CAPTEC

cincoze™

# DC-1200

## Compact Rugged Embedded Computer

## Key Benefits

- **Quad-Core Processing** with Intel® Pentium® N4200 processor operating at up to 2.50 GHz
- **Triple Display Support** with DVI-D, DisplayPort and an additional output via optional CMI module
- **Versatile Connectivity** with dual GbE LAN, four USB 3.2 Gen 1 ports and two RS-232/422/485 serial ports
- **Flexible Expansion** with dual Mini PCIe sockets, dual SIM slots and optional CMI/CFM modules for additional I/O, PoE+ and ignition sensing
- **Rugged Fanless Design** with -40°C to +70°C operating temperature and 9–48 V DC power input



## Overview

The DC-1200 is a compact, fanless embedded computer designed for industrial automation and in-vehicle applications. Powered by an Intel® Pentium® N4200 quad-core processor, it provides dual Gigabit Ethernet, USB 3.2 and serial connectivity alongside support for three independent displays. Dual Mini PCIe sockets, two SIM slots and modular CMI/CFM interfaces enable additional I/O, PoE+ and optional power ignition sensing. Its rugged aluminium chassis, wide operating temperature range and 9–48 V DC power input support deployment in demanding industrial environments.

## Certifications

Power Ignition Sensing | PoE | E13 | FC | CE | CMI TECHNOLOGY | CFM TECHNOLOGY






TRIED, TESTED & **TRUSTED**

# Specifications

| Model Name | DC-1200 |
|---|---|
| **System** | |
| Processor | ▪ Onboard Intel® Pentium® N4200 Quad Core Processor, up to 2.50 GHz |
| BIOS | ▪ AMI BIOS, 8MB SPI Flash ROM built on board |
| Memory | ▪ 1x DDR3L 1333/1600/1866 MHz SO-DIMM Socket, with up to 1600 MHz operation<br>▪ Supports Un-buffered and Non-ECC Type, Up to 8GB |
| **Graphics** | |
| Graphics Engine | ▪ Integrated Intel® HD Graphics 505<br>▪ Supports Triple Independent Display (DVI-D, DisplayPort and one output from optional CMI module) |
| **Audio** | |
| Audio Codec | ▪ Realtek® ALC888-GR |
| **I/O** | |
| Connector | ▪ 1x DVI-D (1920 x 1080 @60Hz) |
| DisplayPort | ▪ 1x DisplayPort Connector (4096 x 2160 @ 60Hz, According to CPU Specifications)<br>* Verified maximum resolution: 3840x2160. |
| LAN | ▪ 2x GbE LAN (Supports WoL, Teaming, Jumbo Frame & PXE), RJ45<br>- GbE1: Intel® I210<br>- GbE2: Intel® I210 |
| USB | ▪ 4x USB 3.2 Gen1x1 (5Gbps) |
| Flow Control | ▪ 2x RS-232/422/485 with Auto Flow Control (Supports 5V/12V), DB9 |
| Mic-in | ▪ 1x Line-out & 1x Mic-in, Phone Jack 3.5mm |
| Power On/Off Button | ▪ 1x ATX Power On/Off Button |
| Reset Button | ▪ 1x Reset Button |
| Mode Switch | ▪ 1x AT/ATX Mode Switch |
| CMOS Switch | ▪ 1x Clear CMOS Switch |
| Remote Power On/Off Connector | ▪ 1x Remote Power On/Off Connector, 2-pin Terminal Block |
| DIP Switch | ▪ 1x Ignition DIP Switch (12V/24V, need to work with CFM module) |
| **Storage** | |
| SSD / HDD | ▪ 1x mSATA Socket (SATA 3.0, Shared by Mini-PCIe Socket) |
| mSATA | ▪ 1x 2.5" HDD/SSD Drive Bay (SATA 3.0) |
| **Expansion** | |
| Mini PCIe | ▪ 2x Full-size Mini-PCIe Socket |
| SIM Socket | ▪ 2x SIM Card Socket for Signal Redundancy |
| CFM (Control Function Module) Interface | ▪ 2x Control Function Module (CFM) Interface |
| CMI (Combined Multiple I/O) Interface | ▪ 2x Combined Multiple I/O (CMI) Interface |
| Antenna Hole | ▪ 2x Antenna Hole |

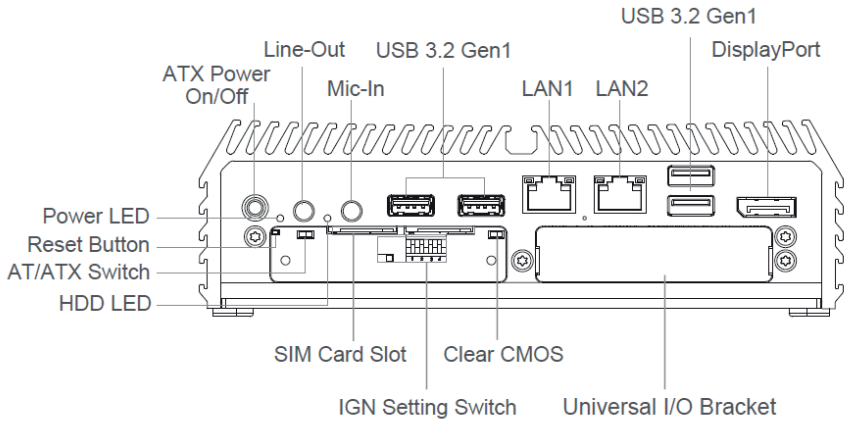
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|---|---|
| **Other Function** | |
| WatchDog Timer | ▪ Software Programmable Supports 256 Levels System Reset |
| CMOS Battery | ▪ SuperCap Integrated for CMOS Battery Maintenance-free Operation |
| Instant Reboot | ▪ Supports Instant Reboot Technology (0.2 sec) |
| **Power Requirement** | |
| Power Type | ▪ Supports AT/ATX Power Type |
| Power Input | ▪ Power Input Voltage 9~48VDC |
| Terminal Block | ▪ 1x 3-pin Terminal Block |
| Power Adapter | ▪ Power Adapter AC/DC 12V/5A 60W or 24V/5A 120W (Optional) |
| **Physical** | |
| Dimension ( W x D x H ) | ▪ 185 x 131 x 56.5 mm |
| Weight | ▪ 1.42 kg |
| Construction | ▪ Extruded Aluminum with Heavy Duty Metal |
| Mounting | ▪ Wall / VESA / Din Rail (Optional: Side + Din Rail Mounting Kit) |
| Physical Design | ▪ Unibody Chassis<br>▪ Fanless Design<br>▪ Jumper-less Design<br>▪ Cable-less Design |
| **Protection** | |
| Reverse Power Input Protection | ▪ Yes |
| Over Voltage Protection | ▪ Protection Range: 51~58V<br>▪ Protection Type: shut down operating voltage, re-power on at the preset level to recover |
| Over Current Protection | ▪ 15A |
| **Operating System** | |
| Windows | ▪ Windows® 10 |
| Linux | ▪ Supports by project |
| **Environment** | |
| Operating Temperature | ▪ -40°C to 70°C<br>* With extended temperature peripherals; Ambient with air flow<br>* According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14 |
| Storage Temperature | ▪ -40°C to 85°C |
| Relative Humidity | ▪ 95% RH @ 40°C (Non-condensing) |
| Shock<br><br>Vibration | ▪ Operating, 50 Grms, Half-sine 11 ms Duration<br>* w/ SSD, according to IEC60068-2-27<br><br>▪ Operating, 5 Grms, 5-500 Hz, 3 Axes<br>* w/ SSD, according to IEC60068-2-64 |
| MTBF | ▪ 479,119 Hours |
| EMC | ▪ CE, UKCA, FCC, ICES-003 Class A<br>▪ E-mark |
| EMI | ▪ CISPR 32 Conducted & Radiated: Class A<br>▪ EN/BS EN 50121-3-2 Conducted & Radiated: Class A<br>▪ EN/BS EN IEC 61000-3-2 Harmonic current emissions: Class A<br>▪ EN/BS EN61000-3-3 Voltage fluctuations & flicker<br>▪ FCC 47 CFR Part 15B, ICES-003 Conducted & Radiated: Class A |

| | |
|---|---|
| EMS | ▪ EN/IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV<br>▪ EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 3 V/m<br>▪ EN/IEC 61000-4-4 EFT (with optional PPM module): AC Power: 2 kV; DC Power: 1 kV; Signal: 1 kV<br>▪ EN/IEC 61000-4-5 Surges: AC Power: 2 kV; Signal: 1 kV<br>▪ EN/IEC 61000-4-6 CS: 3V<br>▪ EN/IEC 61000-4-8 PFMF: 50 Hz, 1A/m<br>▪ EN/IEC 61000-4-11 Voltage Dips & Voltage Interruptions: 0.5 cycles at 50 Hz |
| Safety | ▪ LVD IEC/EN 62368-1 |

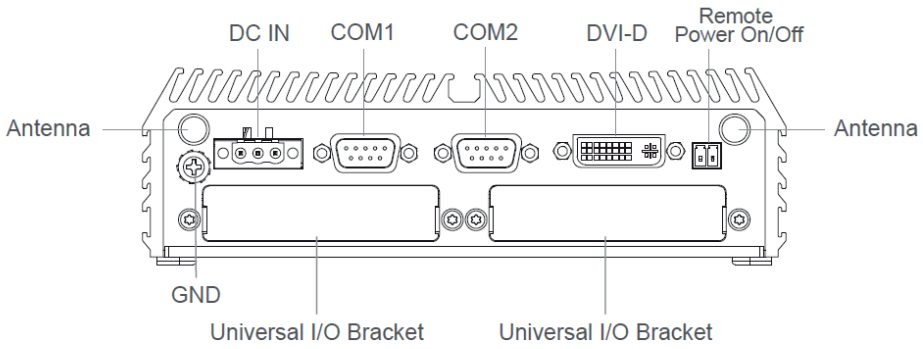
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## External Layout

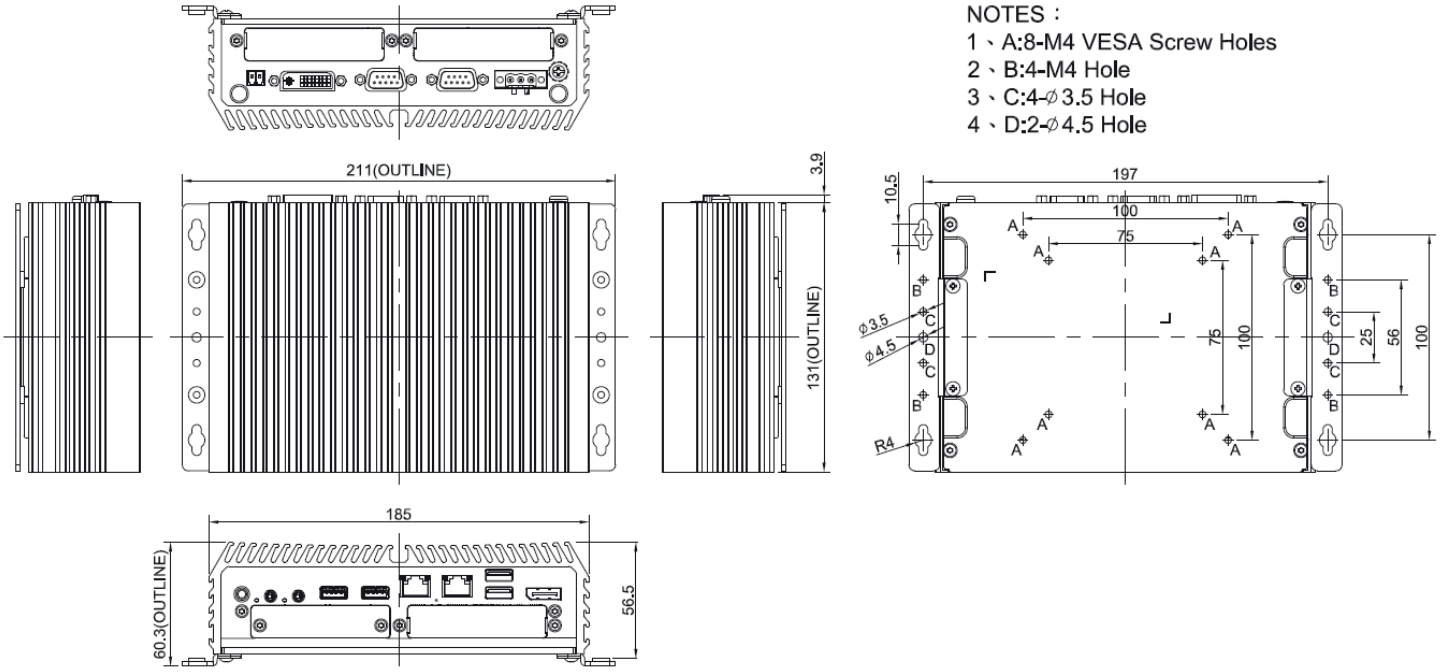
Front I/O




Rear I/O




## Dimensions




NOTES：
1、A:8-M4 VESA Screw Holes
2、B:4-M4 Hole
3、C:4-ϕ3.5 Hole
4、D:2-ϕ4.5 Hole

**Unit: mm**

# Ordering Information

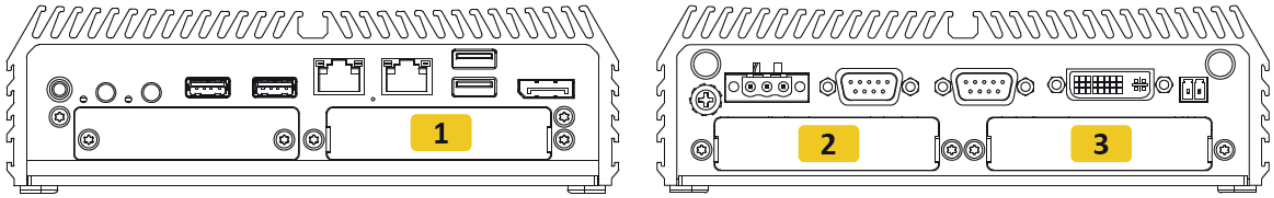
## Available Models

| Model No. | Description |
|---|---|
| DC-1200-N42-R10 | Intel® Pentium® Processor N4200 Compact Size Fanless Computer |

## Package Checklist

- DC-1200 Compact Size Fanless Embedded Computer x1
- Power Terminal Block Connector x1
- Thermal Pad (for CPU Thermal Block) x1
- Remote Power On/Off Terminal Block Connectorx1
- Screw Pack x1
- DIN Rail Mounting Kit x1
- Wall Mounting Kit x1

## Optional I/O Modules




| Model No. | Description | 1 | 2 | 3 |
|---|---|---|---|---|
| CMI-DVI01/UB1107  | CMI Module with 1x DVI-D Connector for DC-1200,1x Universal Bracket with 1x DVI-D Cutout for DC-1200 | - | - | V |
| CMI-VGA01/UB1116  | CMI Module with 1x VGA Port for DC-1200, 1x Universal Bracket with 1x VGA Cutout for DC-1200 | - | - | V |
| CMI-HD02/UB1108  | CMI Module with 1x HDMI® Port for DC-1200,1x Universal Bracket with 1x HDMI® Cutout for DC-1200 | - | - | V |
| CMI-COM03/UB1103  | CMI Module with 2x RS232/422/485 (Support 5V/12V) for DC-1200,1x Universal Bracket with 2x DB9 Cutout for DC-1200 | - | V | V |
| CMI-DIO03/UB1115  | CMI Module with 8x Optical Isolated DIO (4 in/4 out) for DC-1200,1x Universal Bracket with DIO Cutout for DC-1200 | - | V | V |

V : Compatible

## Optional Module Configuration

| Model No. | Description | 1 | 2 | 3 |
|---|---|---|---|---|
| MEC-COM-M212-TDB9/UB1103  | Mini-PCIe Module with 2x COM Ports,1x Universal Bracket with 2x DB9 Cutout for DC-1200 | V | - | - |
| MEC-LAN-M102-15/UB1111  | Mini-PCIe Module with 2x LAN Ports / 1x Universal Bracket with 2x RJ45 Cutout for MEC-LAN Expansion | V | - | - |
| MEC-LAN-M102-15/UB1129  | Mini-PCIe Module with 2x LAN Ports / 1x Universal Bracket with 2x RJ45 Cutout for MEC-LAN Expansion (DC Series Rear Bezel)<br>* Only compatible with half slim SSD and mSATA when MEC-LAN is installed at Rear Bezel. | - | - | V |

V : Compatible

### Available Models

| Model No. | Description |
|---|---|
| CFM-IGN02 | CFM Module with Power Ignition Sensing Control Function, Select 12V/24V |
| CFM-PoE02 | CFM Module with PoE Control Function, Individual Port 25.5W |

### Optional Accessories

| Model No. | Description |
|---|---|
| SIDE03 | Side Mount Kit for DC-1200 Series, with KMRH-K175 for DIN-Rail option |
| GST60A12-CIN1 | Adapter AC/DC 12V 5A 60W, GST60A12-CIN, wide temp(-30°C ~ +70°C), level VI |
| GST120A24-CIN | Adapter AC/DC 24V 5A 120W, GST120A24-CIN, wide temp(-30°C ~ +70°C), level VI |
| SL2-SL3 | US 2 heads power cord, US B type to IEC C13, SVT 18AWG/3C Black 1.8M SL -2+SL -3 |
| SL6-SL3 | EU 2 heads power cord, EU G type to IEC C13, H05VV-F 0.75mm2/3G Black 1.8M SL -6+SL -3 |
| QP026-SL3 | UK 2 heads power cord, UK I type to IEC C13 ,H05VV-F 0.75mm2/3G Black 1.8M QP026+SL -3 |
| PPM-I180-02-R10 | 180W Power Protection Module for DC-1200 Series |

cincoze™

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


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