Gen 5 PCIe, and rich I/O for high-performance edge workload

- 4U Rackmount Edge-Server with dual 5th/4th Gen Intel<sup>®</sup> Xeon<sup>®</sup> Scalable processors
- 16 ECC-RDIMM up to 1024GB
- Supports up to 3 dual width, full length, full height GPU cards
   Multiple Expansion Options: 4 PCIe x16 (Gen 5), 2 PCIe x8 (Gen5), 1 M.2 M key 2280
- Diverse I/O Options: 4 GbE, 1 dedicated IPMI LAN, 4 USB 3.2, 1 DP

#### RM810-ERX810 | Edge AI Server

1U Edge AI server with dual Intel® Xeon® CPUs, up to 1024GB RDIMM, PCIe Gen 5, rich I/O, IPMI remote manager 4 hot-swappable 3.5" drive bays ment, and

- Slim 1U Rackmount Space-saving design with dual 5th/4th Gen Intel® Xeon® Scalable CPU support
- High-Capacity Memory Up to 1024GB RDIMM across 16 slots for data-intensive workloads
- Flexible Expansion & I/O 1 PCIe x16, 4 GbE, 1 IPMI LAN, 4 USB 3.2, 1 DP, 1 M.2 (2280 M-Key), 2 MCIO IPMI-based out-of-band management for remote system monitoring
- and control · 4 hot-swappable 3.5" drive bays ensure high-availability and
- serviceability

#### KSX215P-EHL | Panel PC



#### 21.5" IP69K stainless touch panel PC with Intel\* Atom x6000, M12 I/O, 9–36V input, and M.2/SIM expansion for rugged, hygienic environments

- IP69K 21.5" Touch Panel PC with Intel<sup>®</sup> Atom X6000 processor Construction 304 Stainless steel chassis
- Multiple Expansions 1 x M.2 2242/2280/3052 B Key. 1 x M.2 2230 E Key, 1 x Nano SIM
- 1 RS232, 2 USB 2.0, 1 GbE @ M12 waterproof connectors
   Wide Voltage Support 9-36V @ M12 connector



#### ED700-EHL | Ultra Compact Fanless System

DIN rail ultra compact fanless system with Intel\* Atom x6000, up to 32GB DDR4, isolated COM & DI/DO, -40°C~60°C wide-temp, and 5G support with dual SIM

- · DIN Rail compact system with Intel® Atom x6000 processor
- Dual channel DDR4-3200 memory by soldered onboard and one SODIMM, up to 32GB
- Dual 2KV isolated COM ports and 12bit DI/DO
  Supports up to -40°C~60°C operating temperature
- (Intel<sup>®</sup> Embedded Series) Supports 5G moduel with dual SIM

#### KS Series | Panel PC

KS Series fanless touch panel PCs feature versatile sizes (5.7"-21.5"), powered by x86 and ARM platforms with Linux/Android support, open-frame desigr and 9-36V DC input

- Versitle size All in One PCs at 5.7", 7", 10", 10.1", 15", 15.6". 17", 21.5" Industrial Touch Panel
- From entry to performance Intel<sup>®</sup> platforms: Atom<sup>®</sup>, Core<sup>™</sup>, and Celeron<sup>®</sup>
- Offer low power ARM NXP i.,MX8M, NXP i.MX6, TI<sup>®</sup> AM3517
- platforms with Linux/Android OS support Provides open frame options with flexibility on housing design
- Fanless and DC 9~36V input

### JUR101-TGU | Rugged Tablet

- 10.1" rugged tablet with 11th Gen Intel® Core™, sunlight-readable display, hot-swappable dual batteries, Dragontrail glass, and programmable function keys
- Rugged High Brightness Sunlight-Readable 10.1" Tablet with 11th Gen Intel<sup>®</sup> Core<sup>™</sup> Processors
- ALL-DAY usability with hot swap capability
- (2 removable Li-lon battery)
- Optical bonding enhances both visibility and strength
- Chemically-strengthened Dragontrail<sup>™</sup> High Ion-Exchange (HIE<sup>™</sup>) cover glass for excellent impact and scratch resistance
- Adjustable LED backlit keys and 8x programmable function keys







HPT171 | Mini-ITX Motherboard

AMD<sup>®</sup> Ryzen<sup>™</sup> Embedded 8000 Series Processors

expansion capabilitie

expansion options

and 3 USB 2.0.6 COM 4 SATA

An AMD<sup>®</sup> Ryzen™ Embedded 8000 Series Mini-ITX Motherboard featuring extensive I/O options and multiple

ATX motherboard with Intel<sup>®</sup> Arrow Lake-S, up to 192GB

(1 Gen5; 3 Gen4), 1 PCI, 2 M.2 M key (1 Gen5; 1 Gen4), 1 M.2 E

DDR5, quad display support, rich I/O, and multip

4 DDR5-5600 ECC/NON-ECC UDIMM up to 192GB





#### ARH171/173 | Mini-ITX Motherboard

Intel<sup>\*</sup> Arrow/Meteor Lake H/U-based Mini-ITX with quad displays and rich expansion

- Arrow Lake H Intel® Arrow Lake H/U, Meteor Lake H/U Processors 2 DDR5 SODIMM up to 64GB Quad Displays: 2 DP/HDMI + 1 USB Type C + 1 M2A Display
- (eDP/LVDS/VGA/HDMI/DP) • Multiple Expansion: 1 PCIe x4, 1 M.2 M key, 1 M.2 B key, 1 M.2 E
- Key, 1 M.2 A Key Rich I/O: Up to 3 Intel<sup>®</sup> 2.5GbE, 4 USB 3.2 Gen2, 1 USB Type C and 4 USB 2.0 headers

#### ASL171/173 | Mini-ITX Motherboard

Optimized for industrial applications with Intel\* Atom\* Amston Lake processors and dual 2.5GbE LAN for reliable,

- Arrow Lake H Intel® Arrow Lake H/U, Meteor Lake H/U Processors 2 DDR5 SODIMM up to 64GB
- (eDP/LVDS/VGA/HDMI/DP)
- Key, 1 M.2 A Key Rich I/O: Up to 3 Intel® 2.5GbE, 4 USB 3.2 Gen2, 1 USB Type C





#### RAP310 | microATX Motherboard

Powered by AMD<sup>\*</sup> Ryzen<sup>™</sup> 7000 Series , delivers triple display support, flexible expansion, and rich I/O connectivity

- AMD<sup>®</sup> Rvzen<sup>™</sup> 7000 Series with AMD B650 chipset
- Triple displays: 1 VGA, 1 DP++, 1 HDMI
   Multiple expansion: 2 PCIe x16, 2 PCIe x4, 1 M.2 E key, 1 M.2 M
- key, 4 SATA 3.0 4 DDR5 UDIMM up to 128GB
- Rich I/O: 2 Intel® 2.5GbE, 4 COM, 6 USB 3.2 Gen2, 2 USB 3.2 Gen1 6 USB 2 0



#### ASL9A2 | COMe Mini

ASL9A2 combines Intel® Atom® performance with dual display, high-speed memory, and scalable expansion in a compact form

- Intel<sup>®</sup> Atom<sup>®</sup> 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: 1 Intel<sup>®</sup> 2.5GbE, 2 SATA 3.0, 2 USB 3.1, 8 USB 2.0

#### ASL600 | SMARC

- SMARC 2.2 module with Intel® Atom x7000RE, up to 16GB LPDDR5, triple display, rich I/O, and PCIe Gen3 expansion for low-power edge application
- Intel<sup>®</sup> Atom x7000RE series processors (Code Name: Amston Lake/Twin Lake)
- Onboard LPDDR5 4800MHz up to 16GB
- Triple Displays: 1 LVDS/eDP, 1 HDMI, 1 DDI
   Multiple Expansion: Up to 4 PCIe x1 (Gen3)
- Rich I/O: 2 2.5GbE, 2 USB 3.2, 4 USB 2.0, 1 SATA 3.0

#### ASL051 | 2.5" SBC

- Featuring Intel<sup>®</sup> Atom x7000RE series (Amston Lake/Twin Lake), ASL051 delivers efficient computing for space strained and I/O-rich environments
- Intel® Atom x7000RE series processors (Code Name : Amston Lake/Twin Lake)
- •1 DDR5 4800MHz SODIMM
- Dual Displays: HDMI + LVDS/eDP (Opt.) Multiple Expansion: 1 M.2 E Key, 2 M.2 B Key
- Rich I/O: 2 Intel® 2.5GbE, 2 COM, 2 USB 3.2, 2 USB 2.0

#### MTH556 | 3.5" SBC

- Designed for Edge AI inference, MTH556 combines Intel® Core™ Ultra, triple display, and flexible expansion
- Intel<sup>®</sup> Core™ Ultra Processor Series 1/2
- · 2 DDR5-5600 SODIMM up to 96GB Triple Independent Displays: 1 HDMI, 1 LVDS, 1 USB-C DP
- Alt. mode
- Multiple Expansion: 1 M.2 M Key, 1 M.2 B Key, 1 M.2 E Key
  Rich I/O: 2 2.5GbE, 4 COM, 3 USB 3.2, 1 USB-C





MTH966 | COMe Compact COMe Type 6 module with Intel® Core™ Ultra, up to 64GB

LPDDR5, multi-display support, extensive PCIe expansion, and rich I/O for embedded solutions

- Intel<sup>®</sup> Core<sup>™</sup> Ultra Processor (Series 1/2)
- Dual Channel LPDDR5 7467MHz memory down up to 64GB
   Multiple Displays: 1 VGA + 1 LVDS/eDP + 3 DDI • 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, 3 USB 3.2, 8 USB 2.0, 2 SATA 3.0



IRN556 | 3.5" SBC

QCS051 | 2.5" SBC

Qualcomm QCS6490 high-level platform

 Target on AMR, box PC application Thin client concept and ruggedize

Designed for Edge IoT applications, featuring Intel\* Atom x7000RE for low-power, high-efficiency edge computing Intel® Atom x7000RE series processors (Code Name : Amston

- Lake/Twin Lake)
- 1 DDR5 4800MHz SODIMM
- Dual Displays: HDMI + LVDS
- Multiple Expansion: 1 M.2 E Key, 1 M.2 B Key, 1 M.2 M Key
  Rich I/O: 2 Intel<sup>®</sup> GbE, 4 COM, 4 USB 3.2, 2 USB 2.0







- ECC memory and advanced remote management 5th/4th Gen Intel<sup>®</sup> Xeon<sup>®</sup> Scalable Family · 16 DDR5 ECC-RDIMM up to 1024GB IPMI OOB Remote Management • Multiple Expansion: 4 PCle x16 (Gen 5), 2 PCle x8 (Gen5), 1 M.2 M key 2280 • Rich I/O: 4 Intel® GbE, 1 Dedicated IPMI LAN, 2 COM, 4 SATA 3.0,
- 6 USB 3 2 Gen1 3 USB 2 0









- Combines thin-client efficiency and rugged design, built on the Qualcomm<sup>\*</sup> QCS6490 platform











Coming Soon



## high-speed connectivity

# Quad Displays: 2 DP/HDMI + 1 USB Type C + 1 M2A Display

## Multiple Expansion: 1 PCIe x4, 1 M.2 M key, 1 M.2 B key, 1 M.2 E

and 4 USB 2.0 headers



MTU9A2 | COMe Mini

- MTU9A2 with Intel® Core™ Ultra U-Series, up to 16GB LPDDR5, dual displays, PCIe expansion, and rich I/O in a compact COMe Type 10 Mini form factor

## Intel<sup>®</sup> Core<sup>™</sup> Ultra Processor (Series 1), U-series only Single Channel LPDDR5 7467MHz up to 16GB



- Rich I/O: 1 Intel 2 5GbE 2 USB 3 2 8 USB 2 0 2 SATA 3 0