

Main Features

- COM Express COM.0, Rev2.0 Evaluation carrier, ATX form-factor
- Support Type 2 pin-outs, COMe Extended/ Basic/ Compact Module
- Display: VGA & dual channels 18/24-bit LVDS
- Bootable CFAST or Mini-SATA, CF and shared IDE
- PCIe x16, PCIe x4, PCIe x1, PCI x1 and Mini-PCIe for Wi-Fi
- PS2/KB/Mouse, LPT/ RS232/422/485, VGA/GbE/4USB/ 5.1, S/PDIF

Product Overview

NEXCOM ICEB 8050C is a COM Express type 2, pin-out defined by PICMG, COM.0 Rev. 2.0 specification with ATX form-factor. In-house designed features with bootable CFAST/ SATA or Mini-SATA/ SATA via Mini-PCIe slot (half-/ full-size slot) as well as legacy SATA and CF/ shared IDE-HDD interfaces. ICEB 8050C support added-on card slots of 1x PCIe x16, 1x PCIe x4, 1x PCIe x1 and 1x PCI (32/33Mhz) slots. Onboard Super I/O W83627DHG-PT maybe backward compatible of legacy BIOS.

- Faster system Time-to-market
ICEB 8050C new type 2 carrier MB may help your system design customer to reduce total development cycle time from our proof-of-concept and design-assistance support for your own customized carrier board.
- CPU support from Atom™ to Core™ i7/ i5/ i3, Celeron® M
It is ready and easy to adapt with our various CPU/ SKU from Intel® Atom to 2nd generation Intel® Core™ i7/ i5/ i3, Celeron® M-based COM Express core module from compact size (95x 95mm) like ICES 251/ ICES 253/ ICES 254 to Basic-size (125 x 95mm) like ICES 270/ ICES 267/ ICES 267S.
- Longevity for your multi-generation durable equipment
Once you designed common I/O carrier solution board, you may adapt multiple COMe modules with different CPU and upgradable by follow 440pos type-2 pin-outs board-to-board connectors of PICMG COM.0 Rev. 2.0 specification.

Specifications

Form factor

- ATX Carrier MB, dimension: 305mm x 244mm (12" x 9.9")
- COM Express Evaluation CRB: PICMB COM Express board-to-board interconnectors, type 2 pin-outs, female, 8mm stack-up height, COM.0 Rev. 2.0

NEXCOM Computer-On-Modules Support List

- Compact Size (95x 95mm) : ICES 251/ ICES 251X, ICES 253, ICES 254
- Basic Size (125x 95mm) : ICES 270, ICES 267/ ICES 267S

Expansion

- 1x PCIe x16 slot, support PEG interfaces
- 1x PCIe x4 slot, optional 4x PCIe x1 signals
- 1x PCIe x1 slot and 1x PCI (v2.3) slot
- 1x Mini-PCIe slot for Wi-Fi with SIM tray

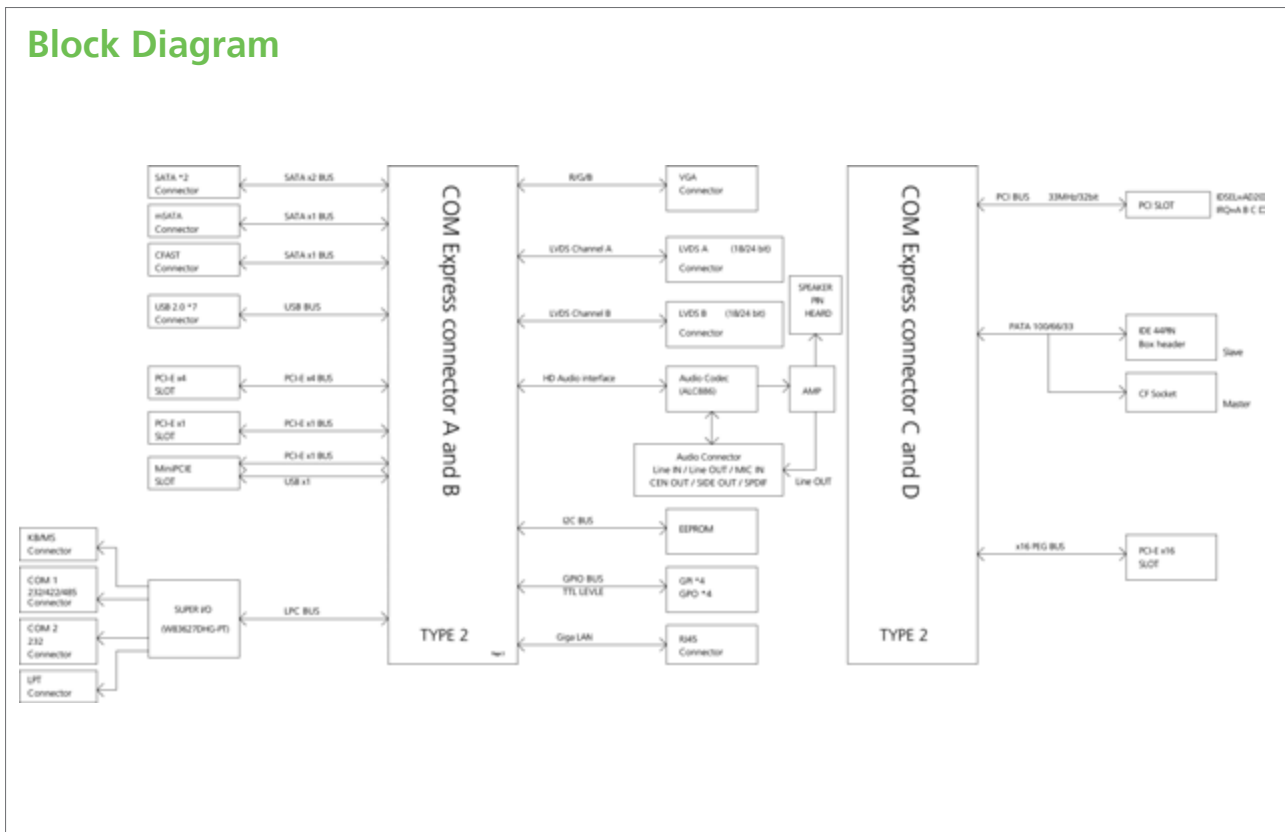
Graphic Interfaces

- Graphic Chip: from Type 2 pin-out, COM Express module
- CRT: support analog VGA with DB15 connector on the I/O edge
- LVDS: dual channels 18/24-bit LVDS connector (dual DF-13-20P)
- PCIe x16: optional EBK-A2HDMI (ICES254 only) riser card for HDMI or DP

Super I/O

- Winbond W83627DHG-PT

Block Diagram



I/O Interface

- Serial COM: 2 ports
- 1x edge DB9 connector to support RS232/ 422/ 485 (+5/ +12V by Ring)
- 1x internal box-header 2.0 pitch to support RS232
- USB2.0: 8 ports
- 4x USB2.0 ports by stack Type A on edge
- 3 USB2.0 by 4-pins JST 2.0mm JST connector,
- 1x internal USB 2.0 to Mini-PCIe slot for external wi-fi module
- SATA 2.0: 4 ports
- 2x SATA 2.0 ports
- 1x Mini-SATA by Mini-PCIe slot for half-/ full size mSATA-SSD
- 1x CFAST slot for CFAST/ SATA 2.0
- CF: 1x CF/ shared IDE slot onboard (default master-mode)
- IDE: 1x 44pins box-header for legacy IDE-HDD
- PS/2: 2x PS/2 connectors on edge for Keyboard/ Mouse
- Printer Port: 1x DB25 on edge for legacy printer interface
- GPIO ports: 8x pins GPIO signals from COMe (default 5V TTL/ option 3.3V)

Network

- LAN chip: from COMe CPU module
- Support 1x RJ45/ GbE port on the edge I/O

Audio

- HD Audio AL886 with 5.1 channels
- Support external S/PDIF interface
- Support internal pin-header for L/R speaker-out 2W/ 4 Ohm

EEPROM

- 1x 2K EEPROM to record PCI Express Lane configuration
- ATMEL AT24C32 (or C02) and address 0 x 57 or (0xAE)

Watchdog Timer

- Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% temperature 25°C)

On-board RTC

- On-chip RTC with battery BR2032

Power Input

- Standard ATX 24 pins and AUX 4-pins with 12V

Dimensions

- ATX form factor, 305 x 244mm (L x W, 12"x9.6")

Environment

- Operating temperatures: -20°C to 60°C
- Storage temperature: -40°C to 85°C
- Relative humidity: Operating 10% to 90%, non-condensing

Certifications

- CE approval
- FCC Class A

Ordering Information

- ICEB 8050C (P/N: 10KB0805001X0) RoHS Compliant**

COM Express Type 2, COM.0 Rev. 2.0 Evaluation CRB, VGA/ LVDS/ 8x USB 2.0/ 2x COM/ GbE/ LPT/ 5.1 HD/ SPDIF/ CF/ shared IDE/ mSATA/ CFAST/ PCIe x16/ PCIe x4/ PCI/ mPCIe, ATX power input