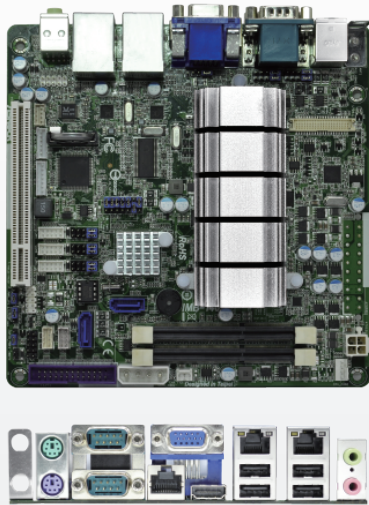




# IMB-140

Mini-ITX Motherboard

## Spotlight Features

- Intel® Dual-Core Atom™ CedarView Processor D2550/N2600/N2800
- Intel® NM10 Express Chipset
- Integrated Intel® PowerVR SGX545, DirectX 9.0, Pixel Shader 3.0
- Supports DDR3 1066MHz, 2 x SO-DIMM, up to 4GB system memory
- 1 x D-Sub, 1 x HDMI, 1 x Dual Channel 24-bit LVDS
- 7 x USB 2.0, 2 x SATA2
- 1 x PCI, 1 x mini-PCIe
- Gigabit LAN : 2 x Realtek RTL8111E-VL
- 1 x CF Socket

## Specifications

### Processor System

|             |                                                                                                         |
|-------------|---------------------------------------------------------------------------------------------------------|
| Dimension   | Mini-ITX (6.7-in x 6.7-in)                                                                              |
| CPU         | Intel® Dual-Core Atom™ CedarView Processor D2550/<br>N2600/N2800<br>Supports Hyper-Threading Technology |
| Core Number | 2                                                                                                       |
| Max Speed   | D2550/N2800: 1.86 GHz, N2600: 1.6GHz                                                                    |
| L3 Cache    | N/A                                                                                                     |
| Chipset     | NM10                                                                                                    |
| BIOS        | UEFI                                                                                                    |

### Expansion Slot

|                   |               |
|-------------------|---------------|
| PCI               | 1             |
| Mini-PCIe         | 1 (Full Size) |
| mSATA             | 0             |
| PCIe x16 (Gen2)   | 0             |
| CFast Card Socket | 0             |

### Memory

|            |                                              |
|------------|----------------------------------------------|
| Technology | Single Channel DDR3 800/1066 MHz SDRAM       |
| Max.       | D2550/N2800: 4GB, N2600: 2GB                 |
| Socket     | D2550/N2800: 2 x SO-DIMM, N2600: 1 x SO-DIMM |

### Graphics

|               |                                                                                 |
|---------------|---------------------------------------------------------------------------------|
| Controller    | Intel® PowerVR SGX545, Support DirectX9 compliant Pixel Shader v3.0 and OGL 3.0 |
| VRAM          | Shared Memory                                                                   |
| VGA           | Supports max. resolution 1920 x 1200                                            |
| LVDS          | Dual channel 24-bit, max resolution 1920x1200                                   |
| HDMI          | Supports HDMI 1.3a, max resolution 1920x1200                                    |
| DVI           | No                                                                              |
| Display Port  | No                                                                              |
| Multi Display | Yes                                                                             |

### Ethernet

|            |                                  |
|------------|----------------------------------|
| Interface  | 10/100/1000 Mbps                 |
| Controller | GbE LAN: 2 x Realtek RTL8111E-VL |
| Connector  | 2 x RJ-45                        |

### SATA

|                        |                 |
|------------------------|-----------------|
| Max Data Transfer Rate | SATA2 (3.0Gb/s) |
|------------------------|-----------------|

### Rear I/O

|              |                                                |
|--------------|------------------------------------------------|
| VGA          | 1                                              |
| HDMI         | 1                                              |
| DVI-I/D      | 0                                              |
| Display Port | 0                                              |
| Ethernet     | 2                                              |
| USB          | 4 (USB 2.0 compliant)                          |
| Audio        | 2 (Mic-in, Line-out)                           |
| Serial       | 1 (RS-232/422/485) + 1 (RS232) + 1 (RJ45 type) |
| PS/2         | 2 (1 x keyboard and 1 x mouse)                 |

### Internal Connector

|                     |                       |
|---------------------|-----------------------|
| USB                 | 3 (USB 2.0 compliant) |
| LVDS/Inverter       | 1/1                   |
| VGA                 | 0                     |
| Serial              | 3 (RS-232)            |
| SATA                | 2 x SATA2 (3.0Gb/s)   |
| m-SATA              | 0                     |
| Mini-PCIe           | 1                     |
| Parallel            | 1                     |
| IrDA                | 0                     |
| GPIO                | 4 x GPI + 4 x GPO     |
| SATA PWR Output Con | 1                     |
| Speaker Header      | 1                     |

### Watchdog Timer

|          |                                  |
|----------|----------------------------------|
| Output   | From Super I/O to drag RESETCON# |
| Interval | 256 segments, 0,1,2...255sec/min |

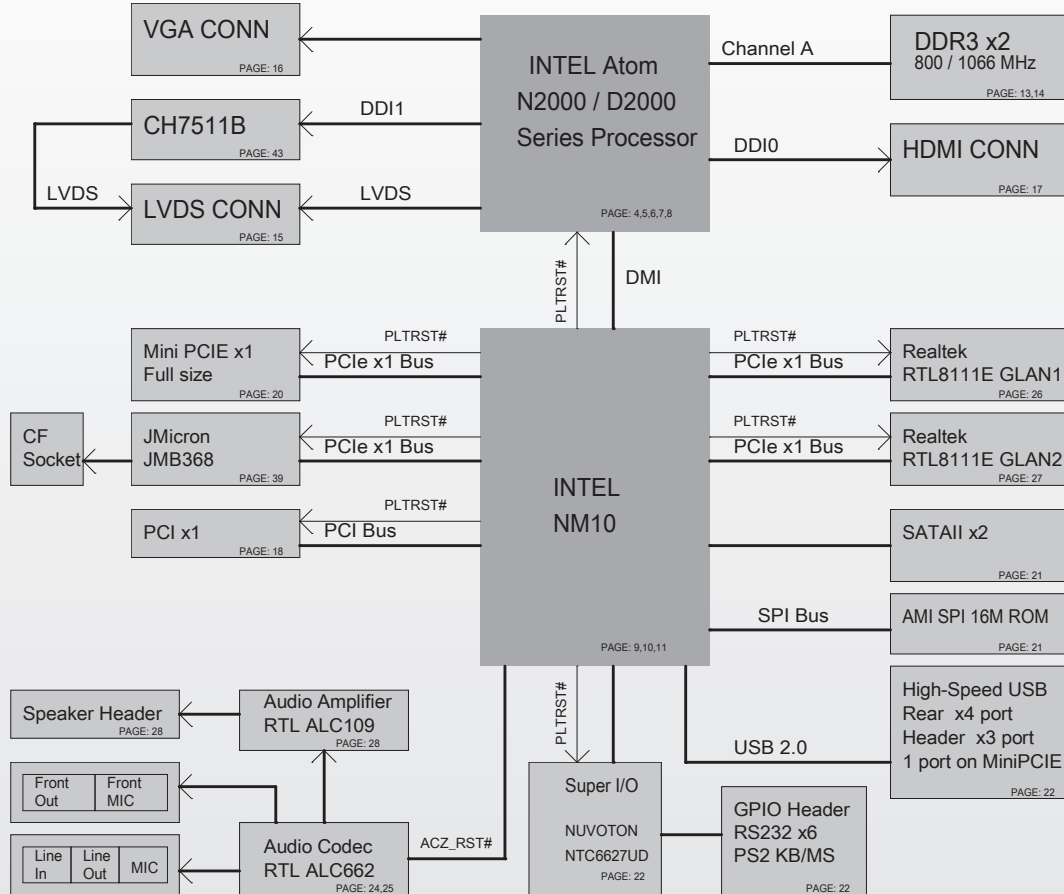
### Power Requirements

|           |                                                                                                                      |
|-----------|----------------------------------------------------------------------------------------------------------------------|
| Input PWR | 12V DC-In (4-pin ATX PWR Con)                                                                                        |
| Power On  | AT/ATX Supported<br>AT : Directly PWR on as Power input ready<br>ATX: Press Button to PWR on after Power input ready |

### Environment

|                       |            |
|-----------------------|------------|
| Operating Temperature | 0°C – 60°C |
|-----------------------|------------|

## Board Diagram



## IPC Motherboards Focused Markets

ASRock IMB solutions can be widely used for industrial applications, such as process control, data acquisition, and so on. IMB-PCs are typically panel mounted and often incorporate touch screens for user interaction.



## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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