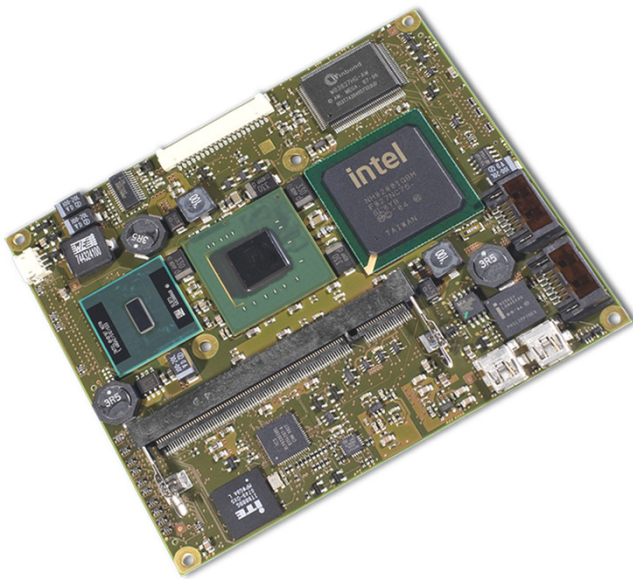


MSC ETE-A945GSE




Intel® Atom™ Module



Description

The design of the MSC ETE-A945GSE module is based on Intel's embedded Atom™ CPU technology enabling to lower the power consumption for embedded applications to a minimum while maintaining high graphics performance.

The Intel® Atom™ N270 processor with its low power consumption of only 2.5 W is ideally suited for fanless designs. Paired with the successful Intel 82945GSE the design offers high graphics performance and many I/O options.

95x114 
 10W 
 Entry/Mid 

Highlights

- Intel®Atom™ N270 (1.6GHz)
- Mobile Intel®945GSE Chipset with integrated Intel®Graphics Media Accelerator 950
- Up to 2GB DDR2 SDRAM
- LVDS interface (24 Bit, dual channel) up to 1920 x 1200
- 2nd LVDS interface via on-board connector (optional)
- CRT interface up to 2048 x 1536
- Dual Independent Display supported
- Six USB 2.0 interfaces

Technical Data – MSC ETE-A945GSE

Module Standard

ETX® Standard 3.02 compliant

Core Logic, Memory

CPU

Intel® Atom N270 (1.6GHz)

Chipset

Intel® 82945GSE, ICH7DH

Memory

200-pin SO-DIMM sockets for up to 2 GB PC4200 DDR2 SDRAM

Storage Interfaces

SATA

2 x SATA-2 channels (up to 300MB/s)

EIDE

2 x Enhanced IDE port (ATA/UDMA100)

Floppy

Shared with parallel port

Bus Interfaces

ISA

Standard ISA interface (via PCI/ISA bridge ITE 8888)

PCI

32 Bit, 33MHz standard interface (PCI 2.3)

Serial

I²C Bus
SMBus

Standard Interfaces

Parallel

Uni/EPP/ECP (shared with Floppy Port)

Serial

2x TTL

Infrared

1x IrDA 1.1 SIR interface

Keyboard / Mouse

PS/2 interface

USB

4 x USB 2.0 to ETX connector
2 x USB 2.0 to onboard Mini-USB connector

Display Interface

Graphics Controller

Intel® Graphics Media Accelerator 950 (integrated in Intel® 945GSE chipset)

Video Memory

UMA, up to 384 MB

LCD Interface

LVDS 24 Bit, dual channel, resolution 1920 x 1200;
2nd LVDS interface 18 Bit, dual channel on on-board connector (option)

CRT Interface

Resolution 2048 x 1536

Miscellaneous

Watchdog Timer

Initiates system reset, (programmable, 1s ... 255h)

Fan Supply

3-pin header (5V)

RTC

Part of ICH7DH, battery external

System Monitoring

Voltage, Temperature, Fan

Network Interface

Ethernet

10/100 Base-TX (part of Intel® ICH7DH)

Audio Interface

AC'97 Audio Interface (Via 1612A)

Firmware, Software

Boot Options

Quick Boot, MultiBoot XP (FD, HD, CD, LAN, USB), Boot without keyboard, LAN Boot via PXE (RPL optional)

Power Management

ACPI (S4, S5 supported), active/passive cooling

USB

USB legacy support (Keyboard, Mouse, Hub)

Video

VGA BIOS with flat panel extensions (EDID/EPI)

Setup

CMOS configuration backup in EEPROM

Software Support

HW Programming I/F

UspEpc (Universal board support package for embedded PCs)

BSP Support

Microsoft Windows XP (e), Linux

Power Supply

Power Supply Voltage

+5V +/-5%, 5V Stby optional

Power Consumption

10W typ. (N270, 1.6GHz)

Environment

Ambient Temperature

0° ... 60° C (operating)
-25° ... 85° C (storage)

Humidity

5 ... 95% (operating, non-condensing)
5 ... 95% (storage, non-condensing)

Mechanical

Dimensions

95mm x 114mm x12mm

Order Reference – MSC ETE-A945GSE

Order Number	Description	Reference
32391	Intel® Atom™ N270, 10/100/Base-TX	MSC ETE-A945GSE-N270-0300

Accessories

Order Number	Description	Reference
	Cooling	
1073444	Heatsreader for ETE-A945GSE, specially formed aluminum plate with M2.5 distance holders, screws, grommets and two thermopads. 6 holes for countersunk screws. No SO-DIMM cutout.	MSC ETE-A945GSE-01 HSP-001
1073643	Heatsreader for ETE-A945GSE, specially formed aluminum plate with pressed in distance holders (3mm inner diameter), screws, grommets and two thermopads. 6 holes for countersunk screws. No SO-DIMM cutout.	MSC ETE-A945GSE-02 HSP-001
1073416	Passive heat sink solution for ETE-A945GSE, single-piece aluminum profile with fins, M2.5 distance holders, screws, grommets and two thermopads. No fan, no SO-DIMM cutout.	MSC ETE-A945GSE-02 HSI-001
	Carrier Boards	
31635	Base board in ATX form factor; with many debugging aids, Super-I/O controller and various interfaces	MSC ETE-MB-ATX
32351	Base board in PISA form factor, also usable as stand-alone base board for evaluation and small series production; floppy controller; many PC typical I/O interfaces; power connector	MSC ETE-MB-PISA
	Memory Modules*	
1054514	DDR2 SODIMM,512MB,64Mx64,unb.,PC667,CL4, 1rank	HYMP164S64CP6-Y5-C
1051494	DDR2 SODIMM, 1GB, PC800, 128Mx64, 1.8V, 2rank	HYMP112S64CP6-S6
1051595	DDR2 SODIMM, 2GB PC800, 256Mx64, 128Mx8, CL5, 1.8V	HYMP125S64CP8-S6
	* Pe-qualified memory modules for the CPU product above	

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