DX-1200 – 13/12th Gen. Intel® Core Series High Performance and Compact Rugged Embedded Computer

The DX-1200 is a fanless embedded computer that packs extreme performance into a rugged, compact chassis, making it the ideal choice for smart manufacturing, machine vision, and edge AI applications. 13/12th gen Intel® Core™ (Raptor Lake-S / Alder Lake-S) processor (TDP up to 65W) and DDR5 4800 MHz memory provide high-speed computing performance, while additional functions, including rich native I/O and modular expansion design, meet the requirements for a wide range of applications.

The DX-1200 supports 13/12th gen Intel® Core™ i9/i7/i5/i3 (Raptor Lake-S/Alder Lake-S) processors based on the Intel 7 process, with up to 24 cores (8P + 16E) and 32 threads, delivering more than 1.35x the speed of Comet Lake-S platform. The Intel® Xe architecture of the UHD 770 graphics chip boosts GPU image classification inference performance to 2.8× the speed of Comet Lake-S, providing the processing performance needed for AI and edge computing.

Two DDR5 SO-DIMM slots support up to 64GB of 4800MHz memory and include ECC (Error Correction Code) technology, giving the extra stability and reliability needed for industrial automation applications.

To cater to the widest range of industrial applications, the DX-1200 provides one M.2 Key E slot and two Mini PCIe slots for the addition of WiFi, GNSS, 4G, and Bluetooth. The Mini PCIe slots also support I/O expansion cards, frame grabber cards, and more, to meet different application requirements.

To improve the transfer rate of videos or large files, the DX-1200 supports up to four high-speed 10Gbps LAN ports. And for application environments that require multiple network connections, the DX-1200 supports up to 8× PoE, providing data and power through the same cable to reduce the difficulty of wiring.

The DX-1200 is built tough, reflected in its industrial-grade protection design and industry certifications in different fields. In addition to features such as wide temperature (-40 - 70°C), wide voltage input (9 - 48 VDC), overvoltage, overcurrent, and ESD protection, it also complies with the US military shock vibration standard MIL-STD-810G. Product safety and reliability are further ensured with internationally recognized UL 62368-1 safety certification. For more secure railway computing, it also passes the EMC EN 50121-3-2 standard in EN 50155 and the EN 45545-2 fire protection standard.

SPECIFICATIONS

CPU	Intel® 12th and 13th Generation processors up to 65W TDP
CPU Socket	LGA1700

Memory Type	262-pin DDR5 4800MHz SO-DIMM (un-buffered, ECC and non-ECC Supported)
Memory Slots	2
Maximum Memory Supported	64GB
Chipset	Intel® R680E
Integrated Graphics	Integrated Intel® UHD Graphics 770: Core™ i9/i7/i5 ; Integrated Intel® UHD Graphics 730: Core™ i3 ; Integrated Intel® UHD Graphics 710: Pentium®/ Celeron®
Watchdog Timer	Software Programmable Supports 256 Levels System Reset
Video	1 x DVI-I (VGA: 1920 x 1080 @ 60 Hz; DVI-D: 1920 x 1200 @ 60 Hz), 1 x DisplayPort (4096 x 2304 @ 60Hz), 1 x HDMI (3840 x 2160 @ 30Hz)
LAN Ports	1 x Intel® I210 GbE LAN, 1 x Intel® I219 GbE LAN
Serial ATA (SATA)	2 x SATA III for 2.5" SATA SSD, 2 x mSATA Sockets (shared with Mini-PCIe)
RAID	Support RAID 0/1/5/10
M.2 Expansion Interface	1 x M.2 E-Key 2230, Support Intel CNVi Module
Extended Interface	2 x Full-Size Mini-PCIe, 1 x SIM, 2 x High Speed CMI Interface, 1 x Low Speed CMI Interface, 1 x CFM IGN Interface
COM	4 x RS-232/422/485 with Auto Flow Control (Supports 5V/12V) DB9
USB	4 x USB 3.2 Gen2x1 (10Gbps), Type A, 4 x USB 3.2 Gen1x1 (5Gbps), Type A
Rear I/O	4 x USB 3.2 Gen 1, 2 x LAN, 4 x COM, 1 x DVI-I, 1 x DP, 1 x Mic-In, 1 x Line-Out, 1 x DC-Input 3-pin, 1 x Remote Power Switch 2-pin, 1 x Remote Power LED 2-pin, 1 x External Fan 4-pin
Front I/O	4 x USB 3.2 Gen 2, 1 x HDMI, 1 x SIM
Audio	Realtek ALC888 HD Audio
Power Input	9 – 48VDC, 3-pin Terminal Block
Remote Power On/Off	1 x Remote Power On/Off, 2-pin Terminal Block
Power Consumption	35W CPU: 201.17W, 65W CPU: 274.80W

Inrush Current (Peak)	35W CPU: 4.151 A@24V, 65W CPU: 4.360 A@24V
Dimensions	242 x 173 x 75 mm
Mechanical Construction	Extruded Aluminum with Heavy Duty Metal
Mounting	Wall / DIN-RAIL / VESA / Side Mount
Operating Temperature	35W TDP Processor: -40°C to 70°C, 65W TDP Processor: -40°C to 50°C (With External Fan Kit)
Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
Relative Humidity	95% @ 70°C, non-condensing
Shock	MIL-STD-810G
Vibration	MIL-STD-810G
OS Software Supported	Windows 11, Windows 10, Ubuntu 22.04
Global P/N / SKU	1708610
Certifications	• CE, UKCA, FCC, ICES-003 Class A • EN 50155 (EN 50121-3-2 Only • E-Mark • CISPR 32 Conducted & Radiated: Class A • EN/BS EN 50121-3-2 Conducted & Radiated: Class A • EN/BS EN IEC 61000-3-2 Harmonic current emissions: Class A • EN/BS EN61000-3-3 Voltage fluctuations & flicker • FCC 47 CFR Part 15B, ICES-003 Conducted & Radiated: Class A • EN/IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV • EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 20 V/m • EN/IEC 61000-4-4 EFT: AC Power: 2 kV; Signal: 2 kV • EN/IEC 61000-4-5 Surges: AC Power: 2 kV • EN/IEC 61000-4-6 CS: 10V • EN/IEC 61000-4-8 PFMF: 50 Hz, 1A/m • EN/IEC 61000-4-11 Voltage Dips & Voltage Interruptions: 0.5 cycles at 50 Hz, UL, cUL, CB, IEC, EN 62368-1, EN 45545-2

Ordering Options

DX-1200-R10 (SKU# 1708610): 13/12th Gen. Intel® Core Series High Performance and Compact Rugged Embedded Computer Package Checklist: 1 x Power Terminal Block Connector 1 x CPU Heatsink Pack 1 x Remote Power On/Off Terminal Block Connector 1 x Screw Pack 1 x Fan Terminal Block Connector 1 x Wall Mounting Kit 1 x DVI-I to VGA Adaptor CMI Module List (https://globalamericaninc.com/wp-content/

uploads/2024/12/CMI-Module-List.pdf)