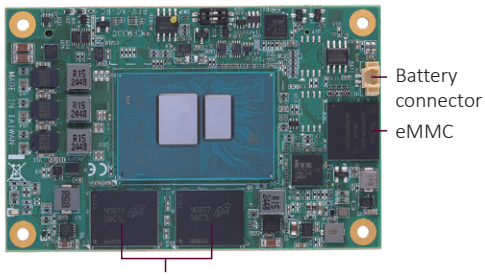
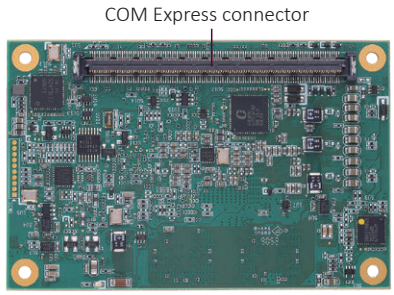
CEM330

COM Express Type 10 Mini Module with Intel Atom® X7000 or Intel® Core™ i3/N-series Processors



▲ Front view



▲ Rear view

DDR5 | USB 3.2 | Dual-View | All Solid Caps | Low Power | Wide Temp.

Features

- Intel Atom® X7000 or Intel® Core™ i3/N-series processors (Amston Lake/Alder Lake-N)
- Up to 16GB LPDDR5 memory onboard
- Supports up to 4 PCI Express lanes
- Up to 2 SATA 3.0
- 2 USB 3.2 and 8 USB 2.0
- eMMC and TPM 2.0 onboard

Specifications

Core System	
CPU	Intel Atom® X7000 or Intel® Core™ i3 N-series processors
System Memory	LPDDR5-4800, up to 16GB
Chipset	SoC integrated
BIOS	AMI uEFI (Legacy free)
Storage	32GB/64GB eMMC onboard
Watchdog Timer	65536 levels, 0 to 65535 sec.
Expansion Interface	Up to 4 x PCIe x1
Battery Lithium	Yes
Power Input	ATX: +12V, +5VSB AT: +12V Extended voltage: +4.75V to +20V
Display	
Chipset	Intel® UHD Graphics
Display Interface	1 x LVDS; 18/24-bit single channel (optional eDP 1.4b) 1 x DDI (with up to 4K supported)

Specifications

I/O	
SATA	2 x SATA 3.0 (optional)
Hardware Monitoring	Yes
Ethernet	1 x 10/100/1000/2500 Mbps Ethernet with Intel® I226LM, supporting Wake-on-LAN
Audio	HD link interface to baseboard for Codec
USB	2 x USB 3.2 Gen 2 8 x USB 2.0
Serial	1 x LPC 1 x SPI 2 x TX/RX
TPM	TPM 2.0
SMBus	Yes
Others	1 x I^2C
GPIO	4-CH in/4-CH out
Smart Battery	Yes
Mechanical and Environmental	
Dimensions	84 x 55 mm
Board Thickness	2.0 mm
Operating Temperature	Extended temp SKU:-40°C to +85°C (-40°F to +185°F), operation with a system thermal solution Standard temp SKU:-20°C to +70°C (-4°F to +158°F) with standard thermal solution
Relative Humidity	10% to 95% relative humidity, non-condensing
Vibration Endurance	3.5 Grms

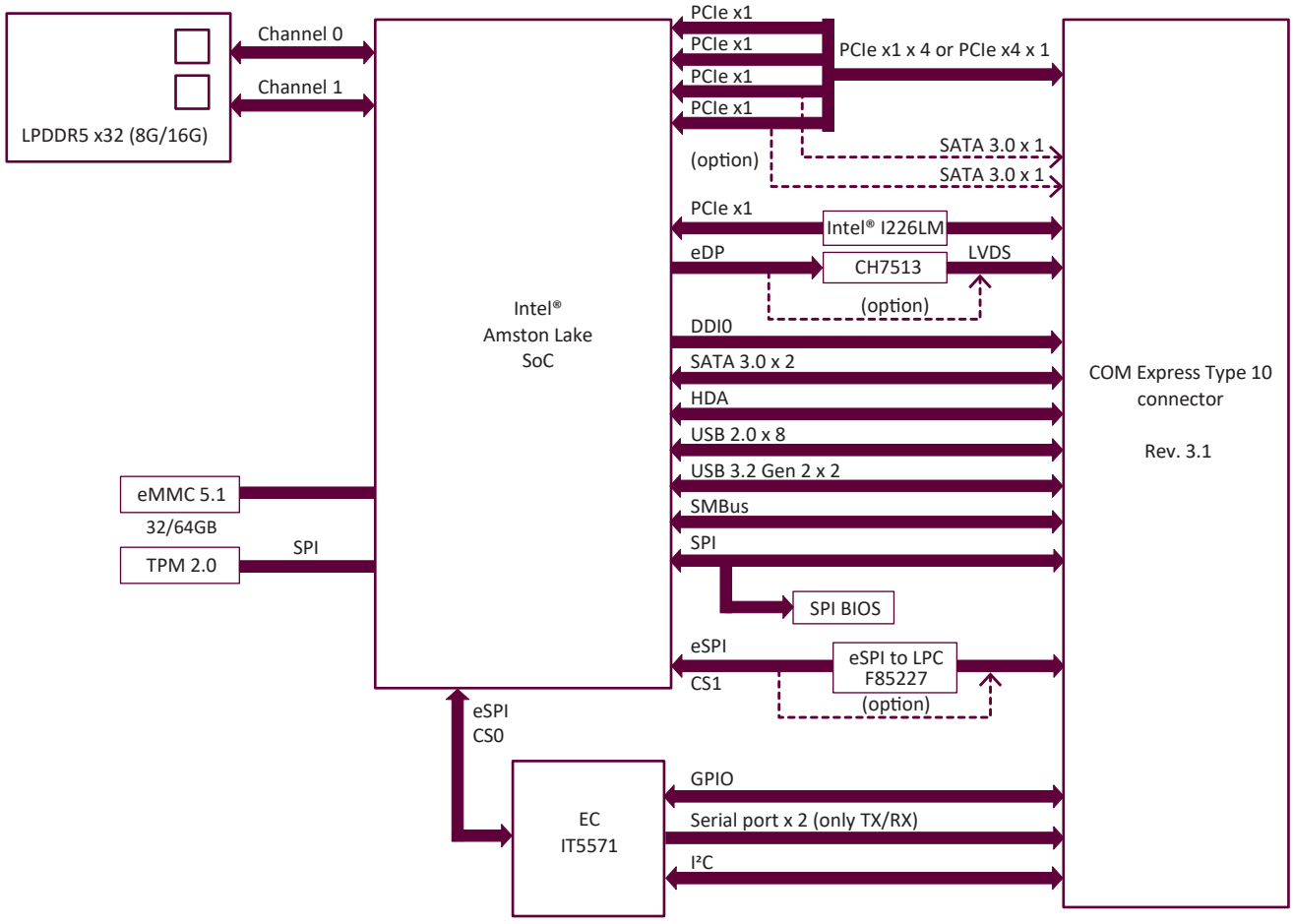
Ordering Information

Standard	
CEM330 X7433RE-4G/32G (P/N: E38D330105)	COM Express Type 10 Mini module with Intel Atom® X7433RE, LPDDR5 4GB, 32GB eMMC, DDI, LVDS, USB 3.2, and GbE LAN (industrial temperature)
Optional	
CEM330 X7835RE-16G/64G	COM Express Type 10 Mini module with Intel Atom® X7835RE, LPDDR5 16GB, 64GB eMMC, DDI, LVDS, USB 3.2, and GbE LAN (industrial temperature)
CEM330 X7433RE-8G/64G	COM Express Type 10 Mini module with Intel Atom® X7433RE, LPDDR5 8GB, 64GB eMMC, DDI, LVDS, USB 3.2, and GbE LAN (industrial temperature)
CEM330 X7211RE-8G/32G	COM Express Type 10 Mini module with Intel Atom® X7211RE, LPDDR5 8GB, 32GB eMMC, DDI, LVDS, USB 3.2, and GbE LAN (industrial temperature)
CEM330 X7425E-16G/64G	COM Express Type 10 Mini module with Intel Atom® X7425E, LPDDR5 16GB, 64GB eMMC, DDI, LVDS, USB 3.2, and GbE LAN (commercial temperature)
CEM330 X7213E-8G/32G	COM Express Type 10 Mini module with Intel Atom® X7213E, LPDDR5 8GB, 32GB eMMC, DDI, LVDS, USB 3.2, and GbE LAN (commercial temperature)
CEB94017 (P/N: E394017101)	COM Express Type 10 development baseboard
712000012700	CEM330 heatspreader
5078D840200E	Active cooler with fan (should be assembled with heat spreader)

Packing List

Quick installation guide

Block Diagram



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