

DA-1000

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



Overview

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

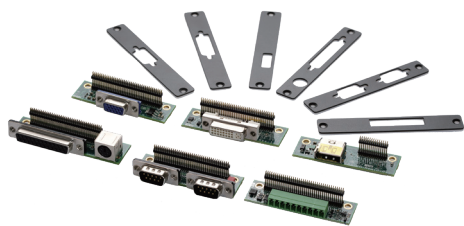
- Onboard Intel® Atom™ or Celeron® Processors
- One DDR3L SO-DIMM Socket, Support Up to 8G
- Support Dual Display, Output from One DVI-I Port
- Dual Intel® I210 GbE LAN Ports, Support WoL, Teaming, PXE
- Ultra Compact Size (150x105x56.02mm)
- Support -25°C~70°C Extended Operating Temperature
- Support 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

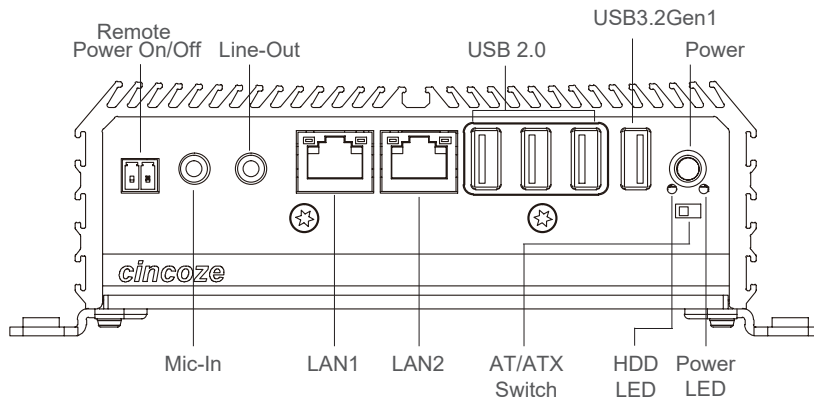
Specifications

Model Name	DA-1000
System	
Processor	<ul style="list-style-type: none"> • Intel® Atom™ Processor E3826 (1M Cache, Upto 1.46 GHz SoC, 7W TDP) • Intel® Atom™ Processor E3845 (2M Cache, Upto 1.91 GHz SoC, 10W TDP) • Intel® Celeron® Processor J1900 (2M Cache, Up to 2.42 GHz SoC, 10W TDP)
BIOS	<ul style="list-style-type: none"> • AMI 64 Mbit SPI BIOS
Memory	<ul style="list-style-type: none"> • 1x DDR3L 1066/1333 MHz SO-DIMM Sockets • Supports Un-buffered and Non-ECC Type Up to 8 GB
Graphics	
Graphics Engine	<ul style="list-style-type: none"> • Integrated Intel® HD Graphics • Two Independent Display
Audio	
Audio Codec	<ul style="list-style-type: none"> • Realtek® ALC888S, High Definition Audio
I/O	
Connector	<ul style="list-style-type: none"> • 1x DVI-I Connector, Up to 1920 x 1080
LAN	<ul style="list-style-type: none"> • 2x GbE LAN Ports (Support Wake On Lan, Teaming, Jumbo Frame, PXE), RJ45 -GbE1: Intel® I210 -GbE2: Intel® I210
Flow Control	<ul style="list-style-type: none"> • 2x RS-232/422/485 with Auto Flow Control, DB9
USB	<ul style="list-style-type: none"> • 1x USB 3.2 Gen1 & 3x USB 2.0 (Type-A)
Mic-in	<ul style="list-style-type: none"> • 1x Mic-in and 1x Line-out, Phone Jack 3.5mm
Power On/Off Switch Button	<ul style="list-style-type: none"> • 1x ATX Power On/Off Switch Button
Mode Switch	<ul style="list-style-type: none"> • 1x AT/ATX Mode Switch
Remote Power On/Off Connector	<ul style="list-style-type: none"> • 1x Remote Power On/Off Connector, 2-Pin Terminal Block
Storage	
SSD / HDD	<ul style="list-style-type: none"> • 1x 2.5" SATA HDD Bay (Optional 1x Half-Slim SSD, SATA 2.0)
mSATA	<ul style="list-style-type: none"> • 1 (SATA 2.0, Shared by Mini-PCIe Socket)
Expansion	
Mini PCIe	<ul style="list-style-type: none"> • 2x Full-size Mini-PCIe (Supports Wireless & I/O Expansion)
SIM Socket	<ul style="list-style-type: none"> • 1x SIM Socket
CMI (Combined Multiple I/O) Interface	<ul style="list-style-type: none"> • 1x CMI Interface for CMI Modules
Universal I/O Bracket	<ul style="list-style-type: none"> • 1x Universal I/O Bracket
Antenna Hole	<ul style="list-style-type: none"> • 2x Antenna Holes
Other Function	
WatchDog Timer	<ul style="list-style-type: none"> • Software Programmable Supports 256 Levels System Reset
Power Requirement	
Power Type	<ul style="list-style-type: none"> • AT / ATX
Power Supply Voltage	<ul style="list-style-type: none"> • 9~48VDC

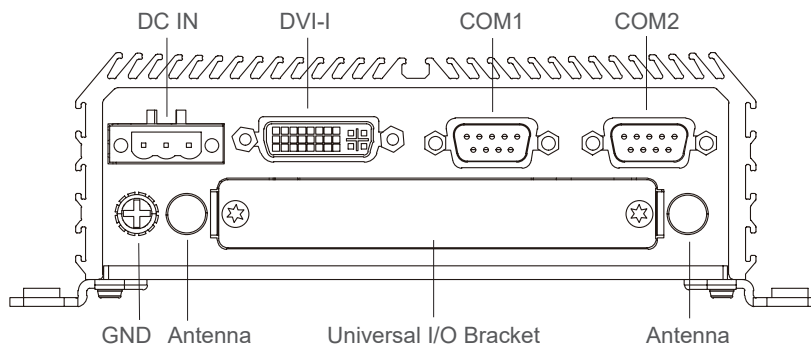
Connector	<ul style="list-style-type: none"> • 1x 3-pin Terminal Block • 1x 2-pin Terminal Block Connector (For Remote Power On/Off)
Power Adaptor	<ul style="list-style-type: none"> • Optional AC/DC 12V/5A, 60W
Power Consumption	<ul style="list-style-type: none"> • Typical 8.3W, Max.15W
Physical	
Dimension (W x D x H)	<ul style="list-style-type: none"> • 150 x 105 x 52.3 mm
Weight	<ul style="list-style-type: none"> • 0.86kg
Construction	<ul style="list-style-type: none"> • Extruded Aluminum with Heavy Duty Metal
Mounting	<ul style="list-style-type: none"> • VESA / Wall Mounting (Optional DIN-Rail / Side Mounting)
Physical Design	<ul style="list-style-type: none"> • Unibody Design • Fanless Design • Jumper-less Design
Protection	
Reverse Power Input Protection	<ul style="list-style-type: none"> • Yes
Over Voltage Protection	<ul style="list-style-type: none"> • Protection Range: 51~58V • Protection Type: shut down operating voltage, re-power on at the preset level to recover
Over Current Protection	<ul style="list-style-type: none"> • 120V/ 20A
Operating System	
Windows	<ul style="list-style-type: none"> • Windows® 10 • Windows® 8.1 • Windows® 7
Environment	
Operating Temperature	<ul style="list-style-type: none"> • -25°C to 70°C (With extended temperature peripherals; Ambient with Air Flow by IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
Storage Temperature	<ul style="list-style-type: none"> • -40°C to 85°C
Relative Humidity	<ul style="list-style-type: none"> • 95% RH @ 40°C (Non-condensing)
Shock	<ul style="list-style-type: none"> • 50 Grms (With SSD According to IEC 60068-2-27, Half Sine, 11ms Duration)
Vibration	<ul style="list-style-type: none"> • Random: 5 Grms (With SSD According to IEC 60068-2-64, 5~500Hz, 1 hr/axis)
EMC	<ul style="list-style-type: none"> • CE, UKCA, FCC, ICES-003 Class A
EMI	<ul style="list-style-type: none"> • CISPR 32 Conducted & Radiated: Class A • EN/BS EN 55032 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	<ul style="list-style-type: none"> • EN/IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV • EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 3 V/m • EN/IEC 61000-4-4 EFT: AC Power: 1 kV; DC Power: 0.5 kV; Signal: 0.5 kV • EN/IEC 61000-4-5 Surges: AC Power: 2 kV; Signal: 1 kV • EN/IEC 61000-4-6 CS: 3V • 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
Safety	<ul style="list-style-type: none"> • LVD IEC/EN 62368-1

External Layout

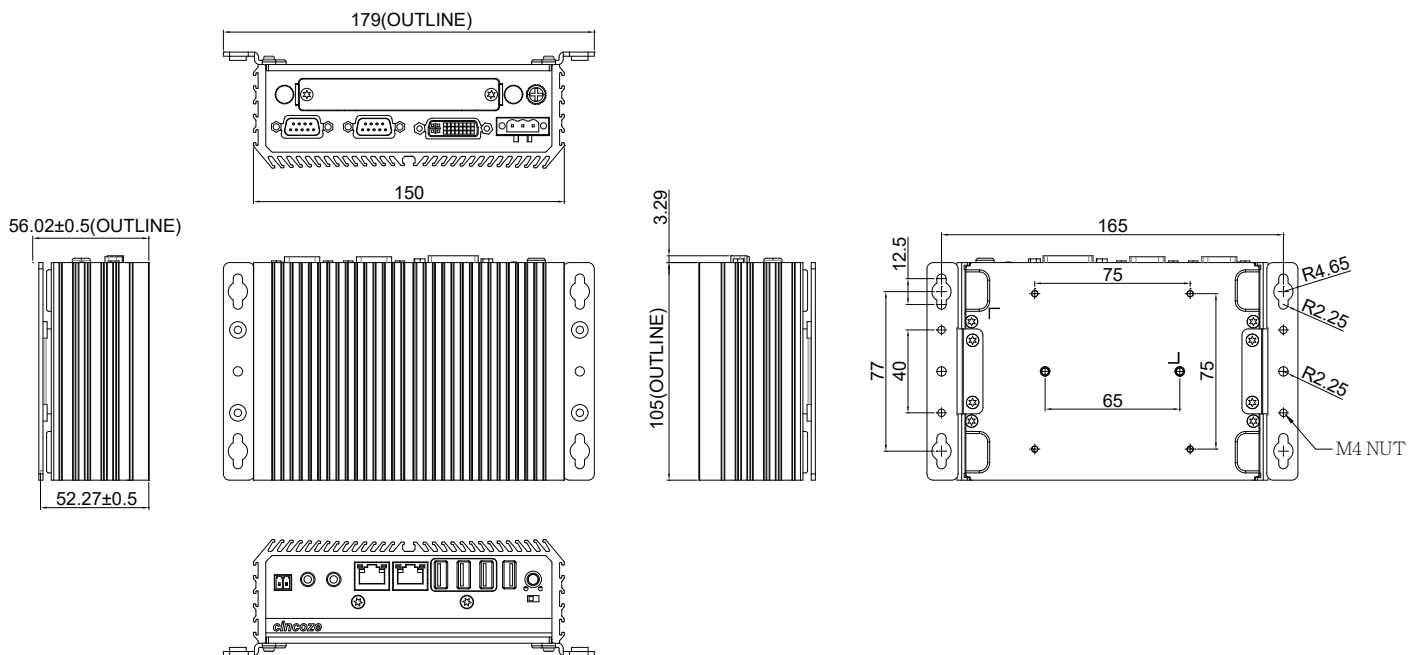
Front I/O



Rear I/O



Dimensions



Ordering Information

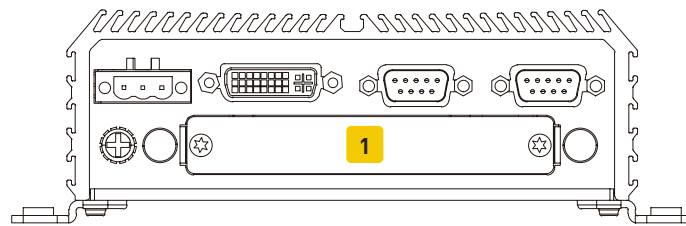
Available Models

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