NP101-D16C
Intel® 945GSE Mini-ITX Board with 12V DC-in

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

CHIPSET
- Intel® chipset
  - Intel® 945GSE Graphics Memory Controller Hub (GMCH)
  - Intel® 82801GBM I/O Controller Hub (ICH7M)

SYSTEM MEMORY
- One 240-pin DDR2 DIMM socket
- Maximum memory supports up to 2GB
- Supports 400MHz and 533MHz DDR2 SDRAM

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

ONBOARD GRAPHICS FEATURES
- 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
- 2x 6W for 8ohm speaker
- Two 24-bit stereo DACs and three 20-bit stereo ADCs
- S/PDIF input/output interface

ONBOARD LAN FEATURES
- Two Realtek RTL8111C PCI Express Gigabit 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

REAR PANEL I/O PORTS
- 1 mini-DIN-6 PS/2 mouse port
- 1 mini-DIN-6 PS/2 keyboard port
- 1 1-pin DC 12V jack
- 1 4-pin DC 12V jack or 4-pin ATX 12V power connector (optional)
  - ♦ -12V power is optional
- 1 DB-9 serial port
- 1 DB-15 VGA port
- 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 additional external USB 2.0/1.1 ports
- 1 connector for an additional external serial port
- 1 speaker-out connector with amplifying feature
- 1 SDVO connector for DFI NP1-LVDS (24-bit / 2 channels external LVDS) or NP1-DVI (external DVI-D) daughterboard
- 1 LVDS LCD panel connector
- 1 LCD/inverter power connector
- 1 DIO connector
- 1 front audio connector for line-out and mic-in jacks
- 1 CD-in internal audio connector
- 1 S/PDIF connector
- 2 Serial ATA connectors
- 1 44-pin IDE connector
- 1 FDD connector (FPC type) - optional
- 1 4-pin power connector for the SATA drive
- 1 front panel connector
- 1 chassis intrusion connector
- 1 fan connector

BIOS
- Award BIOS
- 8Mbit SPI interface BIOS

ENERGY EFFICIENT DESIGN
- Supports ACPI specification 2.0/1.0
- Supports ACPI STR (Suspend to RAM) function
- 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
- 6-layers, Mini-ITX form factor
- 17cm (6.7") x 17cm (6.7")

REAR PANEL I/O PORTS

PS/2 Mouse · optional 4-pin DC 12V · COM 1 · LAN 1 · LAN 2 · Mic-in · Line-in · Line-out · PS/2 K/B · 1-pin DC 12V · VGA · USB 0-1 · USB 2-3