

ICES 251X

COM Express Type 2 Compact Module with Intel® Atom™ N450 1.66GHz

DDR2, Extended -40°C to + 85°C



Main Features

- Support Wide Range Operating Temperature
- Low Power COM Express CPU Module
- On-board Intel® Atom™ N450 1.66GHz Processor
- Intel® ICH8M Chipset
- Support DDR2 667 SO-DIMM up to 2GB
- Intel® PCI Express GbE 82574L
- Support 3x SATA, 1x IDE, 8x USB2.0 for Fast Peripherals
- Compact COM Express Type II Supports up to 5 Express Lanes, 32 bit PCI Interface and One IDE and Gigabit LAN

Product Overview

The ICES 251X is a COM Express Type 2 compact module that features Extended -40°C to + 85°C operating temperature with Intel® Atom™ N450 1.66GHz and ICH8M in small foot print. ICES 251X supports operating temperature form -40°C to 85°C. It also provides outstanding performance in the combination of high computing power and low thermal dissipation. ICES 251X supports DDR2 667 SO-DIMM memory up to 2GB, and supports 3x SATA, 1x IDE, 8x USB2.0 for fast peripherals. ICES 251X is type 2 COM Express Module support up to 5 Express lanes, 32 bit PCI interface and one IDE and Gigabit LAN.

Specifications

CPU Support

- On-board Intel® Atom™ N450 1.66GHz processor

Main Memory

- Support one un-buffered non-ECC DDR2 SO-DIMM 667 up to 2GB

Chipset

- Intel® ICH8M chipsets

BIOS

- AMI System BIOS
- SPI ROM
- Plug and play support
- Advanced power management and advanced configuration & power interface support

On-board LAN

- Intel® PCI Express GbE 82574L x 1
- Support PXE LAN boot function
- Support Wake on LAN function

Display

- Intel® N450 integrated graphics solution with dynamic video memory allocation
- Analog monitor with pixel resolution up to 1400x1050 @60Hz
- Support Single channel for 18 bit

- LFP (local fl at panel) LVDS interface

Audio

- HD configurable audio bus interface

Storage

- 3 x SATA
- 1 x IDE

I/O Interface

- Reset signal
- 8 GPIO lines (GPI 0~3 and GPO0~3), CMOS Level (0/3.3V)
- I2C interface/ SMBus interface
- USB 2.0 x 8
- PATA

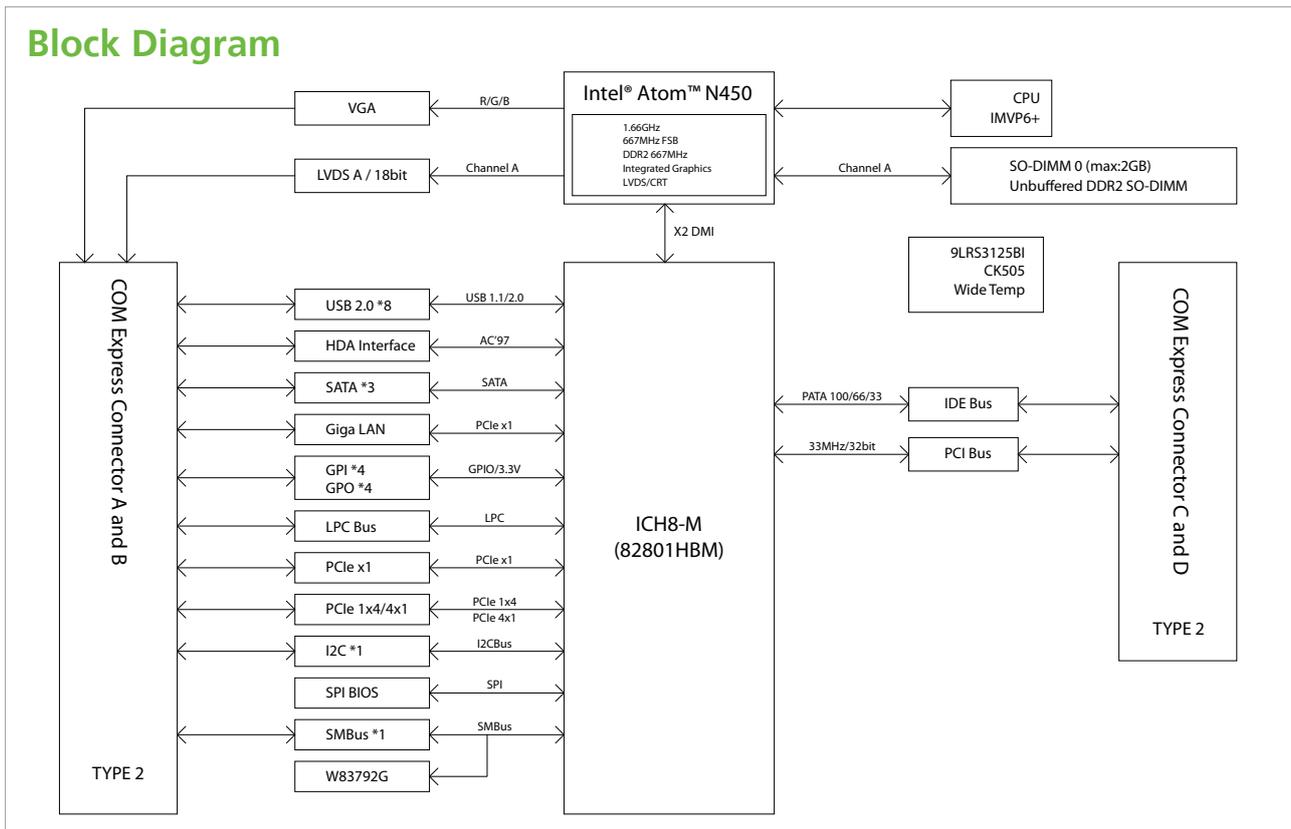
Other Interfaces

- One 3pin fan connector (90 degree, 12V)

COM Express Connector

- AB connector
VGA/ LVDS/ 8x USB/ HD audio interface/ 3 x SATA/ LAN/ GPIO (3.3V)/ LPC bus
- 1x PCIe X4/ 1x PCIe X1/ SMBus/ I2C/ SPI BIOS
- CD connector, IDE, PCI

Block Diagram



System Monitor

- Monitoring of 4 voltages, 2 temperatures and 1 fan speed
- 4 voltages (For +5V, +12V, Vcore, +3.3V)
- 2 temperatures (CPU and one external temperature sensor)

Power Requirements

- +12Vdc, 3.3V battery, +5Vsb power input
- Support both AT and ATX power supply mode

Power Management

- ACPI 2.0 compliant with battery support. Also supports suspend to RAM (S3)

Carrier Board

- ICEB 8050

Dimensions

- 95mm (W) x 95mm (L)

Environment

- Operating temperature: -40°C to 85°C
- Storage temperature: -40°C to 85°C
- Relative humidity:
 - 10% to 97% (operating, non-condensing)
 - 5% to 97% (non-operating, non-condensing)

Certifications

- CE approval
- FCC Class A

Ordering Information

• ICES 251X (P/N:10K00025102X0)

COM Express Type 2 Compact Module Extended -40°C to + 85°C with Intel® Atom™ N450 1.66GHz DDR2/ PCIe/ PCI/ IDE/ GbE/ LVDS/ audio interface

• ICEB 8050 (P/N:10KB0805000X0)

COM Express Type 2 evaluation board with PCIe/ PCI/ SATA/ CF/ IDE/ COM/ USB/ LVDS/ VGA/ LAN