



Features

- Onboard Intel® Atom™ D2550 1.86GHz CPU
- Intel® NM10 Express Chipset
- One 204-pin SODIMM Up to 4GB DDR3 1066 SDRAM
- Rich I/O, 1 VGA, 1 LAN, 1 SIM Slot, 1 Swappable HDD, 1 Audio, 1 12-bit GPIO, 1 SMBUS, 2 COM, 2 PS/2 for KB & MS, 2 Knockouts Antenna Mounting, 3 USB
- Expansion Slot Supporting 2 Mini PCIe Slot
- Front Access Swappable 2.5" Drive Bay, SIM Card
- MI/O Expansion Supporting Multi-COM, Multi-LAN Bypass, Multi-LAN PoE, Multi-COM Isolation Modules
- Rugged Design for Vibration & Shock Protection, Cable-less Design
- Fanless Operation from -10 ~ 60°C
- Wide Range DC Power Input from 12 ~ 28V
- Service Windows, Easy to Install mSATA, Memory and Mini PCIe Module

Specifications

System

• Board	EBM-CDVS
• CPU	Onboard Intel® Atom™ D2550 1.86GHz CPU
• BIOS	AMI 16Mbit SPI BIOS
• System Chipset	Intel® NM10 Express Chipset
• I/O Chip	Nuvoton W83627DHG-P
• System Memory	One 204-pin DDR3 SODIMM Socket Up to 4GB DDR3 800/ 1066 SDRAM
• Storage	1 x 2.5" Drive Bay, 1 x mSATA
• Watchdog Timer	Reset: 1sec. ~ 65535sec./min. and 1sec. or 1min./step
• H/W Status Monitor	Monitoring System Temperature and Voltage with Auto Throttling Control
• Expansion Interface	2 x Mini PCIe Socket (mSATA on 1 st , SIM Card Slot on 2 nd)

External I/O

• COM	2 x COM (Can be set as RS-232/422/485 by BIOS)
• LAN	1 x RJ45
• VGA	1 x VGA
• Audio Port	Mic-in, Line-in, Line-out
• GPIO	6-bit GPI and 6-bit GPO
• USB Port	3 x USB 2.0 (Rear 2; Front 1)
• PS/2	2 x PS/2 for KB & MS
• SIM	1 x SIM Card Slot
• SMBUS	1 x SMBUS
• Antenna	2 Knockouts for Antenna Mounting (Options to Add WiFi & 3G)

Display

• Chipset	Intel® Cedarview Integrated Graphics
• Resolution	CRT Mode: 1920 x 1200 @ 60Hz

Audio

• Audio Chipset	Realtek ALC892 Supports 5.1-CH Audio
• Audio Interface	Line-in, Line-out and Mic-in

Ethernet

• LAN Chip	1 x Intel® 82574L Gigabit Ethernet
• Ethernet Interface	10/ 100/ 1000 Base-Tx Gigabit Ethernet Compatible

Environment & Mechanical

• Power Requirement	+12 ~ +28Vdc
• ACPI	Single Power ATX Support S0, S3, S4, S5 ACPI 3.0 Compliant
• Power Type	AT/ ATX (ATX is The Default Setting)
• Operating Temperature	-10 ~ 60°C (w/ mSATA and 2.5" SSD), Ambient w/ Air Flow
• Storage Temperature	-40 ~ 75°C (-40 ~ 167°F)
• Relative Humidity	0% ~ 90% Relative Humidity, Non-condensing
• Vibration Protection	With mSATA/ SSD: 5Grms, IEC 60068-2-64, Random, 10 ~ 500Hz, 1hr/axis
• Shock Protection	With mSATA/ SSD: 50G, IEC 60068-2-27, Half Sine, 11ms
• Certification	CE, FCC Class B
• Dimension (W x D x H)	240mm x 170mm x 45mm
• Weight	4.4lbs (2Kgs)

Ordering Information

• EMS-CDV-255-A1-1R

Fanless Intel® Cedarview Rugged Embedded System with Intel® NM10 Express Chipset and VGA, LAN, SIM Slot, Swappable HDD, Audio, 12-bit GPIO, SMBUS, 2 COM, 2 PS/2 for KB & MS, 2 Knockouts Antenna Mounting, 3 USB

• EMS-CDV-255-A1-2R (with AUX-M01 Module)

Fanless Intel® Cedarview Rugged Embedded System with Intel® NM10 Express Chipset and Multi-COM Module, VGA, LAN, SIM Slot, Swappable HDD, Audio, 12-bit GPIO, SMBUS, 2 PS/2 for KB & MS, 2 Knockouts Antenna Mounting, 5 USB, 6 COM

• EMS-CDV-255-A1-3R (with AUX-M02 Module)

Fanless Intel® Cedarview Rugged Embedded System with Intel® NM10 Express Chipset and Multi-LAN Module, VGA, SIM Slot, Swappable HDD, Audio, 12-bit GPIO, SMBUS, 2 COM, 2 PS/2 for KB & MS, 2 Knockouts Antenna Mounting, 5 USB, 5 LAN



EMS-CDV-255-A1-2R

- **Board** EBM-CDVS + AUX-M01
- **I/O Extension** 2 x USB 2.0, 4 x COM Port
- **Dimension (W x D x H)** 240mm x 170mm x 60mm

Features

- COM 1 ~ COM 4 RS-232/422/485 Selected by BIOS
- COM1 ~ COM4 +5V and +12V Support on Pin-9 Selected by Jumper



EMS-CDV-255-A1-3R

- **Board** EBM-CDVS + AUX-M02
- **I/O Extension** 2 x USB 2.0, 4 x LAN Port
- **Dimension (W x D x H)** 240mm x 170mm x 60mm

Features

- 4 Gigabit LAN Ports with 2 Pair Bypass
- Isolation Protection for LAN Ports



EMS-CDV-255-A1-4R

- **Board** EBM-CDVS + AUX-M04
- **I/O Extension** 2 x USB 2.0, 4 x LAN Port (POE)
- **Dimension (W x D x H)** 240mm x 170mm x 60mm

Features

- 4 Gigabit LAN Ports Supports PoE Function (IEEE802.3af-16.8W Per Port)
- Isolation Protection for LAN Ports



EMS-CDV-255-A1-5R

- **Board** EBM-CDVS + AUX-M07
- **I/O Extension** 2 x USB 2.0, 4 x LAN Port
- **Dimension (W x D x H)** 240mm x 170mm x 60mm

Features

- COM 1 ~ COM 4 RS-232/422/485 Selected by BIOS
- COM1 ~ COM4 +5V and +12V Support on Pin-9 Selected by Jumper
- Isolation Protection for COM Ports

1	Embedded System
2	Qseven Module
3	ETX/XTX COM Express
4	3.5" SBC
5	EPIC
6	5.25" SBC
7	ATX
8	Micro ATX
9	Mini ITX
10	Nano ITX
11	ACP
12	Rack Mount System
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