

# DA-1000

Intel® Atom™ or Celeron® Processor Affordable Fanless Embedded Computer



## Overview

[CONTACT](#)

DA-1000 Series is an ultra-compact size fanless embedded computer powered by Intel® Atom™ or Celeron® Processors; it integrated HD graphics processor supporting dual display. This can bring economic advantages on budget and also fulfill the needs for industrial computing tasks. DA-1000 Series manages to pack a diverse array of I/O into its small form factor, with one DVI-I port, two RS-232/422/485 COM ports, dual Gbe LAN ports, four USB ports and one set of Mic-in and Line-out. DA-1000 Series supports Combined Multiple I/O (CMI) interface and modules which are especially designed for flexible I/O expandability; it allows users to extend various I/Os according to their needs. CMI modules are including COMs, DIO, DisplayPort, DVI, LPT/PS2 or VGA. The rugged construction, wide operating temperature and high tolerance for shock and vibration enables DA-1000 Series to deploy in a harsh environment and for critical applications, and it is totally maintenance-free.

### Key Features

- Onboard Intel® Atom™ or Celeron® Processors
- One DDR3L SO-DIMM Socket, Support Up to 8G
- Support Dual Display, Output from One DVI-I Port
- Dual Intel® I210 GbE LAN Ports, Support WoL, Teaming, PXE
- Ultra Compact Size (150x105x56.02mm)
- Support -25°C~70°C Extended Operating Temperature
- Support 9~48VDC Input, Support AT/ATX Power Mode
- CMI (Combined Multiple I/O) Interface for I/O Module Expandability
- Various Mounting Options (VESA, DIN-Rail, Side/Wall Mounting)

### Certifications



### Ultra Compact

- Palm-size volume in only 150 x 105 x 56.02 mm
- All in one system with comprehensive I/O Interfaces and flexible expansions



### Highly Modularized

- CMI interface and modules offers the possibilities to extend I/O in a small footprint construction
- MEC Modules and dedicated I/O brackets are available

### Rugged & Reliable

- Wide temperature range (-25°C~70°C) for operating in harsh environment
- Shock (50 Grms) and vibration (5 Grms) resistance
- OCP, OVP and ESD protections



Wide Temperature Operating



Jumper-Less



Tolerance for Shock & Vibration



Over Voltage Protection



Over Current Protection



ESD Protection

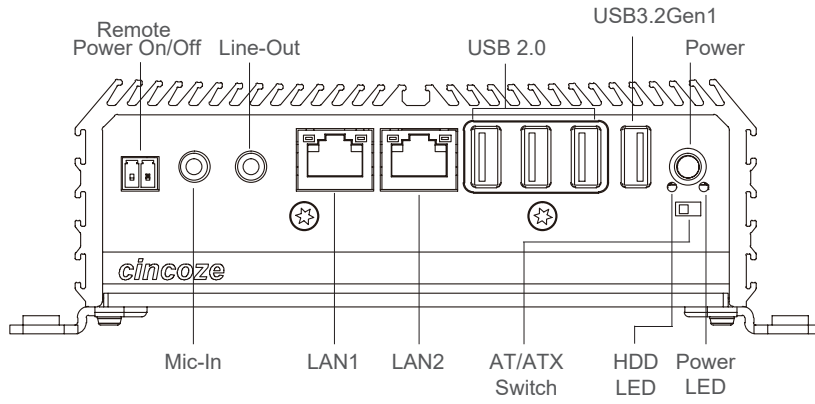
## Specifications

Model Name	DA-1000
<b>System</b>	
Processor	<ul style="list-style-type: none"> <li>• Intel® Atom™ Processor E3826 (1M Cache, Upto 1.46 GHz SoC, 7W TDP)</li> <li>• Intel® Atom™ Processor E3845 (2M Cache, Upto 1.91 GHz SoC, 10W TDP)</li> <li>• Intel® Celeron® Processor J1900 (2M Cache, Up to 2.42 GHz SoC, 10W TDP)</li> </ul>
BIOS	<ul style="list-style-type: none"> <li>• AMI 64 Mbit SPI BIOS</li> </ul>
Memory	<ul style="list-style-type: none"> <li>• 1x DDR3L 1066/1333 MHz SO-DIMM Sockets</li> <li>• Supports Un-buffered and Non-ECC Type Up to 8 GB</li> </ul>
<b>Graphics</b>	
Graphics Engine	<ul style="list-style-type: none"> <li>• Integrated Intel® HD Graphics</li> <li>• Two Independent Display</li> </ul>
<b>Audio</b>	
Audio Codec	<ul style="list-style-type: none"> <li>• Realtek® ALC888S, High Definition Audio</li> </ul>
<b>I/O</b>	
Connector	<ul style="list-style-type: none"> <li>• 1x DVI-I Connector, Up to 1920 x 1080</li> </ul>
LAN	<ul style="list-style-type: none"> <li>• 2x GbE LAN Ports (Support Wake On Lan, Teaming, Jumbo Frame, PXE), RJ45</li> <li>-GbE1: Intel® I210</li> <li>-GbE2: Intel® I210</li> </ul>
Flow Control	<ul style="list-style-type: none"> <li>• 2x RS-232/422/485 with Auto Flow Control, DB9</li> </ul>
USB	<ul style="list-style-type: none"> <li>• 1x USB 3.2 Gen1 &amp; 3x USB 2.0 (Type-A)</li> </ul>
Mic-in	<ul style="list-style-type: none"> <li>• 1x Mic-in and 1x Line-out, Phone Jack 3.5mm</li> </ul>
Power On/Off Switch Button	<ul style="list-style-type: none"> <li>• 1x ATX Power On/Off Switch Button</li> </ul>
Mode Switch	<ul style="list-style-type: none"> <li>• 1x AT/ATX Mode 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>
<b>Storage</b>	
SSD / HDD	<ul style="list-style-type: none"> <li>• 1x 2.5" SATA HDD Bay (Optional 1x Half-Slim SSD, SATA 2.0)</li> </ul>
mSATA	<ul style="list-style-type: none"> <li>• 1 (SATA 2.0, Shared by Mini-PCIe Socket)</li> </ul>
<b>Expansion</b>	
Mini PCIe	<ul style="list-style-type: none"> <li>• 2x Full-size Mini-PCIe (Supports Wireless &amp; I/O Expansion)</li> </ul>
SIM Socket	<ul style="list-style-type: none"> <li>• 1x SIM Socket</li> </ul>
CMI (Combined Multiple I/O) Interface	<ul style="list-style-type: none"> <li>• 1x CMI Interface for CMI Modules</li> </ul>
Universal I/O Bracket	<ul style="list-style-type: none"> <li>• 1x Universal I/O Bracket</li> </ul>
Antenna Hole	<ul style="list-style-type: none"> <li>• 2x Antenna Holes</li> </ul>
<b>Other Function</b>	
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>

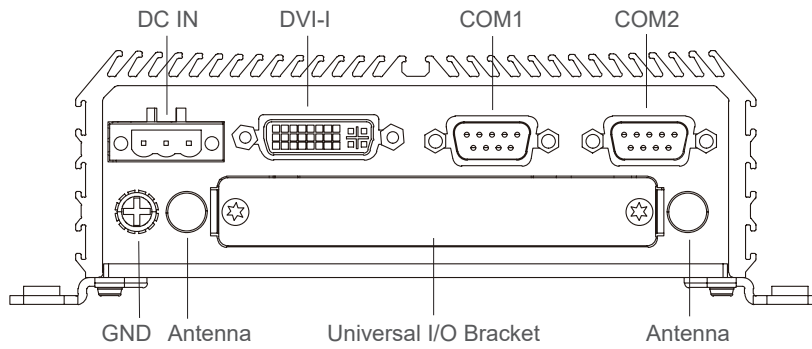
Connector	<ul style="list-style-type: none"> <li>• 1x 3-pin Terminal Block</li> <li>• 1x 2-pin Terminal Block Connector (For Remote Power On/Off)</li> </ul>
Power Adaptor	<ul style="list-style-type: none"> <li>• Optional AC/DC 12V/5A, 60W</li> </ul>
Power Consumption	<ul style="list-style-type: none"> <li>• Typical 8.3W, Max.15W</li> </ul>
<b>Physical</b>	
Dimension ( W x D x H )	<ul style="list-style-type: none"> <li>• 150 x 105 x 52.3 mm</li> </ul>
Weight	<ul style="list-style-type: none"> <li>• 0.86kg</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>• VESA / Wall Mounting (Optional DIN-Rail / Side 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>• 120V/ 20A</li> </ul>
<b>Operating System</b>	
Windows	<ul style="list-style-type: none"> <li>• Windows® 10</li> <li>• Windows® 8.1</li> <li>• Windows® 7</li> </ul>
<b>Environment</b>	
Operating Temperature	<ul style="list-style-type: none"> <li>• -25°C to 70°C (With extended temperature peripherals; Ambient with Air Flow by 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 @ 40°C (Non-condensing)</li> </ul>
Shock	<ul style="list-style-type: none"> <li>• 50 Grms (With SSD According to IEC 60068-2-27, Half Sine, 11ms Duration)</li> </ul>
Vibration	<ul style="list-style-type: none"> <li>• Random: 5 Grms (With SSD According to IEC 60068-2-64, 5~500Hz, 1 hr/axis)</li> </ul>
EMC	<ul style="list-style-type: none"> <li>• CE, UKCA, FCC, ICES-003 Class A</li> </ul>
EMI	<ul style="list-style-type: none"> <li>• CISPR 32 Conducted &amp; Radiated: Class A</li> <li>• EN/BS EN 55032 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: 4 kV; Air: 8 kV</li> <li>• EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 3 V/m</li> <li>• EN/IEC 61000-4-4 EFT: AC Power: 1 kV; DC Power: 0.5 kV; Signal: 0.5 kV</li> <li>• EN/IEC 61000-4-5 Surges: AC Power: 2 kV; Signal: 1 kV</li> <li>• EN/IEC 61000-4-6 CS: 3V</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>• LVD IEC/EN 62368-1</li> </ul>

**External Layout**

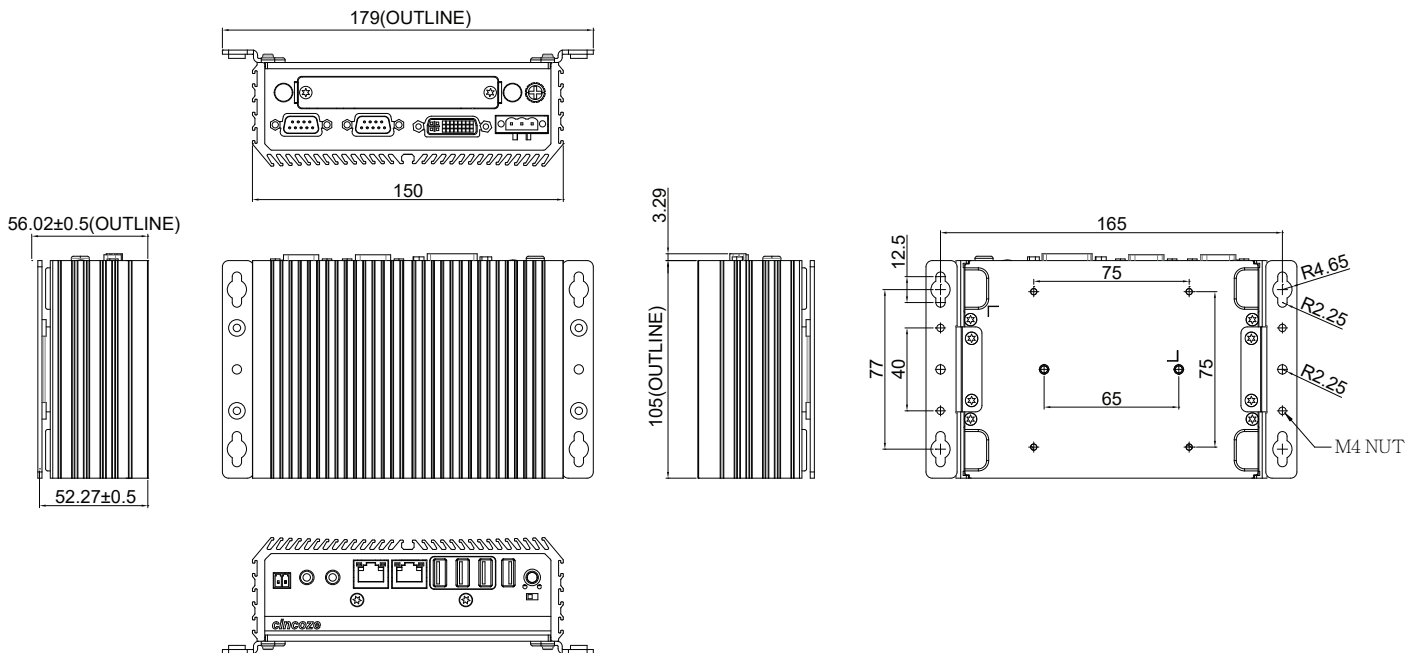
Front I/O



Rear I/O



**Dimensions**



Unit: mm

## Ordering Information

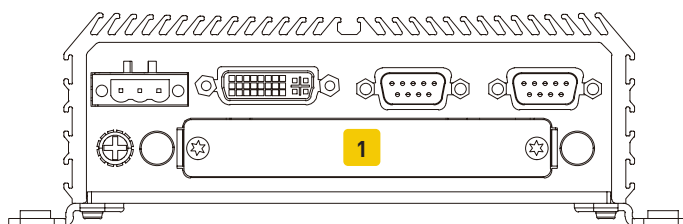
### Available Models

Model No.	Description
DA-1000-R10	Intel® Atom™ E3826 Affordable Fanless Embedded Computer
DA-1000-E45-R10	Intel® Atom™ E3845 Affordable Fanless Embedded Computer
DA-1000-J19-R10	Intel® Celeron® J1900 Affordable Fanless Embedded Computer

### Package Checklist

• DA-1000 Embedded System x 1	• DVI-I to VGA Adapter x 1
• Power Terminal Block Connector x 1	• Screw Pack x 1 (For HDD/Mini-PCle/Wall & VESA Mounting)
• Remote Power On/Off Terminal Block Connector x 1	• Wall Mount Kit x 1

### Optional I/O Modules



Model No.	Description	1
CMI-COM102/UB0403	CMI Module with 2x RS232/422/485, 1x Universal Bracket (96 x 15 mm)	V
CMI-DIO100/UB0415	CMI Module with 8x Optical Isolated DIO (4 in/4 out), 1x Universal Bracket (96 x 15 mm)	V
CMI-DP101/UB0406	CMI Module with 1x Display Port, 1x Universal Bracket (96 x 15 mm)	V
CMI-DVI101/UB0407	CMI Module with 1x DVI-D Connector, 1x Universal Bracket (96 x 15 mm)	V
CMI-LPPS102/UB0409	CMI Module with 1x LPT Port, 1x PS/2, 1x Universal Bracket (96 x 15 mm)	V
CMI-VGA101/UB0416	CMI Module with 1x VGA Port, 1x Universal Bracket (96 x 15 mm)	V
CMI-HD01/UB0408	CMI Module with 1x HDMI Port for DA Series, 1x Universal Bracket with HDMI Cutout for DA Series	V
MEC-LAN-M102-15/UB0411	Mini-PCle Module with 2x LAN Ports, 1x Universal Bracket (96 x 15 mm) * Only can be compatible with half slim SSD and mSATA when MEC-LAN is installed.	V

**Optional Accessories**

Model No.	Description
SIDE02	Side Mount Kit for DA Series, with KMRH-K175 for DIN-Rail option
DINRAIL-R10	Diamond series DIN-RAIL Mount Kit
HBK01	DA-1000 Half-Slim SSD Bracket with 6x Screws
GST60A12-CIN1	Adapter AC/DC 12V 5A 60W, with 3pin Terminal Block Plug 5.0mm Pitch with Tubes, Level VI