ETX-AT

ETX® Module with Intel® Atom™ Processor N270 and 945GSE / ICH7-M Chipset



Features

- Intel® Atom™ Processor N270 at 1.6 GHz
- Intel® 945GSE/ICH7-M chipset
- Up to 2 GB DDR2 533 MHz SDRAM
- Single/dual 18/24-bit LVDS and TV-out
- 2 SATA, 2 IDE (PATA), LAN, USB 2.0

Specifications

Core System

CPU	**BGA type**
	Intel® Atom™ N270, 1.6 GHz with 512 KB L2 cache, 2.5 Watt On-die, primary 32-kB instruction cache and 24-kB, write-back data cache
	Hyperthreading (2-thread) support
	Advanced gunning transceiver logic (AGTL+) bus driver technology
	Enhanced Intel SpeedStep® Technology
	Source synchronous double-pumped (2x) Address
	Source synchronous quad-pumped (4x) Data
	C0 - C4 low power states supported
Memory	Single SODIMM socket supporting : - up to 2 GB of non-ECC, un-buffered, 533 MHz standard DDR2 SODIMM memory - Virtium SSDDR type module combining NAND flash SATA Solid State Drive (SATA SSD) and DDR2 memory on a single SODIMM module (ETX-AT-N270-SD only)
Chipset	Intel® 945GSE Express Graphic Memory Controller Hub and Intel® I/O Controller Hub 7 Mobile (ICH7-M)
BIOS	AMIBIOS®8 with CMOS backup in 8 Mbit SPI flash
Hardware Monitor	Supply voltages and CPU temperature
Watchdog Timer	Programmable timer ranges to generate RESET
Expansion Busses	PCI 32-bit: PCI ver 2.3 at 33MHz, supporting 4 bus masters
	Fast ISA 16-bit (through PCI/ISA bridge)
	SMBus, I²C

Video

Chipset	945GSE GMCH integrated chipset supports dual independent displays
VGA Interface	Analog VGA support up to 2048 x1536 resolution
LVDS Interface	Dual channel 18/24bit with Chrontel 7308B on SDVO
TV-out	NTSC/PAL , SDTV, HDTV supported (without Macrovision)

Audio

Chipset	Integrated on Intel® I/O Controller Hub 7 Mobile (ICH7-M)
Audio Codec	Realtek ALC 262 HDA compatible

LAN

Chipset	PCIe x1 Realtek RTL8111C
Interface	10/100 Mbps

Multi I/O

IDE (PATA)	Dual channel IDE with UDMA 33
SATA	Two channels SATA 1.5 Gb/s with connectors on module (ETX-AT-N270-SD supports one SATA channel only)
USB	Supports up to four ports v. 2.0

Super I/O

Chipset	W83627HG
Serial	Two high speed RS-232C ports (COM1/COM2)
IrDA	Supports SIR IrDA 1.1 compliant
Parallel	SPP, EPP, and ECP mode (pin out shared with FDD)
FDD	One drive (pin out shared with LPT)
Keyboard & Mouse	One PS/2 keyboard and one PS/2 mouse

TPM

Chipset	Infineon SLB9635TT1.2
Type	TPM 1.2

Power Specifications

Input Power	AT mode (5 V only) and ATX mode (5 V and 5 Vsb)
Power States	S0, S1, S3, S4, S5
Power Consumption	9 W typical (with Atom® N270 and 1 GB memory)

Mechanical and Environmental

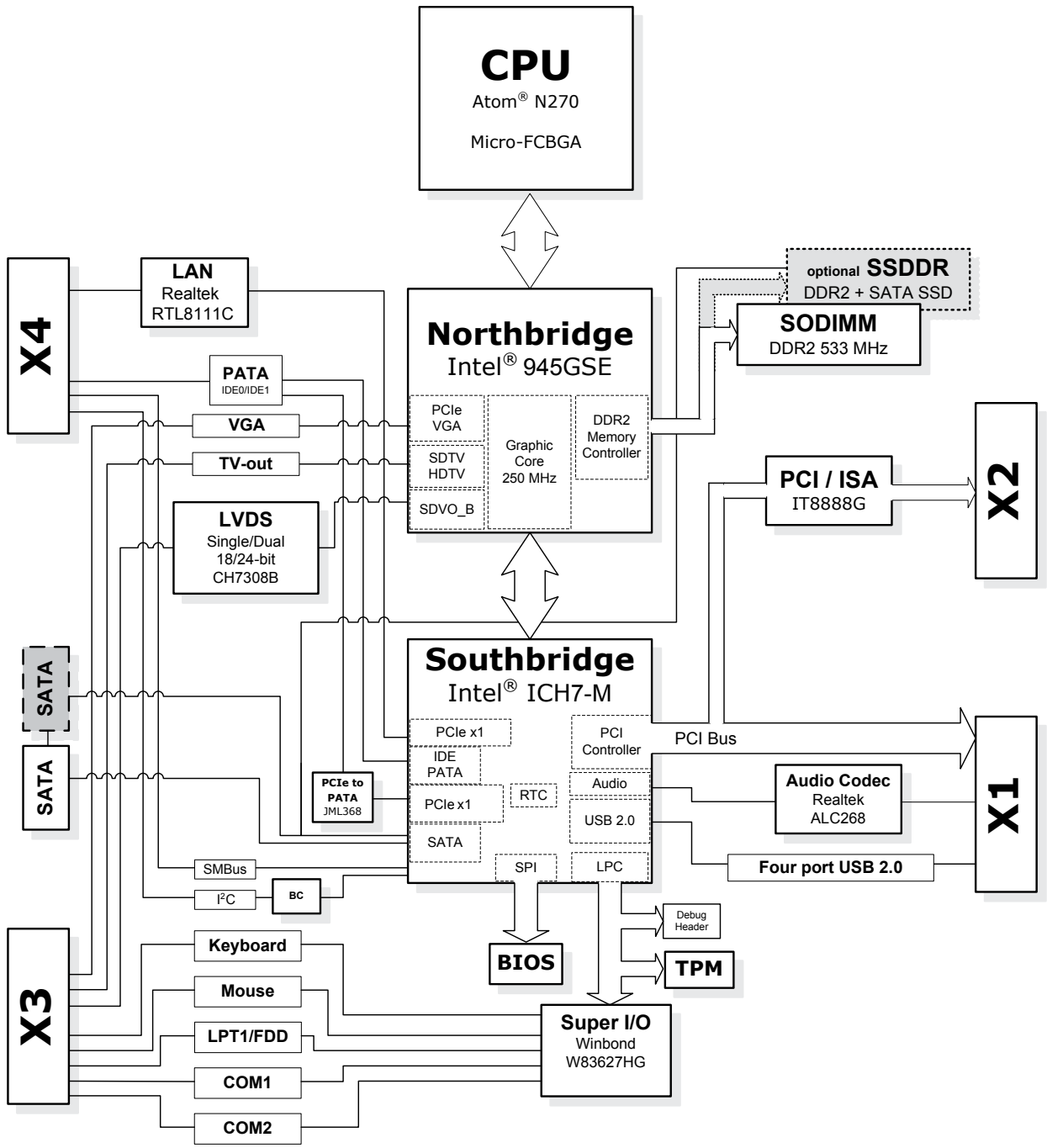
Operating Temp.	Standard: 0°C to 60°C
Storage Temp.	-20°C to 80°C
Humidity	5% to 95% relative humidity, non condensing
Shock	15G peak-to-peak, 11ms duration, non-operation
Vibration	Non-operating: 1.88 Grms, 5-500 Hz, each axis
	Operating: 0.5 Grms, 5-500 Hz, each axis
Form Factor	ETX® rev. 3.02, size 95 mm x 114 mm
Certifications	CE, FCC

Operating Systems

Standard Support	Windows® Vista 32-bit
	Windows® XP 32-bit
	Linux® 2.6.x
Extended Support	Embedded XP BSP
	WinCE 6.0 BSP
	Linux® 2.6.x BSP
	AIDI Library for Win32, WinCE and Linux®

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Functional Diagram



Ordering Information

Modules

Model Number	Description/Configuration
ETX-AT-N270-18	ETX Module with Intel® Atom™ Processor N270 at 1.6 GHz with 18-bit integrated LVDS support
ETX-AT-N270	ETX® Module with Intel® Atom™ Processor N270 at 1.6 GHz with 24-bit LVDS support
ETX-AT-N270-18SD	ETX Module with Intel® Atom™ Processor N270 at 1.6 GHz with 18-bit integrated LVDS and SSDDR support
ETX-AT-N270-SD	ETX Module with Intel® Atom™ Processor N270 at 1.6 GHz with 24-bit LVDS and SSDDR support

Accessories

Model Number	Description/Configuration
Heat Spreaders	
HTS-EAT-B	Heatspreader for ETX-AT (BGA CPU) with threaded standoffs
Passive Heatsinks	
THS-EAT-B	Low Profile Heatsink for ETX-AT (BGA CPU) with threaded standoffs
SSDDR	SSDDR by Virtium Technology Inc. is available in following configurations: 1GB DDR2, 4GB-16GB SSD 2GB DDR2, 4GB-16GB SSD

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