NP100-N16C
Intel® 945GSE Mini-ITX Board

PROCESSOR
- Intel® Atom™ N270 processor
- 1.6GHz core frequency, 1.10V voltage
- 2.5W thermal design power
- 512KB on-die second level cache
- 533MHz FSB
- 22x22 mm, 1.0 mm ball pitch and 437 balls FCBGA

CHIPSET
- Intel® chipset
  - Intel® 945GSE Graphics Memory Controller Hub (GMCH)
  - Intel® ICH7M I/O Controller Hub

SYSTEM MEMORY
- One 240-pin DDR2 DIMM socket
- Supports DDR2 400/533MHz
- Supports up to 2GB system memory

EXPANSION SLOTS
- 1 PCI Express x1 slot
- 1 PCI slot
- 1 CompactFlash socket

ONBOARD GRAPHICS FEATURES
- Intel® GMA 950
- 133/166MHz internal graphics core render frequency at 1.05V core voltage
- One SDVO port (Port B)
  - SDVO slot reversal not supported
- Supports 18-bit dual-channel LVDS
- Supports CRT resolutions up to SXGA+

ONBOARD AUDIO FEATURES
- Realtek ALC262 2-channel High Definition Audio
- Two 24-bit stereo DACs and three 20-bit stereo ADCs
- S/PDIF audio interface

ONBOARD LAN FEATURES
- Two Realtek RTL8111C PCI Express Gigabit Ethernet controllers
- Supports 10Mbps, 100Mbps and 1Gbps data transmission
- IEEE 802.3 (10/100Mbps) and IEEE 802.3ab (1Gbps) compliant

SERIAL ATA INTERFACE
- Two SATA ports with independent DMA operation supported on ports 0 and 2
- Two-mode operation supports legacy mode using I/O space or an AHCI mode using memory space
- SATA and PATA can be used in a combined function mode (When SATA is used with PATA, AHCI mode is not supported.)

IDE INTERFACE
- Bus Master IDE (PATA) controller
- Supports up to two IDE devices
- Ultra ATA 100/66/33

TRUSTED PLATFORM MODULE (TPM) - optional
- Provides a Trusted PC for secure transactions
- Provides software license protection, enforcement and password protection

REAR PANEL I/O PORTS
- 1 mini-DIN-6 PS/2 mouse port
- 1 mini-DIN-6 PS/2 keyboard port
- 2 DB-9 RS232 serial ports
  - Pins 1 and 9 of COM2 functions as RS232 signal or power (selectable via jumper)
- 1 DB-15 VGA port
- 1 DVI-I port (DVI-D signal only)
- 2 RJ45 LAN ports
- 4 USB 2.0/1.1 ports
- Mic-in, line-in and line-out

I/O CONNECTORS
- 2 connectors for 4 external USB 2.0/1.1 ports
- 2 connectors for 2 external serial ports
  - COM3 supports RS232/422/485
- 1 LVDS LCD panel connector
- 1 LCD/inverter power connector
- 1 8-bit Digital I/O connector
- 1 front audio connector for line-out and mic-in jacks
- 1 CD-in connector
- 1 S/PDIF connector
- 2 Serial ATA connectors
- 1 40-pin IDE connector
- 1 20-pin ATX power connector
- 1 front panel connector
- 1 chassis intrusion connector
- 1 fan connector

BIOS
- Award BIOS
- 8Mbit SPI BIOS

ENERGY EFFICIENT DESIGN
- ACPI 2.0/1.0 specification
- Wake-On-Events include:
  - Wake-On-PS/2 Keyboard/Mouse
  - Wake up by PCI card
  - PCI Express PME
  - USB KB/MS wake up from S3
  - Wake-On-Ring
  - RTC timer to power-on the system
- Enhanced Intel® SpeedStep Technology
- AC power failure recovery

DAMAGE FREE INTELLIGENCE
- Monitors CPU/system temperature and overheat alarm
- Monitors CPU(V)/3.3V/5V/12V/VBAT(V) voltages and failure alarm
- Monitors system fan speed and failure alarm
- Read back capability that displays temperature, voltage and fan speed
- Watchdog timer function

TEMPERATURE
- 0°C to 60°C

HUMIDITY
- 10% to 90%

PCB
- Mini-ITX form factor
- 170mm (6.7") x 170mm (6.7")

REAR PANEL I/O PORTS

PS/2 Mouse · COM 2 · VGA · LAN 1 · LAN 2 · Mic-in · Line-in · Line-out
PS/2 K/B · COM 1 · DVI-I (DVI-D signal only) · USB 0-1 · USB 2-3