

EmCORE-i290H

Intel® Atom™ N455/D525 EPIC Compact Board



Features

- Soldered Onboard Intel® Atom™ N455/D525 Processor
- Dual Gigabit Ethernet Ports
- Analog RGB and Single Channel 18-bit LVDS Display
- Support Dual Independent Displays
- Integrate SIM Socket to Support Mobile Telecommunication
- **Extended Range Operating Temp.: -20 ~ 70°C**

System

CPU	Soldered onboard Intel® Atom™ N455 1.6GHz, or D525 1.8GHz processor
Memory	Soldered onboard 2GB DDR3 SDRAM
Chipset	Intel® ICH8M
BIOS	AMI PnP Flash BIOS
Watchdog Timer	1~255 levels reset

I/O

I/O Chip	Winbond 83627UHG
Serial Port	5 x COM ports (4 x RS-232, 1 x RS-232/422/485 selectable)
USB Port	8 x USB 2.0 ports
KB/MS	1 x 6-pin wafer connector for keyboard and mouse (PS/2 interface via cable)
Digital I/O	8-bit programmable Digital Input/Output

Expansion Bus

1 x Mini PCI socket
1 x Mini-card socket
1 x SIM socket

Storage

1 x Ultra ATA, supporting 2 IDE devices
2 x SATA ports at 300MB/s HDD transfer rate
Soldered on board 2GB NANDrive (optional)

Ethernet Chipset	2 x Realtek RTL8111 PCIe GbE controllers
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Audio Interface	Realtek ALC886 7.1 Channel HD Audio Codec, Mic-in/Line-out
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Display

Graphics Chipset	Integrated Intel® Graphics Media Accelerator 3150
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Graphics Interface

Analog RGB supports resolution up to:

- 1400 x 1050 @60Hz (N455)
- 2048 x 1536 @60Hz (D525)

Single channel 18-bit LVDS supports resolution up to:

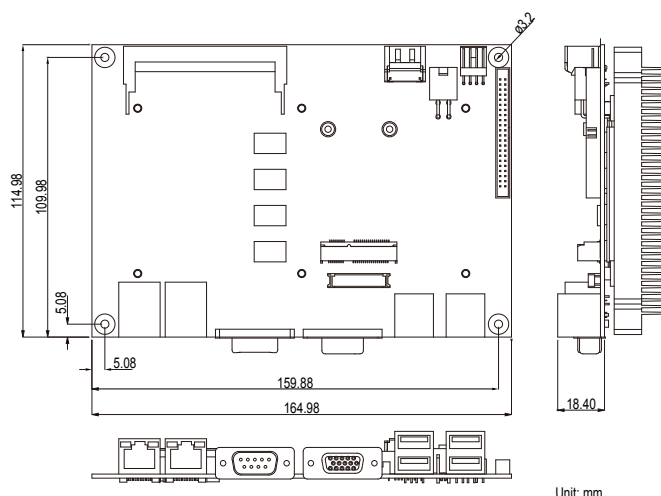
- 1280 x 800 or 1366 x 768 (N455)
- 1366 x 768 (D525)

Support Dual Independent Displays

Mechanical & Environmental

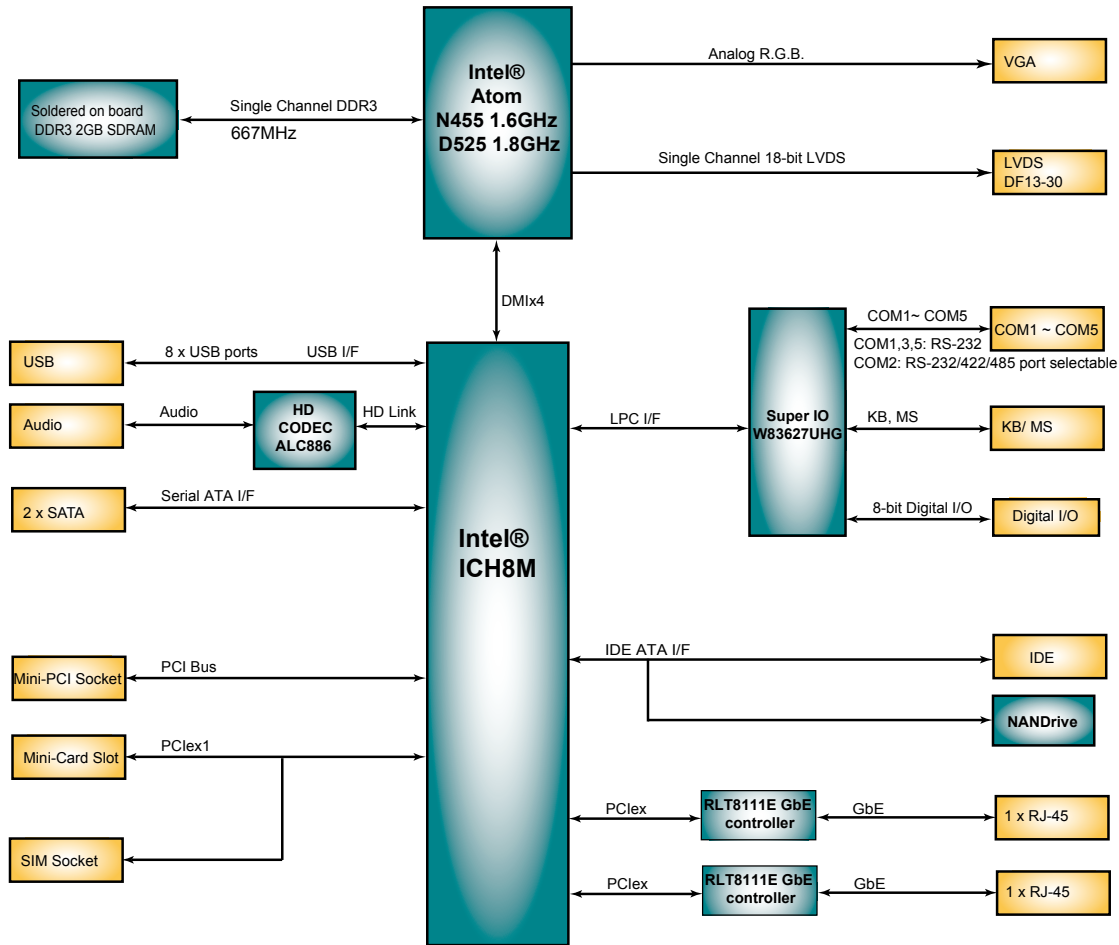
Power Connector	4-pin Aux. ATX power connector
Power Consumption	1.52A@+12V with D525 CPU (Typical) 1.29A@+12V with N455 CPU (Typical)
Operating Temp.	-20 ~ 70°C (-4 ~ 158°F)
Operating Humidity	10 ~ 95% @ 70°C (non-condensing)
Dimensions (L x W)	165 x 115 mm (6.5" x 4.5")

Dimensions



Unit: mm

Block Diagram



Ordering Information

EmCORE-i290H-N4	Intel® Atom™ N455 EPIC Compact Board
EmCORE-i290H-D5	Intel® Atom™ D525 EPIC Compact Board
EmCORE-i290HD-N4	Intel® Atom™ N455 with 2GB NANDrive EPIC Compact Board
EmCORE-i290HD-D5	Intel® Atom™ D525 with 2GB NANDrive EPIC Compact Board

Optional Accessories

CBK-11-2902-00	Cable kit
	• 1 x IDE cable • 1 x audio cable • 2 x SATA cables • 2 x USB cables • 4 x COM port cables • 1 x KB/MS cable

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