

# DS-1201

9/8th Generation Intel® Core™ Series Processors, High Performance, Expandable and Modular Rugged Embedded Computer with 1x PCI/PCIe Expansion Slot



## Overview

[CONTACT](#)

DS-1201 is a high performance fanless embedded computer, powered by 9/8th Generation Intel® Core™ processor (Coffee Lake) with up to 8 cores and 64GB DDR4 memory capacity for unprecedented performance to fulfill all kinds of high-end computing requirements. The system also incorporates rich I/O, such as 2x Intel® GbE ports, 2x USB 3.1 (Gen2), 4x USB 3.0, 1x DVI-I, 2x DisplayPort, and 1x M.2 Key M 2280 socket for ultra-fast data transfer speed. Based on Cincoze' innovative CMI & CFM Technology, it allows users to expand I/O and functionalities through ready-to-use modules, such as GbE/PoE ports, serial ports, optical isolated digital I/O and power ignition function. Furthermore, DS-1201 is available with one PCI(e) expansion slot to accommodate versatile add-on cards. Designed to operate under harsh conditions, DS-1201 has passed rigorous testing like EN50121-3-2 and EN60950-1 to fulfill industrial applications such as rolling stock. Besides, DS-1201 features with wide operating temperature (-40°C to 70°C), wide range DC power input (from 9V to 48V), high tolerance of shock/vibration (5G/50G), and industrial-grade protections (OVP, OCP, ESD Surge, ...etc).

## Key Features

- Supports 9/8th Generation Intel® Core™ / Pentium® / Celeron® Octa Cores 35W/65W LGA 1151 Processors
- 2x DDR4 SO-DIMM Socket, Supports Up to 2666MHz, 64GB
- Triple Independent Displays: 1x DVI-I and 2x DP (4K Resolution)
- 1x M.2 2280 M Key Socket, Auto-detection for PCIe4 NVMe SSD or SATA Gen3 SSD
- 2x Front Accessible SIM Card Slots for Signal Redundancy
- 1x PCI/PCIe Slot for Add-on Cards (Maximum Length: 235 mm)
- 4x CMI Slots for Modular I/O Expansions
- 1x CFM Slot for Power Ignition Sensing Function
- Wide Operating Temperature (-40°C to 70°C )
- EN50121-3-2 Certified / LVD EN62368-1

## Certifications



## High Performance

The new 9/8th Generation Intel® Core™ processor (Coffee Lake) offers for the first time up to 8 cores, 16 threads and 1.4 times computing performance improvement comparing to the previous generation (Kaby Lake).



## Fully Modular and Expandable

Featuring Mini-PCIe slots, CMI (Combined Multiple I/O), CFM (Control Function Module), and versatile ready-to-use modules, DS-1200 provides great flexibility to configure the system according to your need.

## Wide Temperature

DS-1200 is designed for continuous operation in wide temperature range from -40°C to 70°C. In addition, it also features with anti-shock/vibration and ESD/surge protection for tough industrial environments.



## Specifications

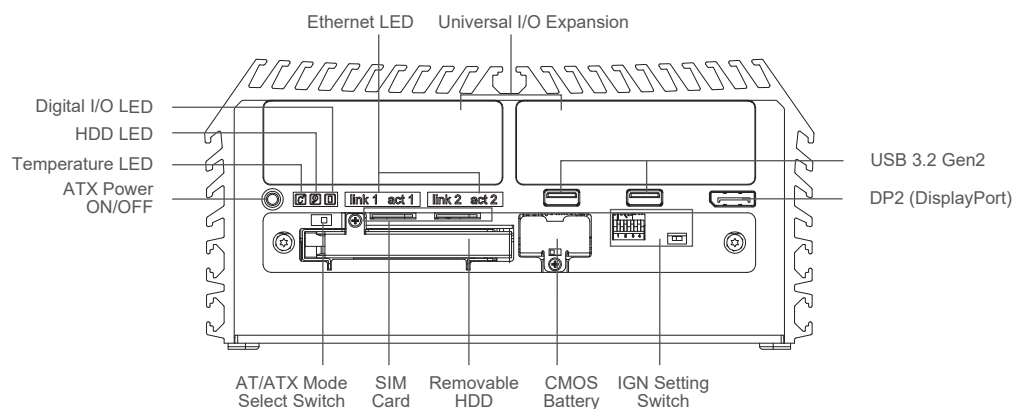
| Model Name                    | DS-1201                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>System</b>                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Processor                     | <ul style="list-style-type: none"> <li>9th Generation Intel® Coffee Lake-R S Series CPU: <ul style="list-style-type: none"> <li>Intel® Core™ i7-9700E 8 Cores Up to 4.4 GHz, TDP 65W</li> <li>Intel® Core™ i5-9500E 6 Cores Up to 4.2 GHz, TDP 65W</li> <li>Intel® Core™ i3-9100E 4 Cores Up to 3.7 GHz, TDP 65W</li> <li>Intel® Core™ i7-9700TE 8 Cores Up to 3.8 GHz, TDP 35W</li> <li>Intel® Core™ i5-9500TE 6 Cores Up to 3.6 GHz, TDP 35W</li> <li>Intel® Core™ i3-9100TE 4 Cores Up to 3.2 GHz, TDP 35W</li> </ul> </li> <li>8th Generation Intel® Coffee Lake S Series CPU: <ul style="list-style-type: none"> <li>Intel® Core™ i7-8700 6 Cores Up to 4.6 GHz - 12M Cache, TDP 65W</li> <li>Intel® Core™ i5-8500 6 Cores Up to 4.1 GHz - 9M Cache, TDP 65W</li> <li>Intel® Core™ i3-8100 4 Cores 3.6 GHz - 6M Cache, TDP 65W</li> <li>Intel® Core™ i7-8700T 6 Cores Up to 4.0 GHz - 12M Cache, TDP 35W</li> <li>Intel® Core™ i5-8500T 6 Cores Up to 3.5 GHz - 9M Cache, TDP 35W</li> <li>Intel® Core™ i3-8100T 4 Cores 3.1 GHz - 6M Cache, TDP 35W</li> <li>Intel® Pentium® G5400 2 Cores 3.7 GHz - 4M Cache, TDP 58W</li> <li>Intel® Pentium® G5400T 2 Cores 3.1 GHz - 4M Cache, TDP 35W</li> <li>Intel® Celeron® G4900 2 Cores 3.1 GHz - 2M Cache, TDP 54W</li> <li>Intel® Celeron® G4900T 2 Cores 2.9 GHz - 2M Cache, TDP 35W</li> </ul> </li> </ul> |
| Chipset                       | <ul style="list-style-type: none"> <li>Intel® Q370</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| BIOS                          | <ul style="list-style-type: none"> <li>AMI 32MB SPI BIOS</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Memory                        | <ul style="list-style-type: none"> <li>2x DDR4 2400/2666 MHz SO-DIMM Sockets</li> <li>Supports Un-buffered and Non-ECC Type Up to 64 GB</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Graphics</b>               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Graphics Engine               | <ul style="list-style-type: none"> <li>Integrated Intel® UHD Graphics 630: Core™ i7/i5/i3</li> <li>Integrated Intel® UHD Graphics 610: Pentium® /Celeron®</li> <li>Supports Triple Independent Display (1x DVI-I, 2x DisplayPort)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Audio</b>                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Audio Codec                   | <ul style="list-style-type: none"> <li>Realtek® ALC888</li> <li>High Definition Audio</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>I/O</b>                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Connector                     | <ul style="list-style-type: none"> <li>1x DVI-I (DVI-D: 1920 x 1200 @60Hz / VGA: 1920 x 1080 @60Hz)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| DisplayPort                   | <ul style="list-style-type: none"> <li>2x DisplayPort Connector (4096 x 2304 @ 60Hz, According to CPU Specifications)</li> <li>* Verified maximum resolution: 3840x2160.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| LAN                           | <ul style="list-style-type: none"> <li>2x GbE LAN (Supports WoL, Teaming, Jumbo Frame &amp; PXE), RJ45 <ul style="list-style-type: none"> <li>GbE1: Intel® I210</li> <li>GbE2: Intel® I219-LM</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| COM                           | <ul style="list-style-type: none"> <li>2x RS-232/422/485 with Auto Flow Control (Supports 5V/12V), DB9</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| USB                           | <ul style="list-style-type: none"> <li>2x USB 3.2 Gen2 (TypeA)</li> <li>4x USB 3.2 Gen1 (TypeA)</li> <li>2x USB 2.0 (Type A)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| mini-DIN                      | <ul style="list-style-type: none"> <li>1x PS/2, 6-pin mini-DIN Female Connector</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Mic-in                        | <ul style="list-style-type: none"> <li>1x Line-out &amp; 1x Mic-in, Phone Jack 3.5mm</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Power On/Off Switch Button    | <ul style="list-style-type: none"> <li>1x ATX Power On/Off Switch</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Mode Switch                   | <ul style="list-style-type: none"> <li>1x AT/ATX Mode Switch</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| CMOS Switch                   | <ul style="list-style-type: none"> <li>1x Clear CMOS Switch</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Remote Power On/Off Connector | <ul style="list-style-type: none"> <li>1x Remote Power On/Off Connector, 2-Pin Terminal Block</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

|                                         |                                                                                                                                                                                          |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Terminal Block                          | <ul style="list-style-type: none"> <li>1x Remote Reset Connector, 2-pin Terminal Block</li> <li>1x External Fan Connector, 4-Pin Terminal Block (Supports smart fan function)</li> </ul> |
| <b>Storage</b>                          |                                                                                                                                                                                          |
| SSD / HDD                               | <ul style="list-style-type: none"> <li>2x 2.5" SATA HDD/SSD bay (Gen3), 1x Internal, 1x Front Accessable Supports RAID 0/1</li> </ul>                                                    |
| mSATA                                   | <ul style="list-style-type: none"> <li>3x mSATA (shared by Mini-PCle socket) (Gen3), BIOS Selectable</li> </ul>                                                                          |
| M.2                                     | <ul style="list-style-type: none"> <li>1x M.2 Key M 2280 Socket, Supports PCIe x4 NVMe SSD or SATA SSD (Gen3)</li> </ul>                                                                 |
| <b>Expansion</b>                        |                                                                                                                                                                                          |
| Mini PCIe                               | <ul style="list-style-type: none"> <li>3x Full-size Mini-PCle Socket</li> </ul>                                                                                                          |
| SIM Socket                              | <ul style="list-style-type: none"> <li>2x SIM Socket</li> </ul>                                                                                                                          |
| CFM (Control Function Module) Interface | <ul style="list-style-type: none"> <li>1x CFM (Control Function Module) Interface</li> </ul>                                                                                             |
| CMI (Combined Multiple I/O) Interface   | <ul style="list-style-type: none"> <li>2x CMI (Combined Multiple I/O) High Speed Interface</li> <li>2x CMI (Combined Multiple I/O) Low Speed Interface</li> </ul>                        |
| Antenna                                 | <ul style="list-style-type: none"> <li>2x Antenna Hole</li> </ul>                                                                                                                        |
| PCI/PCle Expansion                      | <ul style="list-style-type: none"> <li>1x PCI/PCle Expansion slot (with Optional Riser Card)</li> <li>* Supports maximum dimensions of add-on card (H x L) : 111 x 235 mm</li> </ul>     |
| <b>Other Function</b>                   |                                                                                                                                                                                          |
| Instant Reboot                          | <ul style="list-style-type: none"> <li>Support Instant Reboot Technology (0.2 sec)</li> </ul>                                                                                            |
| CMOS                                    | <ul style="list-style-type: none"> <li>SuperCap Integrated for CMOS Battery Maintenance-free Operation</li> </ul>                                                                        |
| WatchDog Timer                          | <ul style="list-style-type: none"> <li>Software Programmable Supports 256 Levels System Reset</li> </ul>                                                                                 |
| <b>Power Requirement</b>                |                                                                                                                                                                                          |
| Power Type                              | <ul style="list-style-type: none"> <li>AT / ATX</li> </ul>                                                                                                                               |
| Power Supply Voltage                    | <ul style="list-style-type: none"> <li>9~48VDC</li> </ul>                                                                                                                                |
| Terminal                                | <ul style="list-style-type: none"> <li>1x 3-Pin Terminal Block</li> </ul>                                                                                                                |
| Power Adapter                           | <ul style="list-style-type: none"> <li>Power Adapter AC/DC 24V/5A 120W or 24V/9.2A 220W (Optional)</li> </ul>                                                                            |
| <b>Physical</b>                         |                                                                                                                                                                                          |
| Dimension ( W x D x H )                 | <ul style="list-style-type: none"> <li>227 x 261 x 108 mm</li> </ul>                                                                                                                     |
| Weight                                  | <ul style="list-style-type: none"> <li>4.92 kg</li> </ul>                                                                                                                                |
| Construction                            | <ul style="list-style-type: none"> <li>Extruded Aluminum with Heavy Duty Metal</li> </ul>                                                                                                |
| Mounting                                | <ul style="list-style-type: none"> <li>Wall Mounting</li> </ul>                                                                                                                          |
| Physical Design                         | <ul style="list-style-type: none"> <li>Unibody Design</li> <li>Fanless Design</li> <li>Jumper-less Design</li> </ul>                                                                     |
| <b>Protection</b>                       |                                                                                                                                                                                          |
| Reverse Power Input Protection          | <ul style="list-style-type: none"> <li>Yes</li> </ul>                                                                                                                                    |
| Over Voltage Protection                 | <ul style="list-style-type: none"> <li>Protection Range: 51~58V</li> <li>Protection Type: shut down operating voltage, re-power on at the preset level to recover</li> </ul>             |
| Over Current Protection                 | <ul style="list-style-type: none"> <li>15A</li> </ul>                                                                                                                                    |
| <b>Operating System</b>                 |                                                                                                                                                                                          |
| Windows                                 | <ul style="list-style-type: none"> <li>Windows® 10</li> </ul>                                                                                                                            |
| Linux                                   | <ul style="list-style-type: none"> <li>Supports by project</li> </ul>                                                                                                                    |

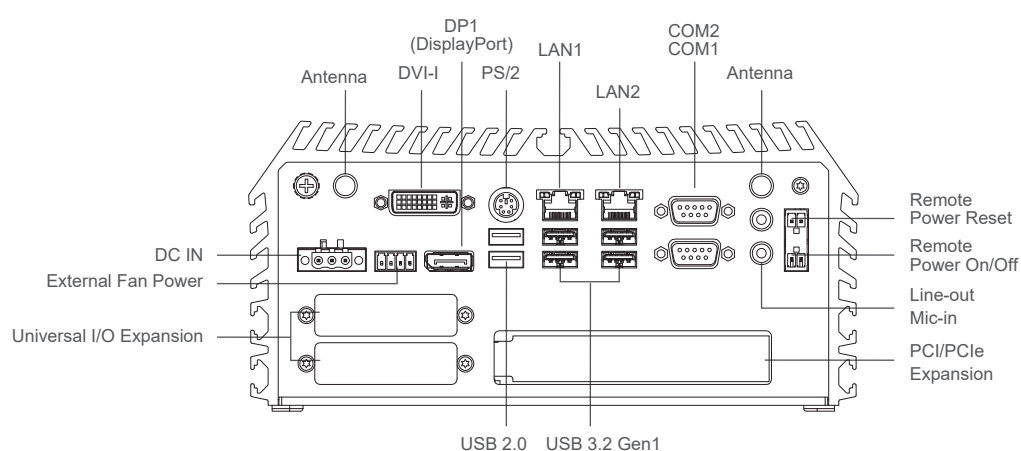
| Environment           |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Temperature | <ul style="list-style-type: none"> <li>• 35W TDP Processor: -40°C to 70°C</li> <li>• 51~65W TDP Processor: -40°C to 45°C</li> <li>* PassMark BurnInTest: 100% CPU, 2D/3D Graphics (without thermal throttling)</li> <li>* With extended temperature peripherals; Ambient with air flow</li> <li>* According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14</li> </ul>                                                                                         |
| Storage Temperature   | <ul style="list-style-type: none"> <li>• -40°C to 85°C</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                           |
| Relative Humidity     | <ul style="list-style-type: none"> <li>• 95%RH @ 70°C (non-Condensing)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                           |
| Shock                 | <ul style="list-style-type: none"> <li>• Operating, 50 Grms, Half-sine 11 ms Duration</li> <li>* w/ SSD, according to IEC60068-2-27</li> </ul>                                                                                                                                                                                                                                                                                                              |
| Vibration             | <ul style="list-style-type: none"> <li>• Operating, 5 Grms, 5-500 Hz, 3 Axes</li> <li>* w/ SSD, according to IEC60068-2-64</li> </ul>                                                                                                                                                                                                                                                                                                                       |
| MTBF                  | <ul style="list-style-type: none"> <li>• 396,565 Hours</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                           |
| EMC                   | <ul style="list-style-type: none"> <li>• CE, UKCA, FCC, ICES-003 Class A</li> <li>• EN 50155 (EN 50121-3-2 Only)</li> </ul>                                                                                                                                                                                                                                                                                                                                 |
| EMI                   | <ul style="list-style-type: none"> <li>• CISPR 32 Conducted &amp; Radiated: Class A</li> <li>• EN/BS EN 50121-3-2 Conducted &amp; Radiated: Class A</li> <li>• EN/BS EN IEC 61000-3-2 Harmonic current emissions: Class A</li> <li>• EN/BS EN61000-3-3 Voltage fluctuations &amp; flicker</li> <li>• FCC 47 CFR Part 15B, ICES-003 Conducted &amp; Radiated: Class A</li> </ul>                                                                             |
| EMS                   | <ul style="list-style-type: none"> <li>• EN/IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV</li> <li>• EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 20 V/m</li> <li>• EN/IEC 61000-4-4 EFT: AC Power: 2 kV; Signal: 2 kV</li> <li>• EN/IEC 61000-4-5 Surges: AC Power: 2 kV</li> <li>• EN/IEC 61000-4-6 CS: 10V</li> <li>• EN/IEC 61000-4-8 PFMF: 50 Hz, 1A/m</li> <li>• EN/IEC 61000-4-11 Voltage Dips &amp; Voltage Interruptions: 0.5 cycles at 50 Hz</li> </ul> |
| Safety                | <ul style="list-style-type: none"> <li>• Safety: LVD IEC/EN 62368-1</li> </ul>                                                                                                                                                                                                                                                                                                                                                                              |

## External Layout

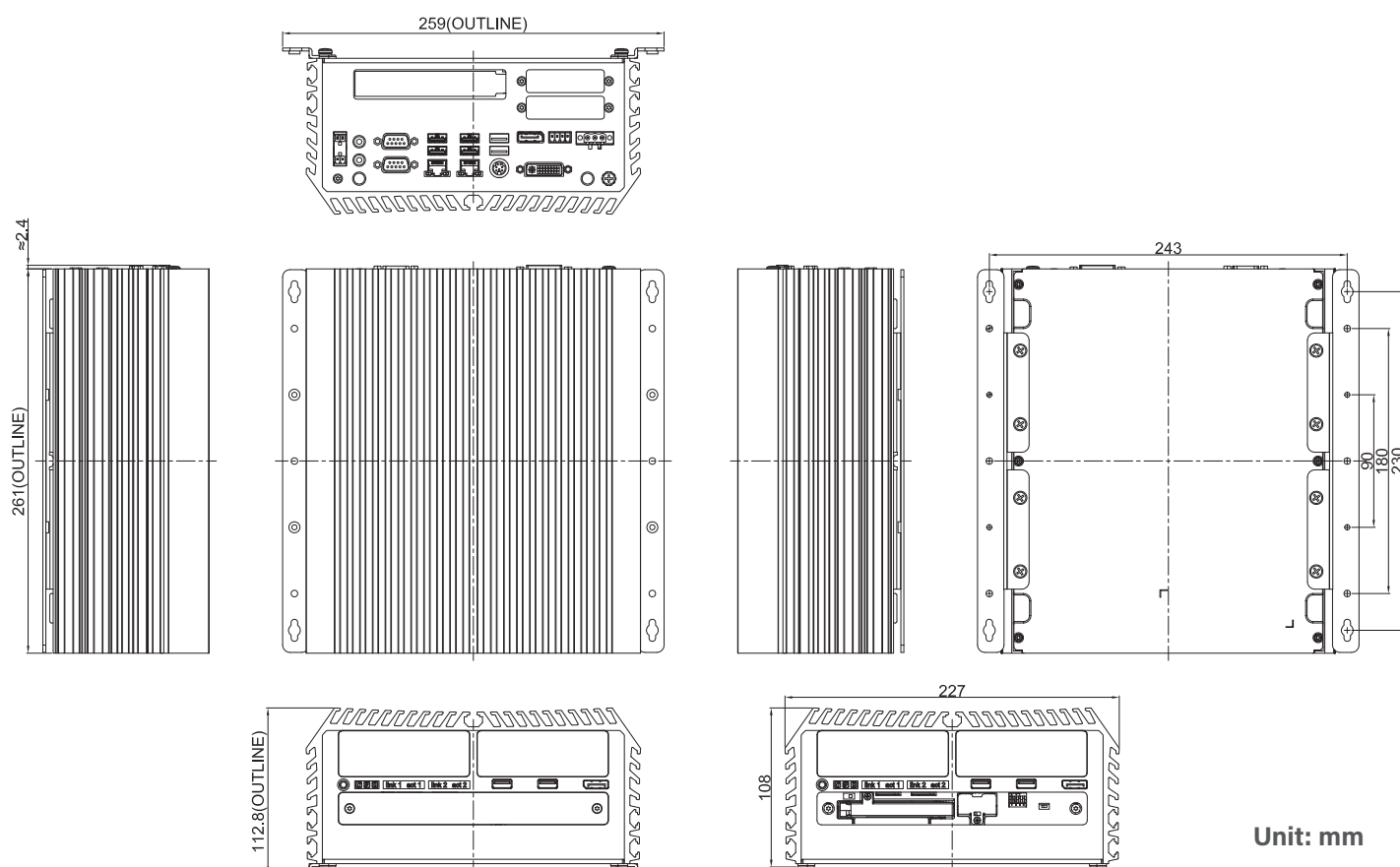
### Front I/O



### Rear I/O



## Dimensions



Unit: mm

## Ordering Information

### Available Models

| Model No.   | Description                                                                                                                                        |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| DS-1201-R10 | 9/8th Generation Intel® Core™ Series Processors, High Performance, Expandable and Modular Rugged Embedded Computer with 1x PCI/PCIe Expansion Slot |

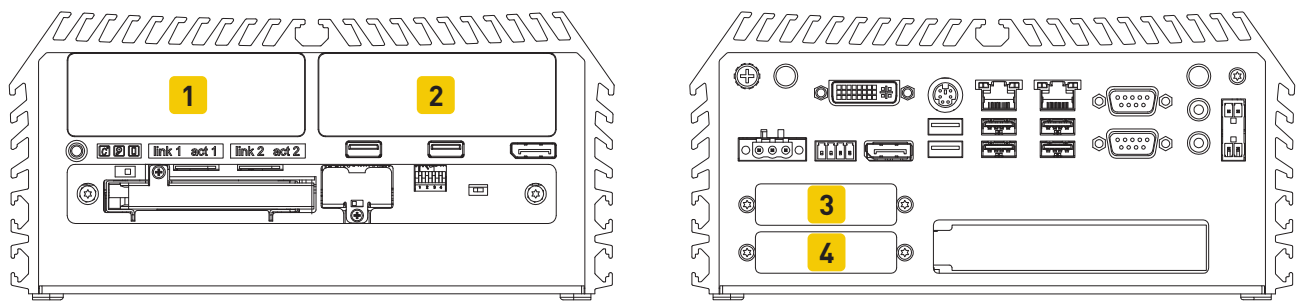
### Package Checklist

|                               |                                                    |
|-------------------------------|----------------------------------------------------|
| • DS-1201 Embedded System x 1 | • Power Terminal Block Connector x 1               |
| • Heat Sink Pack x 1          | • Remote Power On/Off Terminal Block Connector x 1 |
| • Screw Pack x 1              | • Remote Power Reset Terminal Block Connector x 1  |
| • Wall Mount Kit x1           | • Fan Terminal Block Connector x 1                 |
| • DVI-I to VGA Adaptor        |                                                    |

### Optional Modules and Accessories

| Model No.                    | Description                                                                                                       |
|------------------------------|-------------------------------------------------------------------------------------------------------------------|
| CFM-PoE03                    | CFM Module with PoE Function, Individual Port 25.5W                                                               |
| CFM-IGN101                   | CFM Module with Power Ignition Sensing Function, 12V/24V Selectable                                               |
| CMI-LAN01-R12/UB1012         | CMI Module with 4x Intel I210 GbE LAN, RJ45 Port / 1x Universal Bracket with 4x RJ45 Cutout                       |
| CMI-M12LAN01-R12/UB1010      | CMI Module with M12 Connector, 4x Intel GbE LAN / 1x Universal Bracket with 4x M12 Cutout                         |
| CMI-XM12LAN01-R10/UB1030-R10 | CMI Module with M12 X-Coded Connector, 4x Intel I210 GbE LAN Ports / Universal Bracket with 4x M12 X-Coded Cutout |
| CMI-DIO02/UB1018             | CMI Module with 16DIO (8in 8out) / 1x Universal Bracket with DIO Cutout                                           |
| CMI-COM02/UB1004             | CMI Module with 4x RS232/422/485 Ports (Support 5V/12V) / 1x Universal Bracket with 4x DB9 Cutout                 |
| CMI-ICOM01/UB1004            | CMI Module with 4x Isolated RS232 Ports / 1x Universal Bracket with 4x DB9 Cutout                                 |
| MEC-COM-M212-DB9/UB0303      | Mini-PCIe Module with 2x RS-232 Ports, 1x Standard DB9 Cable / 2x Universal Bracket each with 1x DB9 Cutout       |
| MEC-USB-M102-30/UB0314       | Mini-PCIe Module with 2x USB 3.2 Gen1 Ports, 1x30 cm cable, 1x Universal Bracket with 2x USB Cutout               |
| MEC-LAN-M102-30/UB0311       | Mini-PCIe Module with 2x LAN Ports, 2x 30cm cable / 1x Universal Bracket with 2x RJ45 Cutout                      |
| FAN-EX101                    | External Fan with 4pin Terminal Block Plug, Mounting Bracket, Support smart fan                                   |
| PAH01                        | Power Adapter Holder for GST120A24                                                                                |
| PAH02                        | Power Adapter Holder for GST220A24                                                                                |
| GST120A24-CIN                | Adapter AC/DC 24V 5A 120W, with 3pin Terminal Block Plug 5.0mm Pitch, with TUBES, level VI                        |
| GST220A24-CIN                | Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug 5.0mm Pitch, with TUBES, level VI                       |
| RC-E16-01                    | Riser Card with 1x PCIe16 Slot                                                                                    |
| RC-PI-01                     | Riser Card with 1x PCI Slot                                                                                       |

Optional Module Configuration



| Model No.                         | Description                                                                                                                                       | 1 | 2 | 3 | 4 |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|
| CMI-LAN01-R12/UB1012              | CMI Module with 4x Intel I210 GbE LAN, RJ45 Port / 1x Universal Bracket with 4x RJ45 Cutout                                                       | V | V | - | - |
| CMI-M12LAN01-R12/UB1010           | CMI Module with M12 Connector, 4x Intel GbE LAN / 1x Universal Bracket with 4x M12 Cutout                                                         | V | V | - | - |
| CMI-XM12LAN01-R10/UB1030-R10      | CMI Module with M12 X-Coded Connector, 4x Intel I210 GbE LAN Ports / Universal Bracket with 4x M12 X-Coded Cutout                                 | V | V | - | - |
| CMI-LAN01-R12/UB1012/CFM-PoE03    | CMI Module with 4x Intel I210 GbE LAN, RJ45 Port / 1x Universal Bracket with 4x RJ45 Cutout / CFM Module with PoE Function, Individual Port 25.5W | V | V | - | - |
| CMI-M12LAN01-R12/UB1010/CFM-PoE03 | CMI Module with M12 Connector, 4x Intel GbE LAN / 1x Universal Bracket with 4x M12 Cutout / CFM Module with PoE Function, Individual Port 25.5W   | V | V | - | - |
| CMI-DIO02/UB1018                  | CMI Module with 16DIO (8in 8out) / 1x Universal Bracket with DIO Cutout                                                                           | V | V | - | - |
| CMI-COM02/UB1004*                 | CMI Module with 4x RS232/422/485 Ports (Support 5V/12V) / 1x Universal Bracket with 4x DB9 Cutout                                                 | V | V | - | - |
| CMI-ICOM01/UB1004*                | CMI Module with 4x Isolated RS232 Ports / 1x Universal Bracket with 4x DB9 Cutout                                                                 | V | V | - | - |
| MEC-COM-M212-DB9/UB0303           | Mini-PCle Module with 2x RS-232 Ports, 1x Standard DB9 Cable / 2x Universal Bracket each with 1x DB9 Cutout                                       | - | - | V | V |
| MEC-USB-M102-30 /UB0314           | Mini-PCle Module with 2x USB 3.2 Gen1 Ports, 1x30 cm cable, 1x Universal Bracket with 2x USB Cutout                                               | - | - | V | V |
| MEC-LAN-M102-30/UB0311            | Mini-PCle Module with 2x LAN Ports, 2x 30cm cable / 1x Universal Bracket with 2x RJ45 Cutout                                                      | - | - | V | V |
| RC-E16-01                         | Riser Card with 1x PCIe16 Slot                                                                                                                    | - | - | - | - |
| RC-PI-01                          | Riser Card with 1x PCI Slot                                                                                                                       | - | - | - | - |

\*Maximum one CMI-COM02 or CMI-ICOM01 module can be installed in this system.

V : Compatible