CAPTEC

cincoze™

DX-1300

Rugged Embedded Computer

Key Benefits

- **AI-Ready Performance** with Intel® Core™ Ultra 200S processors delivering up to 36 TOPS
- **High-Speed Memory** supporting up to 96 GB DDR5 at 6400 MHz
- **Flexible Expansion** with M.2 sockets and optional CMI/CFM modules
- **Versatile Connectivity** with dual 2.5GbE LAN, USB 3.2 and optional 10GbE and PoE expansion
- **Rugged Reliability** with 9–48 V DC input and MIL-STD-810H shock and vibration compliance



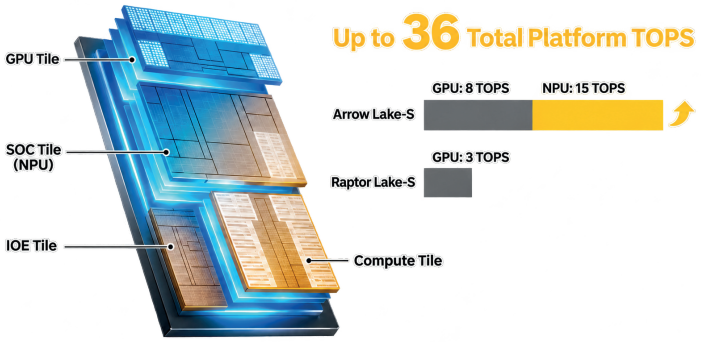
Overview

The DX-1300 is a compact, rugged embedded computer designed for demanding industrial edge computing applications. Powered by Intel® Core™ Ultra 200S processors, it delivers up to 36 TOPS of AI performance and supports up to 96 GB DDR5 memory. Flexible M.2, CMI and CFM expansion enables additional storage, networking and industrial I/O, while dual 2.5GbE LAN and high-speed USB connectivity support data-intensive applications. Its fanless construction, wide-range DC power input and industrial-grade protection make it suitable for manufacturing, in-vehicle and railway applications.

Certifications

EN 50121-3-2 · EN 45545 · MIL-STD-810H · CB · cULus LISTED





TRIED, TESTED & **TRUSTED**

Specifications

Model Name	DX-1300
System	
Processor	▪ Arrow Lake-S Ultra 200S Series CPU: - Intel® Core™ Ultra 9 285 24 Cores Up to 5.6 GHz, TDP 65W - Intel® Core™ Ultra 9 285T 24 Cores Up to 5.4 GHz, TDP 35W - Intel® Core™ Ultra 7 265 20 Cores Up to 5.3 GHz, TDP 65W - Intel® Core™ Ultra 7 265T 20 Cores Up to 5.3 GHz, TDP 35W - Intel® Core™ Ultra 5 245 14 Cores Up to 5.1 GHz, TDP 65W - Intel® Core™ Ultra 5 245T 14 Cores Up to 5.1 GHz, TDP 35W - Intel® Core™ Ultra 5 225 10 Cores Up to 4.9 GHz, TDP 65W - Intel® Core™ Ultra 5 225T 10 Cores Up to 4.9 GHz, TDP 35W
Chipset	▪ Intel W880 Chipset
Memory	▪ 2x DDR5 SODIMM/CSODIMM Socket, Support Un-buffered and ECC Type - Ultra 9 / 7: Supports Up to 6400MHz, 96GB - Ultra 5: Supports Up to 5600MHz, 96GB * CSODIMM is supported by project
BIOS	▪ AMI BIOS
Graphics	
Graphics Engine	▪ Integrated Intel® X^e LPG Graphics
Maximum Display Output	▪ Supports Three Independent Display
VGA	▪ 1x VGA Connector : 1920 x 1200@60Hz
DP	▪ 1x DP Connector : 4096 x 2304@60Hz - Support cable switch HDMI® 4096 x 2160@30Hz * Verified maximum resolution: 3840x2160 @60Hz
HDMI®	▪ 1x HDMI® Connector : 4096x2160@30Hz * Verified maximum resolution: 3840x2160 @30Hz
Audio	
Audio Codec	▪ Realtek® ALC888, High Definition Audio
Line-out	▪ 1x Line-out, Phone Jack 3.5mm
Mic-in	▪ 1x Mic-in, Phone Jack 3.5mm
I/O	
LAN	▪ 2x 2.5 GbE LAN, RJ45 - GbE1~2: Intel® I226
COM	▪ 4x RS-232/422/485 with Auto Flow Control (Supports 5V/12V), DB9
USB	▪ 4x 10Gbps USB 3.2 Gen2x1, Type A ▪ 4x 5Gbps USB 3.2 Gen1x1, Type A
Storage / Expansion	
2.5" SSD / HDD	▪ 2x 2.5" Front Accessible SATA HDD/SSD Bay (SATA 3.0)
M.2 Key B Socket	▪ 1x M.2 Key B Type 3042/3052 Socket (PCIe Gen 3x2 / USB3.2 Gen1x1 / SATA), Support 5G / GNSS / Storage / Add-on Card Expansion ▪ 1x M.2 Key B Type 2242 Socket (PCIe Gen 4x2 / SATA / USB 2.0), Support Storage / Add-on Card Expansion
M.2 Key E Socket	▪ 1x M.2 Key E Type 2230 Socket (PCIe Gen 3x2 / USB2.0), Support Wireless / Bluetooth / Storage / Intel CNVi Module Expansion
SIM	▪ 1x SIM Socket
CMI (Combined Multiple I/O) Socket	▪ 2x High Speed CMI Interface for optional CMI Module Expansion ▪ 1x Low Speed CMI Interface for optional CMI Module Expansion
CFM (Control Function Module) Socket	▪ 1x CFM-IGN Interface for optional CFM-IGN Module Expansion ▪ 1x CFM-TPM Interface for optional CFM-TPM Module Expansion

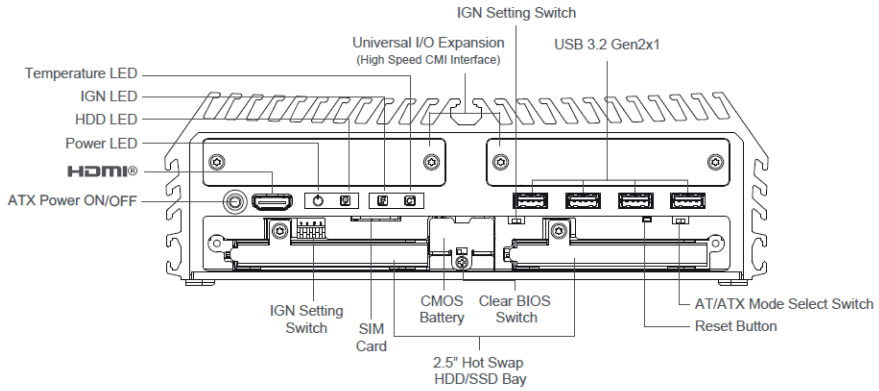
Other Function	
RAID	▪ Support RAID 0/1/5/10
External FAN Connector	▪ 1x External FAN Connector, 4-pin Terminal Block (Support Smart Fan by BIOS)
Power Ignition Sensing	▪ Support Power Ignition Sensing Function with Delay Time Management and Selectable 12V/24V (With Optional CFM Module)
TPM	▪ Support Discrete TPM2.0 (with Optional CFM Module)
Clear CMOS Switch	▪ 1x Clear CMOS Switch
Reset Button	▪ 1x Reset Button
Instant Reboot	▪ Support 0.2sec Instant Reboot Technology
Watchdog Timer	▪ Software Programmable Supports 256 Levels System Reset
Antenna Holes	▪ 3
Power	
Power Button	▪ 1x ATX Power On/Off Button
Power Mode Switch	▪ 1x AT/ATX Mode Switch
Power Input	▪ 9-48VDC, 3-pin Terminal Block
Remote Power On/Off	▪ 1x Remote Power On/Off, 2-pin Terminal Block
Remote Power LED	▪ 1x Remote Power LED, 2-pin Terminal Block
Max. Power Consumption	▪ 35W CPU: 162W ▪ 65W CPU: 272.88W - Test conducted with CPU, 1x RAM, and 1x storage - 100% load during burn-in test
Inrush Current (Peak)	▪ 35W CPU: 5.24 A@24V ▪ 65W CPU: 4.939 A@24V
Physical	
Dimension (W x D x H)	▪ 242.2 x 173 x 75mm
Weight Information	▪ 3.59 kg
Mechanical Construction	▪ Extruded Aluminum with Heavy Duty Metal
Mounting	▪ Wall / DIN-RAIL / VESA / Side Mount
Physical Design	▪ Fanless Design ▪ Cableless Design ▪ Jumper-less Design ▪ Unibody Design
Reliability & Protection	
Reverse Power Input Protection	▪ Yes
Over Voltage Protection	▪ Protection Range: 51~58V ▪ Protection Type: shut down operating voltage, re-power on at the preset level to recover
Over Current Protection	▪ 15A
CMOS Battery Backup	▪ SuperCap Integrated for CMOS Battery Maintenance-free Operation
MTBF	▪ 332,808 Hours - Database: Telcordia SR-332 Issue3, Method 1, Case 3
Operating System	
Windows	▪ Windows®11, Windows® 10
Linux	▪ Ubuntu 24.04

Environment	
Operating Temperature	▪ 35W TDP Processor: -20°C to 60°C (-4°F to 140°F) ▪ 65W TDP Processor: -20°C to 50°C (-4°F to 122°F) With External Fan Kit - With extended temperature peripherals; Ambient with air flow - According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14
Storage Temperature	▪ -40°C to 85°C (-40°F to 185°F)
Relative Humidity	▪ 95%@60°C (non-Condensing)
Shock	▪ MIL-STD-810H
Vibration	▪ MIL-STD-810H
EMC	▪ CE, UKCA, FCC, ICES-003 Class A
EMI	▪ 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
EMS	▪ 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 (with optional PPM module): AC Power: 2 kV; DC Power: 1 kV; Signal: 2 kV ▪ EN/IEC 61000-4-5 Surges: AC Power: 2 kV; Signal: 1 kV ▪ EN/IEC 61000-4-6 CS: 10V ▪ EN/IEC 61000-4-8 PF: 50 Hz, 30A/m ▪ EN/IEC 61000-4-11 Voltage Dips & Voltage Interruptions: 1 cycles at 60 Hz
Railway	▪ EMC: EN 50155: 2021 Clause 4.4.6, 13.4.9 - EN 50121-1 : 2017 - EN 50121-3-2: 2016 + A1: 2019
Fire Protection	▪ EN 45545-2
Safety	▪ UL, cUL, CB, IEC, EN 62368-1

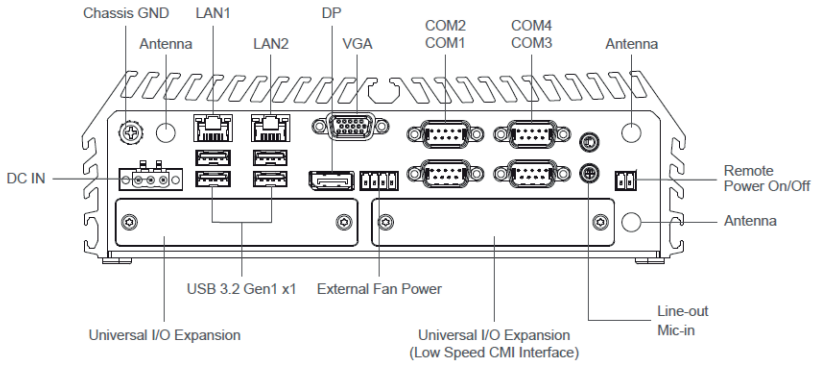
The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI Trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

External Layout

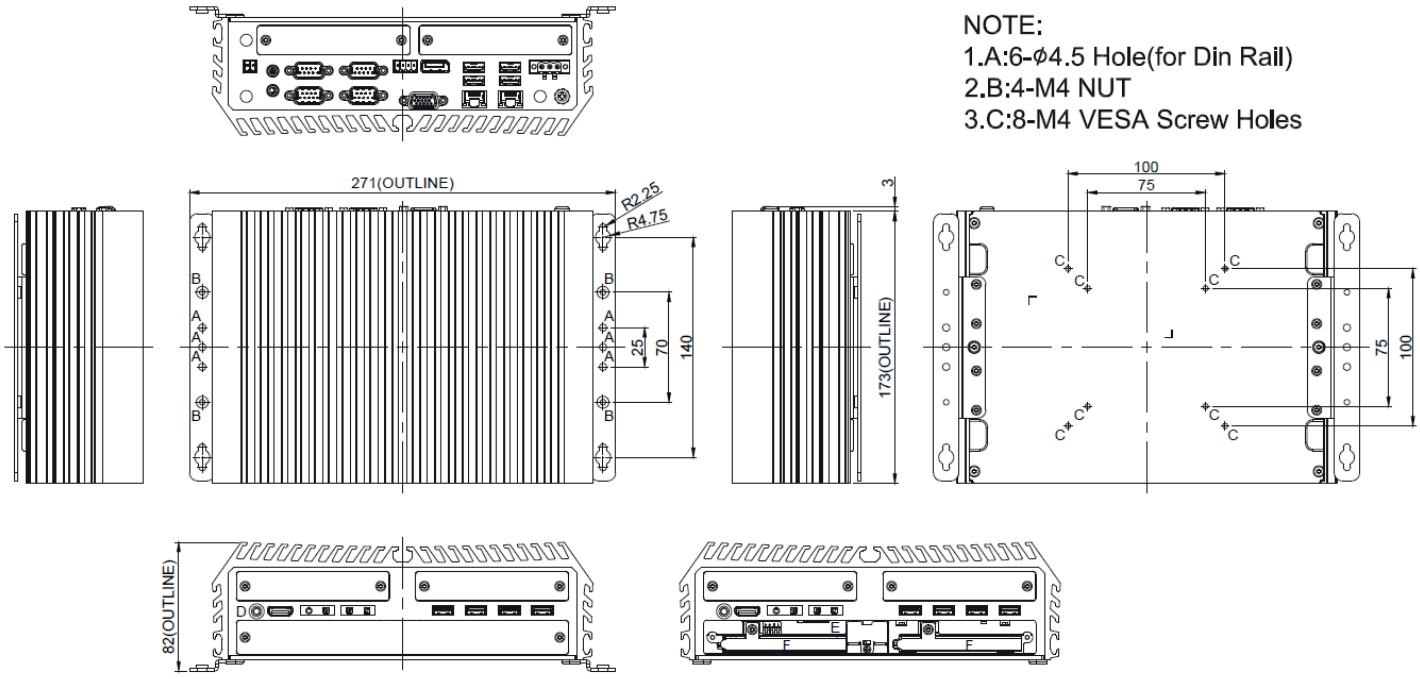
Front I/O



Rear I/O



Dimensions



Unit: mm

Ordering Information

Available Models

Model No.	Description
DX-1300-R11	Intel® Arrow Lake-S Core™ Ultra 200S Series Processors, High Performance and Compact Rugged Embedded Computer

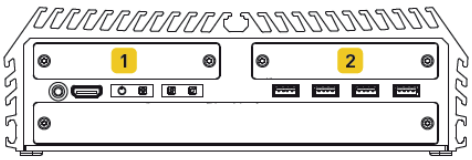
Package Checklist

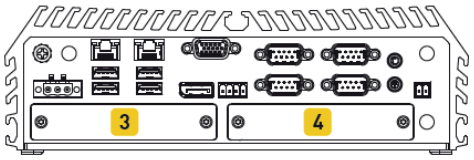
▪ DX-1300 Series Embedded System x1	▪ Power Terminal Block Connector x1
▪ CPU Heatsink Pack x1	▪ Remote Power On/Off Terminal Block Connector x 1
▪ Screw Pack x 1	▪ Fan Terminal Block Connector x 1
▪ Wall Mounting Kit x1	▪ M.2 Key B Type 3052 to 3042 Adapter Bracket x1

Optional Modules and Accessories

Model No.	Description
CFM-PoE01	CFM Module with PoE Control Function, Individual Port 25.5W
CFM-IGN01	CFM Module with Power Ignition Sensing Control Function, 12V/24V Selectable
CFM-TPM02-R10	CFM Module with Hardware TPM 2.0
CMI-LAN01-R12	CMI Module with 4x RJ45 Intel I210 1GbE LAN Ports
CMI-M12LAN01-R12	CMI Module with 4 x M12 Intel I210 1GbE LAN Ports
CMI-XM12LAN01-R10	CMI Module with M12 X-Coded Connector, 4x Intel I210 1GbE LAN Ports
CMI-2P5GLAN01-R10	CMI Module with 4x Intel 2.5GbE LAN, RJ45 Port
CMI-10GLAN05-R10	CMI Module with 2x Intel 10GbE LAN, RJ45 Port
CMI-10GXM12LAN01-R10	CMI Module with 2x Intel 10GbE LAN, M12 X-Coded Connector
CMI-CAN01-R10	CMI Module with 2x CAN FD Ports
CMI-DIO01	CMI Module with 16DIO (8in 8out)
CMI-COM01	CMI Module with 2x RS232/422/485 (Support 5V/12V)
MEC-CAN-2812i	M.2 2242/2260/2280 (B+M key) dual isolated CAN bus 2.0B board (-40°C~+85°C), 2x DB9 Connector, Cervoz
MEC-CAN-2814i	M.2 2242/2260/2280 (B+M key) quad isolated CAN bus 2.0B board (-40°C~+85°C), 4x DB9 Connector, Cervoz
MEC-COM-2012	M.2 2242/2260/2280 (B+M key) 2-port RS-232 serial board (-40°C~+85°C), 2x DB9 Connector, Cervoz
MEC-COM-2032i	M.2 2242/2260/2280 (B+M key) 2-port RS-232/422/485 isolated serial board (-40°C~+85°C), 2x DB9 Connector, Cervoz
MEC-LAN-2002i	M.2 2242/2260/2280 (B+M key) 2-port 10/100/1000 isolated Ethernet board(-40°C~+85°C), 2x RJ45 Connector, Cervoz
MEC-LAN-2002i-S	M.2 2242/2260/2280 (B+M key) 2-port 10/100/1000 isolated Ethernet board(0°C~+70°C), 2x RJ45 Connector, Cervoz
UB0930-R10	Universal Bracket with 4x M12 X-Coded Cutout
UB0932-R10	Universal Bracket with 3x Antenna Cutout
UB1303	Universal Bracket with 2x DB9 Cutout
UB1311	Universal Bracket with 2x RJ45 Cutout for MEC-LAN Expansion
UB1318	Universal Bracket with DIO Cutout
UB1710-R10	Universal Bracket with 4x M12 A-Coded Cutout
UB1712-R10	Universal Bracket with 4x RJ45 Cutout
UB1728-R10	Universal Bracket with 2x RJ45 Cutout for CMI-10GLAN Expansion
UB1737-R10	Universal Bracket with 2x M12 X-coded Cutout
UB1738-R10	Universal Bracket with 2x DB9 and 1× Switch Cutout for CMI-CAN Expansion
AC-BE01-R10	M.2 Key B Type 2242 to M.2 Key E Type 2230 Adapter Card
SIDE-DX	DX Series side mount kit
DIN01	DIN-RAIL Mount Kit, KMRH-K175
GST220A24-CIN	Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug and Tubes, Level VI
GST360A24-CIN	Adapter AC/DC 24V 15A 360W with 3pin Terminal Block Plug and TUBES, Level VI
RSD-200D-24	Railway Single Output DC-DC Converter 200W / DC 24V
FAN-EX101	External Fan with 4pin Terminal Block Plug and Mounting Bracket, Support smart fan
PPM-I360-01-R10	360W Power Protection Module for DV/DX Series

Optional Module Configuration





Model No.	Description	1	2	3	4
UB0932-R10 	Universal Bracket with 3x Antenna Cutout	V	V	V	V
CMI-LAN01-R12/UB1712-R10 	CMI Module with 4x Intel I210 1GbE LAN, RJ45 Port / Universal Bracket with 4x RJ45 Cutout	V	V	-	-
CMI-2P5GLAN01-R10/UB1712-R10 	CMI Module with 4x Intel 2.5GbE LAN, RJ45 Port / Universal Bracket with 4x RJ45 Cutout	V	V	-	-
CMI-10GLAN05-R10/UB1728-R10 	CMI Module with 2x Intel 10GbE LAN, RJ45 Port/ Universal Bracket with 2x RJ45 Cutout	V	V	-	-
CMI-M12LAN01-R12/UB1710-R10 	CMI Module with M12 Connector, 4x Intel 1GbE LAN / Universal Bracketwith 4x M12 A-Coded Cutout	V	V	-	-
CMI-XM12LAN01-R10/UB0930-R10 	CMI Module with M12 X-Coded Connector, 4x Intel I210 1GbE LAN Ports / Universal Bracket with 4x M12 X-Coded Cutout	V	V	-	-
CMI-10GXM12LAN01-R10/UB1737-R10 	CMI Module with 2x Intel 10GbE LAN, M12 X-Coded Connector / Universal Bracket with 2x M12 X-coded Cutout	V	V	-	-
CMI-CAN01-R10 /UB1738-R10 	CMI Module with 2x CAN FD Ports / Universal Bracket with 2x DB9 and 1x Switch Cutout for CMI-CAN Expansion	V	V	-	-
CMI-DIO01/UB1318 	CMI Module with 16DIO (8in 8out) / Universal Bracket with DIO Cutout	-	-	-	V

CMI-COM01/UB1303 	CMI Module with 2x RS232/422/485 (Support 5V/12V) / Universal Bracket with 2x DB9 Cutout	-	-	-	V
MEC-COM-2012/UB1303 	M.2 Module with 2x RS-232 Ports, 1x Standard DB9 Cable / Universal Bracket with 2x DB9 Cutout	-	-	V	-
MEC-COM-2032i/UB1303 	M.2 Module with 2x RS-232/422/485 Ports, 1x Standard DB9 Cable / 2x Universal Bracket with 2x DB9 Cutout	-	-	V	-
MEC-CAN-2812i/UB1303 	M.2 Module with 2x isolated CAN bus 2.0B Ports, 2x Standard DB9 Cable / Universal Bracket with 2x DB9 Cutout	-	-	V	V
MEC-CAN-2814i/2xUB1303 	M.2 Module with 4x isolated CAN bus 2.0B Ports, 4x Standard DB9 Cable / 2x Universal Bracket with 2x DB9 Cutout	-	-	V	
MEC-LAN-2002i(-S)/UB1311 	M.2 Module with 2x LAN Ports, 2x 30cm cable / Universal Bracket with 2x RJ45 Cutout for MEC-LAN Expansion	-	-	V	-

V : Compatible

cincoze™

CAPTEC

Delivering end-to-end, like no one else.
Bring us your challenge & experience the difference.

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