

MSC CX-SK-A945M-IP1

Intel® ATOM™ Starter Kit



Description

The Starter Kit assembles all the items to build up a ready-to-use system including a pre-installed LINUX on a USB 2.0 memory stick.

Comprehensive information including the official COM Express™ specification from PICMG and a board support package make the Starter Kit a useful investment in the beginning of your first COM Express project.

The design of the MSC CXB-A945M module is based on Intel's new ATOM™ processor technology enabling to lower the power consumption for embedded applications to a minimum while maintaining high graphics performance.

The N270 CPU dissipation of only 2.5W is ideally suited for fan-less system designs. Paired with the successful Intel 82945GME, the design offers higher graphics performance as its little brother 945GSE.

Our industrial platform MSC CX-MB-IP1 offers a large variety of interfaces commonly used in industrial applications such as dual Gigabit LAN, USB 2.0, serial, LVDS and VGA/DVI for display support and even USB NAND storage. 32bit PCI and PCI Express are supported with slots and riser cards.

Highlights

- Industrial Mini-ITX Baseboard for COMe Type 2
- COM Express™ Atom N270 CPU, 1.6 GHz
- 1 GB SO-DIMM module installed
- Active heat sink with fan installed
- Optional 15" TFT open frame display
- Pre-installed LINUX on USB memory stick
- Extensive documentation on CD
- Board Support Package on CD
- Requires ATX power supply and USB Keyboard / Mouse

Technical Data – MSC SK-A945M-IP1

COM Express Module

Module: MSC CXB-A945M-N270-165000

CPU: Intel® Atom™ N270 (1.6GHz)

Chipset: Intel® 82945GME, ICH7DH

Memory: 1 GB DDR2 SO-DIMM installed

Drives

SATA: Two SATA-2 connectors (up to 300MB/s)

CompactFlash: Socket for True IDE devices using Master and Slave IDE channels

Standard Interfaces

USB: 8 x USB 2.0, 4 USB connectors on rear panel, USB NAND storage connector (e.g. Micron RealSSD Embedded USB)

Serial : COM1/2 on two 9-pin D-Sub connectors

LPT : Parallel Port on 2mm pin row available

Bus Interfaces

PCI Express : One PCI Express x1 slot, connector accessible via CX-MB-IP-RC1/ CX-MB-IP-RC3 adapter

PCI : One PCI slot 32-bit V2.1, PCI master, One connector for mini-PCI module

Flat Panel / CRT Interface

Graphics : Standard VGA monitor interface, (15-pin D-Sub) and Digital DVI monitor interface via Chrontel 7307 SDVO/DVI converter

LCD Interface: LVDS-Interface on JILI30 connector, EEPROM to store display data, Backlight connector onboard; cable kit and inverter available from MSC (visit our web site at www.msc-ge.com).

Miscellaneous

GPIO: 4 x GPO , 4 x GPI, TTL

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

System Control: Winbond W83627THF system monitoring and control (2 fans)

System Monitoring

Voltage: VBAT, 3.3V, 12V, 5V

Temperature: Monitoring thermistor onboard (system)

FAN: 2 x PWM controlled fan connectors onboard

LAN Interface

Ethernet: Dual LAN support: One RJ45 connector for GbE LAN on module, One RJ45 connector for onboard LAN (i82573), 10/100/1000 Mb/s, link and speed indicator LEDs

Sound Interface

Audio: High Definition Audio (HDA) codec for MIC, Line-In, Line-Out, Centre/LFE Surround Side (VT1708A) requires module to support HDA

Security Device

Infineon Trusted Platform Module 1.2 SLB 9635

Power Supply

Power: Standard 20-pin ATX power connector and additional 4-pin ATX12V connector; power requirement is module dependant

Power Consumption: 10W typ. additional power required for backlight, USB or drives

Environment

Ambient: 0° ... +60°C operating

Temperature: -25° ... 85°C storage

Humidity : 20 ... 80% operating, 5 ... 95% storage (non condensing)

Mechanical

Dimensions: 170mm x 170mm, (LxW)

Cooling Solution

Heatsink: MSC CXB-HEATSINK-945-2.7 with CPU fan installed

Accessories

Passive Heatsink: MSC CXB-HEATSINK-PASSIVE-945-2.7

Heatspreader: MSC CXB-HEATSPREADER-A945M-ES

Order Reference – MSC CX-SK-A945M-IP1

Order Number	Description	Reference
	MSC COM Express Intel Atom Starter Kit	MSC CX-SK-A945M-IP1-001-KIT000
	MSC COM Express Intel Atom Starter Kit, 15" TFT display	MSC CX-SK-A945M-IP1-001-KIT001
	Riser card for one PCI and one PCI Express x1 slot access	MSC CX-MB-IP-RC1
	Riser card for two PCI slots access	MSC CX-MB-IP-RC2
	Riser card for three PCI and one PCI Express x1 slot access	MSC CX-MB-IP-RC3
	Riser card for four PCI slots access	MSC CX-MB-IP-RC4

Accessories

Order Number	Description	Reference
	Cooling	
1073524	Passive Heatsink for CXB-A945M	MSC CXB-A945M-01 HSI-001
	Memory Modules	
	Pse-qualified memory modules are available on demand	

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