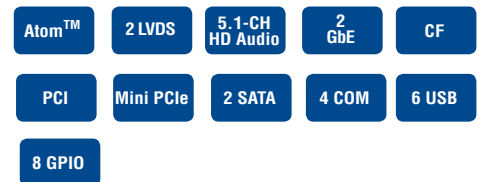


### Features

- Onboard Intel® XFCBGA 45nm Atom™ N270 Processor
- Intel® 945GSE / ICH7-M Chipset
- One 200-pin SODIMM up to 2GB DDR2 533 SDRAM, non-ECC
- Intel® Graphics Media Accelerator 950
- Dual View, 2-CH LVDS
- 5.1-CH HD Audio, 6W AMP
- Dual Realtek RTL8111C Gigabit Ethernet
- 1 PCI 2.3, 1 Mini PClex1
- 1 CF, 4 Powered COM, 2 SATA, 6 USB, 8-bit GPIO



### System

<b>CPU</b>	Onboard Intel® XFCBGA 45nm Atom™ N270 1.6 GHz Processor
<b>FSB</b>	533 MHz
<b>BIOS</b>	Award 4 Mb SPI BIOS
<b>System Chipset</b>	Intel® 945GSE / ICH7-M
<b>I/O Chip</b>	Winbond W83627DHG-A
<b>System Memory</b>	One 200-pin SODIMM up to 2GB DDR2 533 SDRAM , non-ECC
<b>SSD</b>	One CompactFlash Type I/II socket
<b>H/W Status Monitor</b>	Monitoring CPU temperature, voltage, and fan status with auto throttling control
<b>Watchdog Timer</b>	Reset: 1 sec.~255 min. and 1 sec. or 1 min./step
<b>Expansion</b>	1 x PCI (PCI Rev. 2.3 compliant) supports 3 PCI master, 1 Mini PClex1
<b>S3/S4</b>	Yes
<b>TPM</b>	TPM (Infineon SLB 9635 TCG 1.2 compliant)
<b>Smart Fan Control</b>	Yes (1 x fan connector)

### I/O

<b>MIO</b>	1 x IDE, 2 x SATA, 4 x COM (5V/12V), 1 x K/B, 1 x Mouse
<b>USB</b>	6 x USB 2.0
<b>GPIO</b>	8-bit General Purpose I/O for DI and DO

### Display

<b>Chipset</b>	Intel® 945GSE GMCH integrated Graphics Media Accelerator 950
<b>Display Memory</b>	Intel® DVMT 3.0 supports up to 224 MB shared video memory
<b>Resolution</b>	CRT Mode: 2048 x 1536 @ 75 Hz LCD Mode: 2048 x 1536 @ 60 Hz
<b>Multiple Display</b>	CRT + LVDS
<b>VGA</b>	Onboard GMA 950, supports for CRT resolutions up to QXGA
<b>LVDS</b>	2-CH 18/24-bit LVDS

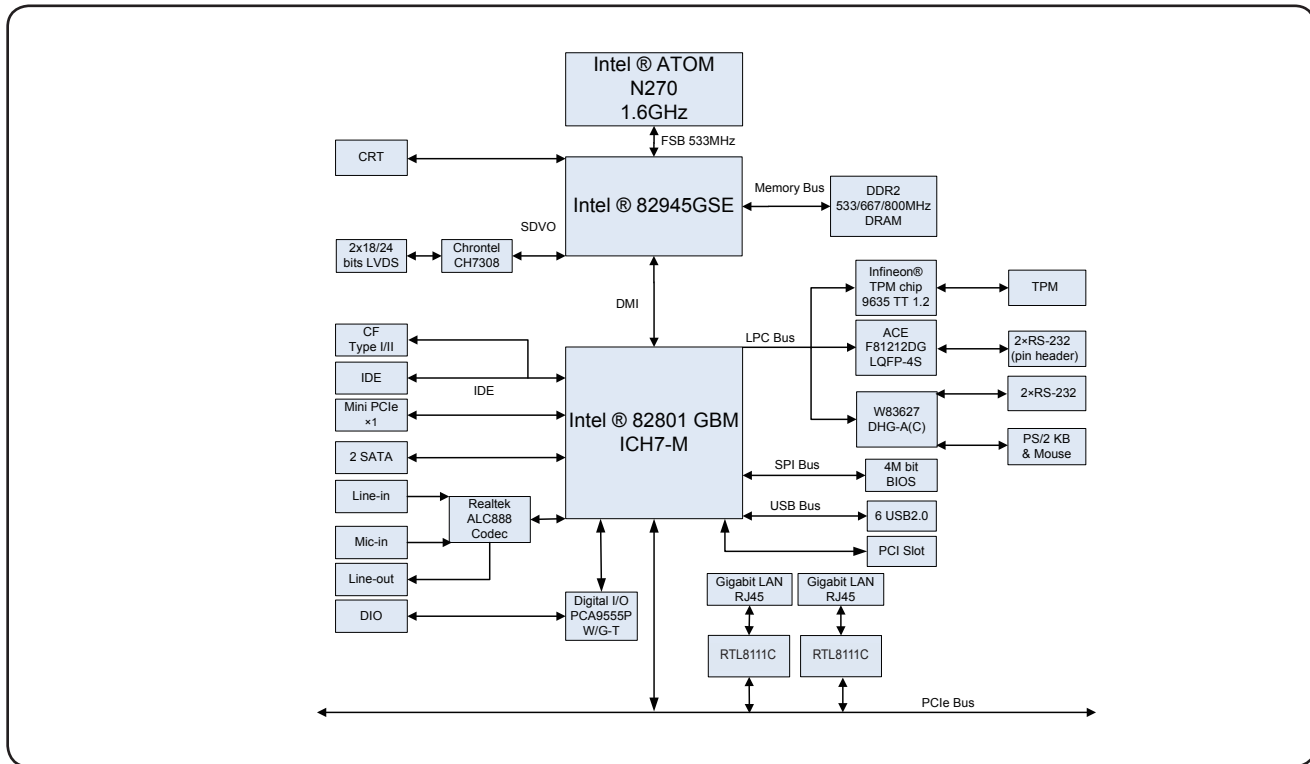
### Audio

<b>Audio Chipset</b>	Intel® ICH7-M
<b>AC97 Codec</b>	Realtek ALC888, 5.1-CH HD Audio
<b>Audio Interface</b>	Mic in, Line in, CD Audio in, Line out
<b>Audio Amplifier</b>	TPA3005D2 Stereo 6Watt

### Ethernet

<b>LAN 1</b>	Realtek RTL8111C Gigabit Ethernet
<b>LAN 2</b>	Realtek RTL8111C Gigabit Ethernet

## Block Diagram



1  
ATX

2  
Micro  
ATX

3  
Mini  
ITX

4  
Nano  
ITX

### Rear Panel I/O Port

- 1 x PS/2 Keyboard
- 1 x PS/2 Mouse
- 1 x VGA port
- 2 x COM Port
- 2 x RJ-45 port
- 4 x USB 2.0/1.1
- 1 x Audio Jack (3 ports)

### Internal I/O Port

- 2 x Power COM port
- 1 x 2x10-pin ATX Power connector
- 1 x CPU Fan connector
- 1 x Power Fan connector
- 1 x USB connectors support additional 2 USB ports
- 1 x LVDS connector
- 1 x LVDS inverter connector
- 1 x IDE connector
- 2 x SATA connectors
- 1 x Digital IO header
- 1 x Front panel header
- 1 x S/PDIF Out Header
- 1 x Audio amplifier connector
- 1 x Front audio connector
- 1 x Mini-PCI Express

### Mechanical & Environmental

<b>Power Type</b>	ATX
<b>Operating Temperature</b>	0~60°C (32~140°F)
<b>Operating Humidity</b>	0%~90% relative humidity, non-condensing
<b>Size (L x W)</b>	6.69" x 6.69" (170 mm x 170 mm)
<b>Weight</b>	0.88 lbs (0.4 Kg)

5  
ACP

6  
System

7  
Accessory

### Ordering Information

**EMX-945GSE-A1R**

Intel® 945GSE Atom™ N270 Mini ITX Motherboard with 5.1-CH HD Audio, 2x24-bit LVDS, Dual GbE, PCI, Mini PCIe, CF, 2 SATA, 4 COM, 6 USB, 8-bit GPIO