

Express-ATR

Extreme Rugged™ COM Express® Module with Intel® Atom™ Processor N270 and 945GSE / ICH7-M Chipset



Features

- Up to 2GB DDR2 memory
- True PICMG COM Express® COM.0 compliance
- PCI Express, SATA 3 Gb/s
- Single Channel 18-bit LVDS, VGA, TV-Out and SDVO
- 50% thicker PCB



Choose the Ampro by ADLINK™ Express-ATR for...

Modular, feature-rich applications that require integrated graphics, wide temperature range operation, and shock and vibration resistance.

Description

The Ampro by ADLINK™ Express-ATR is a compact, high performance module featuring the Intel® Atom™ processor with Gigabit Ethernet and high performance I/O.

Specifications

Core System

CPU	BGA type Intel® Atom™ N270, 1.6 GHz, 512 KB L2 cache, 2.5 W
Memory	Single channel 400/533 MHz DDR2 memory up to 2GB
BIOS	AMIBIOS® 8 with CMOS backup in 8 Mbit SPI flash
Hardware Monitor	Supply voltages and CPU temperature
Watchdog Timer	Programmable timer range to generate RESET
Expansion Busses	3 PCI Express x1 lanes, PCI, and LPC

Video

Integrated in Chipset	Intel® Graphics Media Accelerator 950 integrated into 945GSE GMCH supporting dual independent displays
VGA Interface	Analog monitor support up to QXGA (2048 x 1536)
LVDS Interface	Single channel 18-bit LVDS support up to UXGA (1600 x 1200)
Digital Display Interface	SDVO

Audio

Chipset	Integrated on Intel® I/O Controller Hub 7 Mobile (ICH7-M)
Audio Codec	HDA (Azalia) or implemented on carrier board

LAN

Chipset	Intel® 82574IT Gigabit Ethernet Controller
Speed	10/100/1000 Mbps Ethernet

Multi I/O

Chipset	Intel® ICH7-M
USB	Eight USB 2.0 ports
SATA	Two SATA ports at 3 Gb/s
Super I/O	Connected to LPC bus on carrier if needed

TPM

Chipset	Infineon SLB9635TT1.2
Type	TPM 1.2

Power Specifications

Input Power	AT mode (12 V +/- 5%) and ATX mode (12 V and 5 Vsb +/- 5%)
Power States	Supports S0, S1, S3, S4, S5
Smart Battery Support	Yes

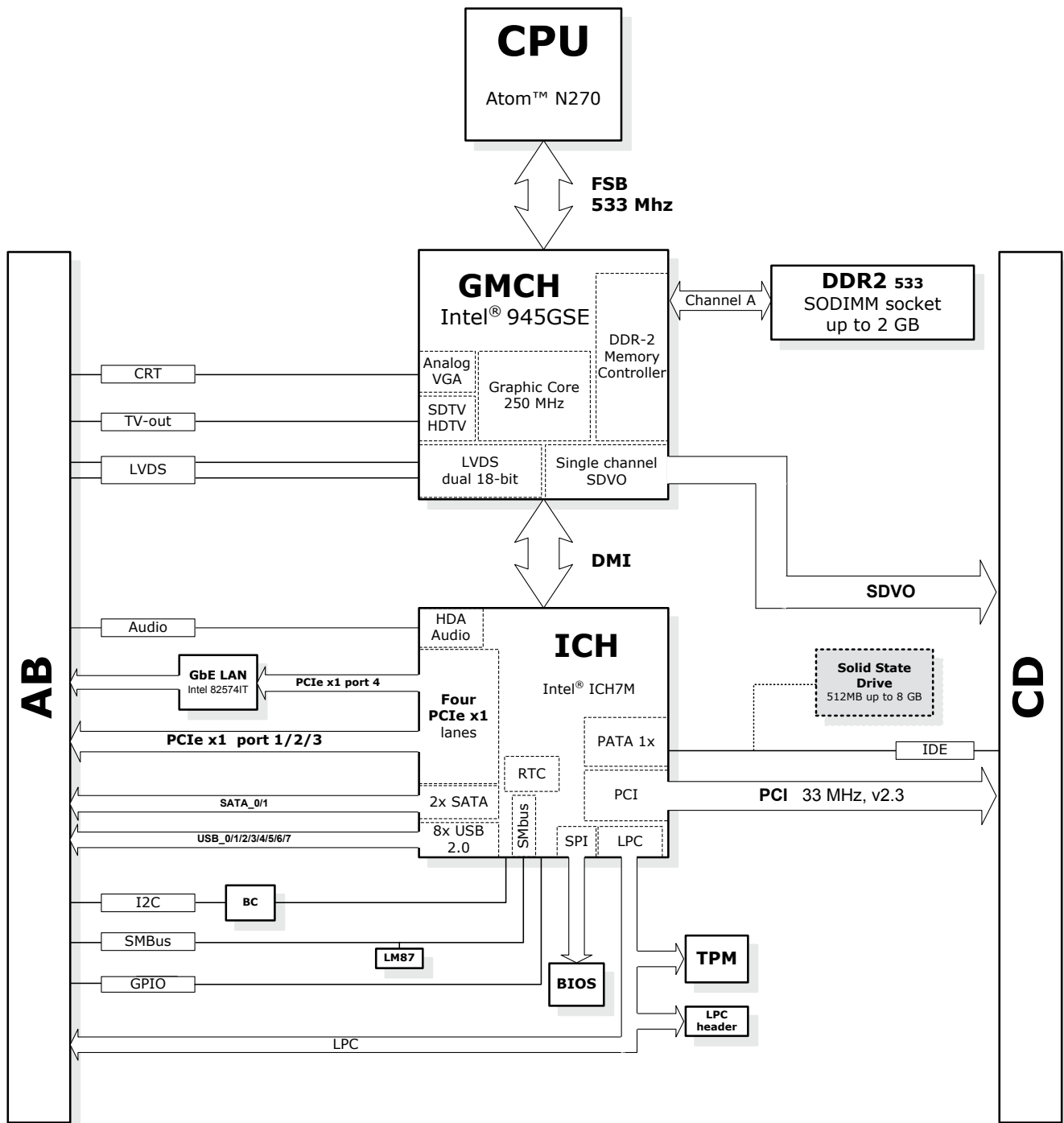
Mechanical and Environmental

Size	Compact COM Express, 95 mm x 95 mm
Board Thickness	0.093" (2.3mm)
Operating Temp. Standard	0°C to 70°C
Operating Temp. Extended	-40°C to 80°C
Storage Temp.	-55°C to 85°C
Humidity	90% at 60°C
Shock	50G peak-to-peak, 11ms duration, MIL-STD-202G Method 213B
Vibration	Operating: 11.96 Grms, 50-20,000 Hz, each axis, MIL-STD-202G Method 214A
Compatibility	PICMG COM Express Type 2
Certifications	CE, FCC, HALT

Operating Systems

Standard Support	Windows XP(e), Linux
Extended Support (BSP)	Windows XP Embedded WinCE 6.0 VxWorks 6.x QNX AIDI Library

Functional Diagram



Ordering Information

Modules

Model Number	Description/Configuration
Express-ATR-R-16	Express-ATR 1.6 GHz Intel® Atom™ N270 CPU, 512kB L2 Cache, PCI Express, PCI, LPC, SSD
Express-ATR-R-15	Express-ATR 1.6 GHz Intel® Atom™ N270 CPU, 512kB L2 Cache, PCI Express, PCI, LPC, without SSD

Quick Start Kits

Model Number	Description/Configuration
Express-ATRE-L-16	Express-ATR-R-16 QuickStart Kit (Express-ATR, 1GB DDR2 RAM, EBX Baseboard, heatsink for Extreme Rugged Extended Temperature installed, documentation, software, ATX power supply)