



### Features

- Intel® Pineview-M/ Pineview-D Series CPU
- Intel® ICH8-M Chipset
- One 200-pin SODIMM Up to 2GB DDR2 667MHz SDRAM
- Dual View, VGA, 18-bit LVDS, Optional 48-bit LVDS Output
- Realtek ALC888 Supports 5.1+2-CH HD Audio
- Dual Intel® 82583V Gigabit Ethernet
- 1 PCI, 1 Mini PCI Express, 1 CF
- 2 SATA/ SATA II, 4 COM, 8 USB, 16-bit GPIO
- ATX/ AT Power Mode
- TPM 1.2 (Optional)



### Specifications

#### System

• CPU	Onboard Intel® PNV-M SC N450 1.6GHz (EMX-PNV-N450) Onboard Intel® PNV-D DC D410/ D510 1.66GHz (EMX-PNV-D410/ D510)
• BIOS	AMI EFI BIOS (8Mbit SPI)
• System Chipset	Intel® ICH8-M
• I/O Chip	Winbond 83627DHG
• System Memory	1 x 200-pin SODIMM 2GB DDR2 667MHz SDRAM
• SSD	One CompactFlash Type I/II Socket
• Watchdog Timer	Reset: 1sec. ~ 255min. and 1sec. or 1min./step
• H/W Status Monitor	Monitoring CPU Temperature and Fan Status with Auto Throttling Control
• TPM	Infinion TPM 1.2 SLB9635 (Optional)
• Expansion	1 x PCI, 1 x Mini PCIe
• S3/ S4	Yes (S1/ S3/ S5)
• Wake up and LAN/RING	Yes
• SmartFan Control	Yes

#### I/O

• MIO	2 x SATA/ SATA II, 4 x COM (5V/ 12V), 2 x PS/2 KB/MS, 1 x LPT
• USB	8 x USB 2.0
• DIO	16-bit (8-in/ 8-out)

#### Audio

• Audio Codec	Realtek ALC888 Supports 5.1+2-CH Audio
• Audio Interface	Mic-in, Line-out, Line-in
• Audio Amplifier	PA3005D2 Stereo 6 Watt Per Channel

#### Display

• Chipset	Integrated Intel® Gen 3.5 + GFX Render Core 200MHz (PNV-M)/ 400MHz (PNV-D)
• Display Memory	Shared Memory
• Max. Resolution	VGA Mode : Up to 2048 x 1536 @ 60Hz (PNV-D) VGA Mode : Up to 1400 x 1050 @ 60Hz (PNV-M)
• Dual Display	VGA + LVDS
• VGA	One D-sub & one Buffered Pin-head Shared The Same Signals
• LVDS	Single Channel 18-bit LVDS

#### Ethernet

• LAN 1	Intel® 82583V PCIe Gigabit Ethernet
• LAN 2	Intel® 82583V PCIe Gigabit Ethernet

#### Mechanical & Environmental

• Power Type	ATX/ AT
• Operating Temperature	0 ~ 60°C (32 ~ 140°F)
• Storage Temperature	-40 ~ 75°C (-40 ~ 167°F)
• Operating Humidity	0 ~ 90% Relative Humidity, Non-condensing
• Size (L x W)	6.69" x 6.69" (170mm x 170mm)
• Weight	0.88lbs (0.4Kg)

### Ordering Information

#### • EMX-PNV-D510-A1R

Intel® Atom™ PNV-D510 Mini ITX Motherboard with Intel® ICH8-M Chipset and VGA, LVDS, Audio, 2 GbE, PCI, Mini PCIe, CF, 2 SATA/ SATA II, 4 COM, 8 USB, 1 LPT

#### • EMX-PNV-N450-A1R

Intel® Atom™ PNV-N450 Mini ITX Motherboard with Intel® ICH8-M Chipset and VGA, LVDS, Audio, 2 GbE, PCI, Mini PCIe, CF, 2 SATA/ SATA II, 4 COM, 8 USB, 1 LPT