

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

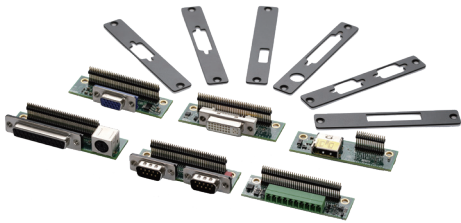
- Onboard Intel® Atom™ or Celeron® Processors
- One DDR3L SO-DIMM Socket, Support Up to 8G
- Support Dual Display, Output from One DVI-I Port
- Dual Intel® I210 GbE LAN Ports, Support WoL, Teaming, PXE
- Ultra Compact Size (150x105x56.02mm)
- Support -25°C~70°C Extended Operating Temperature
- Support 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
System	
Processor	- 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	AMI 64 Mbit SPI BIOS
Memory	1x DDR3L 1066/1333 MHz SO-DIMM Sockets - Supports Un-buffered and Non-ECC Type Up to 8 GB
Graphics	
Graphics Engine	- Integrated Intel® HD Graphics - Two Independent Display
Audio	
Audio Codec	Realtek® ALC888S, High Definition Audio
I/O	
Connector	1x DVI-I Connector, Up to 1920 x 1080
LAN	2x GbE LAN Ports (Support Wake On Lan, Teaming, Jumbo Frame, PXE), RJ45 -GbE1: Intel® I210 -GbE2: Intel® I210
Flow Control	2x RS-232/422/485 with Auto Flow Control, DB9
USB	1x USB 3.2 Gen1 & 3x USB 2.0 (Type-A)
Mic-in	1x Mic-in and 1x Line-out, Phone Jack 3.5mm
Power On/Off Switch Button	1x ATX Power On/Off Switch Button
Mode Switch	1x AT/ATX Mode Switch
Remote Power On/Off Connector	1x Remote Power On/Off Connector, 2-Pin Terminal Block
Storage	
SSD / HDD	1x 2.5" SATA HDD Bay (Optional 1x Half-Slim SSD, SATA 2.0)
mSATA	1 (SATA 2.0, Shared by Mini-PCle Socket)
Expansion	
Mini PCIe	2x Full-size Mini-PCle (Supports Wireless & I/O Expansion)
SIM Socket	1x SIM Socket
CMI (Combined Multiple I/O) Interface	1x CMI Interface for CMI Modules
Universal I/O Bracket	1x Universal I/O Bracket
Antenna Hole	2x Antenna Holes
Other Function	
WatchDog Timer	Software Programmable Supports 256 Levels System Reset
Power Requirement	
Power Type	AT / ATX
Power Supply Voltage	9~48VDC

Connector	1x 3-pin Terminal Block 1x 2-pin Terminal Block Connector (For Remote Power On/Off)
Power Adaptor	Optional AC/DC 12V/5A, 60W
Power Consumption	Typical 8.3W, Max.15W
Physical	
Dimension (W x D x H)	150 x 105 x 52.3 mm
Weight	0.86kg
Construction	Extruded Aluminum with Heavy Duty Metal
Mounting	VESA / Wall Mounting (Optional DIN-Rail / Side Mounting)
Physical Design	- Unibody Design - Fanless Design - Jumper-less Design
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	120V/ 20A
Operating System	
Windows	- Windows® 10 - Windows® 8.1 - Windows® 7
Environment	
Operating Temperature	-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	-40°C to 85°C
Relative Humidity	95% RH @ 40°C (Non-condensing)
Shock	50 Grms (With SSD According to IEC 60068-2-27, Half Sine, 11ms Duration)
Vibration	Random: 5 Grms (With SSD According to IEC 60068-2-64, 5~500Hz, 1 hr/axis)
EMC	CE, UKCA, FCC, ICES-003 Class A
EMI	- 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	- 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 PFME: 50 Hz, 1A/m - EN/IEC 61000-4-11 Voltage Dips & Voltage Interruptions: 0.5 cycles at 50 Hz
Safety	LVD IEC/EN 62368-1

Front I/O

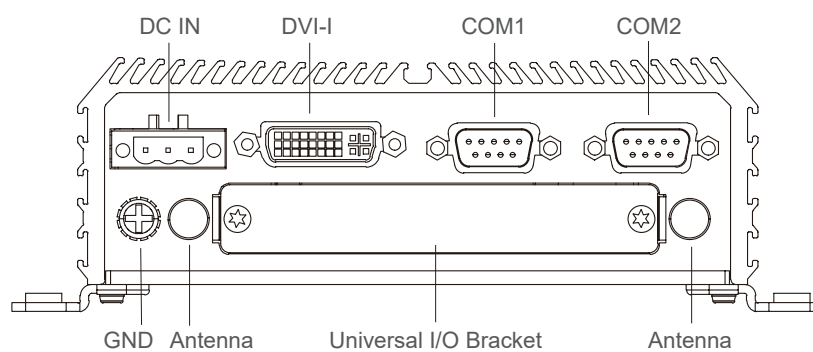
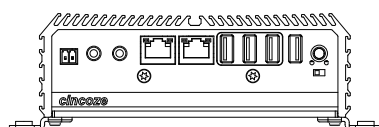
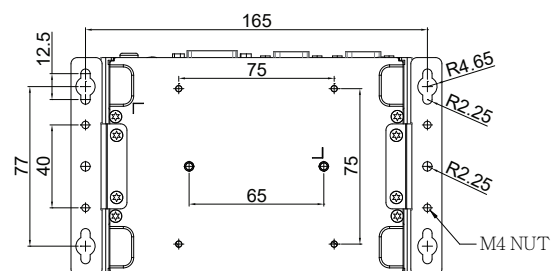
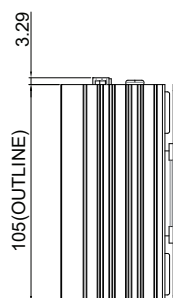
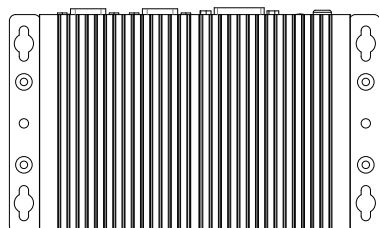
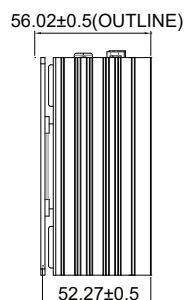


Figure 1-10 shows the front view of the device. The top width is labeled 179(OUTLINE) and the bottom width is labeled 150. The device features a central display area with four circular indicators (two on the left, two on the right) and four rectangular ports (two on the left, two on the right) below the display. The bottom edge of the device is indicated by a wavy line.



Unit: mm

Ordering Information

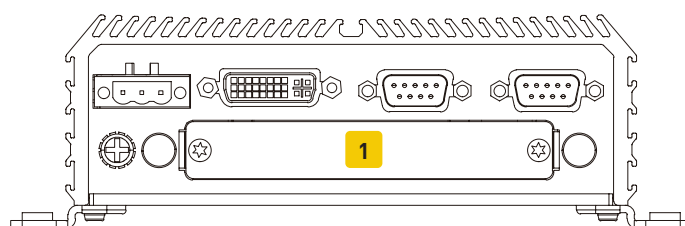
Available Models

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