# ICES 253

**Intel® Atom™ D525 1.8GHz Micro COM Express Type II Module**



## Main Features

- Low Power COM Express CPU Module
- Onboard Intel® Atom™ Dual Core D525 1.8GHz Processor
- Intel® ICH8M Chipset
- Support DDR2 667 and 800 SO-DIMM up to 2GB

- Intel® PCI Express GbE 82574L
- Support 3 x SATA, 1 x IDE, 8 x USB2.0 for fast peripherals
- Micro COM Express Type II supports up to 5 Express lanes, 32 bit PCI interface and one IDE and Gigabit LAN

## Product Overview

ICES 253 is a COM Express module that features Intel® Atom™ D525 1.8GHz and ICH8M in small foot print. ICES 253 provides outstanding performance in the combination of high computing power and low thermal dissipation.

ICES 253 supports DDR2 667 SO-DIMM memory up to 2GB, and supports 3 x SATA, 1 x IDE, 8 x USB2.0 for fast peripherals.

ICES 253 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**
- Onboard Intel® Atom™ Dual Core D525 1.8GHz Processor

**Chipset**
- Intel® ICH8M chipsets

**Main Memory**
- Support one un-buffered non-ECC DDR2 SO-DIMM 667 and 800 up to 2GB

**BIOS**
- AMI System BIOS
- SPI ROM
- Plug & Play support
- Advanced Power Management and Advanced Configuration & Power Interface support

**Display**
- Intel® Atom™ D525 integrated graphics solution with dynamic video memory allocation
- Analog monitor with pixel resolution up to 2048 x 1536 @60Hz
- Support Single channel for 18 bit
- LFP (local flat panel) LVDS interface

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

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

**Storage**
- 3 x SATA
- 1 x IDE

**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

**Extension**
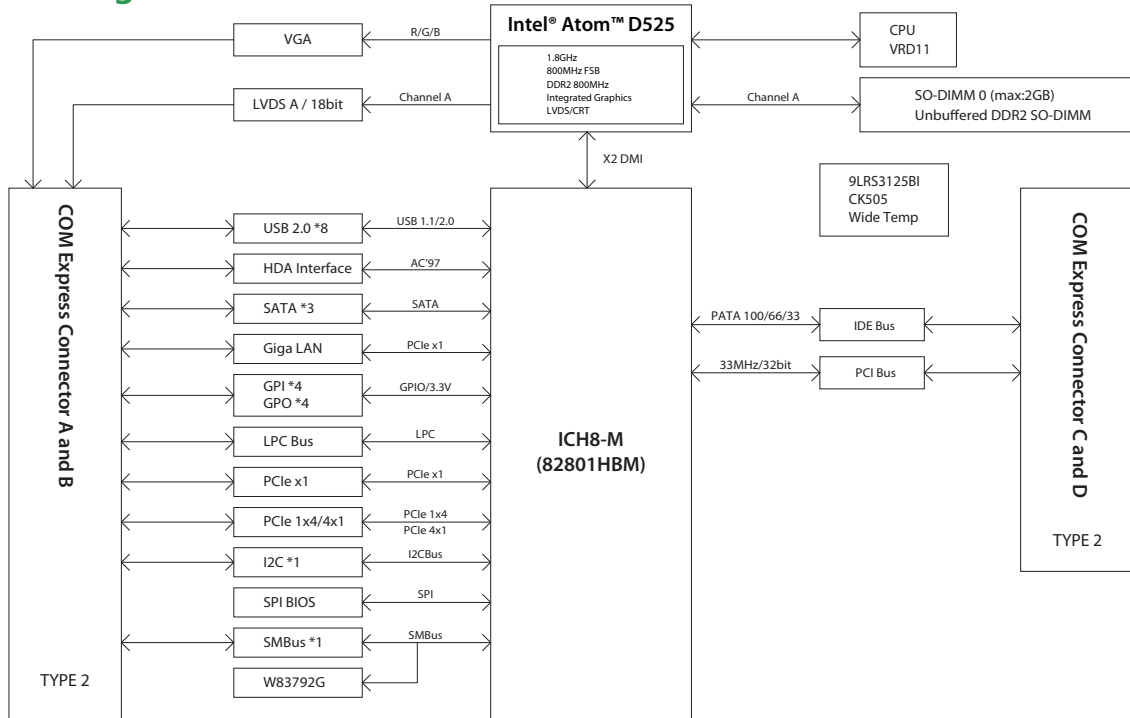- One 32-bit PCI V2.3 interface
- One PCI express: 5 Lanes (via dip switch for 5 x 1 or 1 x 1+ 1 x 4)

**Other Interfaces**
- One 3pin fan connector (Reserved, 90 degree, 12V)

# Block Diagram



## COM Express Connector

- AB connector
  VGA/LVDS/8 x USB/HD Audio interface/3 x SATA/LAN/GPIO(3.3V)/LPC bus/ 1 x PCIe x4/1 x PCIe x1/SMBus/I2C/SPI BIOS
- CD connector, IDE, PCI

## 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)

## System Monitor

- Monitoring of 4 voltages, 2 temperatures and 1 fan Speed
- 4 voltage (For +5V, +12V, Vcore, +3.3V)
- 2 Temperatures (CPU and one external Temperature Sensor)

## Carrier Board

- ICEB 8050

## Dimensions

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

## Environment

- Operating temperature: -20°C to 60°C
- Storage temperature: -20°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 253 (P/N: TBD)**
  Micro COM Express Type II Module Atom™ D525 1.8GHz COM Express Module

**NEXCOM**

COM Express

We reserve the right to change specifications and product descriptions at any time without prior notice.

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