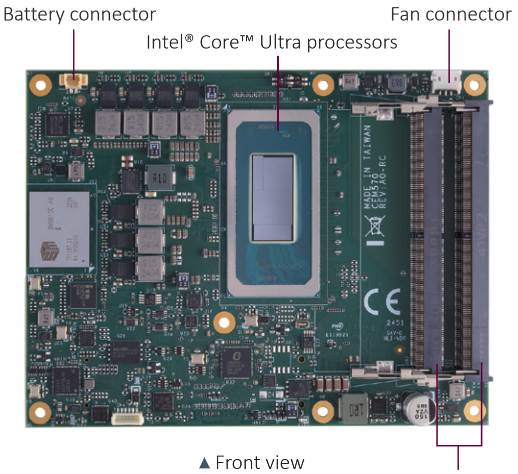
CEM570

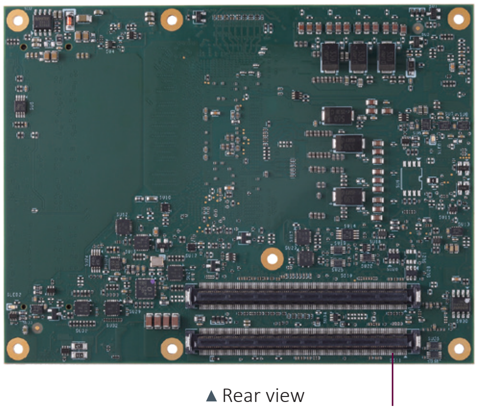
NEW

COM Express Type 6 Basic Module with Intel® Core™ Ultra Processors Family (Meteor Lake U/H)



▲ Front view

2 x DDR5 SO-DIMM



▲ Rear view

COM Express connector

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

Features

- Intel® Core™ Ultra processors family (Meteor Lake U/H)
- Dual channel DDR5-5600 SO-DIMM, up to 96GB
- Up to 20 PCIe lanes
- 2 SATA 3.0
- Up to 4 USB 3.2 Gen 2 and 8 USB 2.0
- Supports up to 512GB NVMe storage
- Supports TPM 2.0

Specifications

Core System

CPU	Intel® Core™ Ultra processors family (Meteor Lake U/H)
System Memory	2 x DDR5-5600 SO-DIMM, up to 96GB
Chipset	SoC integrated
BIOS	AMI uEFI (Legacy free)
SSD	NVMe for up to 512GB
Watchdog Timer	65536 levels, 0 to 65535 sec.

Specifications

Core System	
Expansion Interface	Up to 1 x PCIe Gen 4 x8 (PEG), 2 x PCIe Gen 4 x4 (PEG)+ 8 x PCIe Gen 3 x1 (HSIO) *Please refer to the HSIO configuration table below
Battery Lithium	Yes
Power Type	ATX: Vin and VSB AT: Vin
Power Input	Vin: 8 to 20V VSB: 4.75 to 5.25V RTC battery: 2.0 to 3.3V with support for AT and ATX modes
Display	
Chipset	Intel® Arc™ Graphics (X^e LPG)
Display Interface	Quad simultaneous independent displays are supported (5 x display signals from module): 1 x LVDS; 18/24-bit single/dual channel (optional eDP 1.4b HBR3: 5120 x 3200 @ 60 Hz) 3 x DDI with configurable HDMI 2.1 (4096 x 2304 @ 60 Hz) and DisplayPort 2.1 HBR3 (4096 x 2304 @ 60 Hz) 1 x VGA; 1920 x 1200 @ 60 Hz
I/O	
SATA	2 x SATA 3.0
Hardware Monitoring	Yes
Ethernet	1 x 10/100/1000/2500 Mbps Ethernet with Intel® I226, supporting Wake-on-LAN and PXE Boot ROM
Audio	HDA link interface to baseboard for audio codec
USB	Default: 3 x USB 3.2 Gen 2 Up to 4 x USB 3.2 Gen 2 by request 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^{2}C
GPIO	4-CH in/4-CH out
Smart Battery	Yes
Mechanical and Environmental	
Dimensions	125 x 95 mm
Board Thickness	2.0 mm
Operating Temperature	Standard: 0°C to +60°C (+32°F to +140°F) with a system thermal solution Extended range available upon request: -40°C to +85°C (-40°F to +185°F) with a system thermal solution
Relative Humidity	10% to 95% relative humidity, non-condensing
Vibration Endurance	3.5 Grms

HSIO Configuration Table

Configuration	CPU SKU	PEG		
Default	H	1 (x8)	1 (x4)	1 x NVME
Optional			2 (x4)	N/A
Default	U	N/A	1 (x4)	1 x NVME
Optional		N/A	2 (x4)	N/A

Configuration	HSIO (U/H)		
Default	3 (x1) +1 (x4) PCIe: 3 (x1) (from controller B) COMe [7:5] 3 (x1), 1 (x1) + 1 (x2) 1 (x4) (from controller C) COMe [3:0] 1 x (x4) for one PCIe x4 device	2 x SATA 3.0	1 x LAN
Optional	4 (x1) (from controller A) COMe [3:0] 4 (x1), 2 (x2), 1 (x4) 3 (x1) (from controller B) COMe [7:5] 3 (x1), 1 (x1) + 1 (x2)	N/A	1 x LAN
	4 (x1) (from controller A) COMe [3:0] 4 (x1), 2 (x2), 1 (x4) 4 (x1) (from controller B) COMe [7:4] 4 (x1), 2 (x2), 1 (x4)	N/A	N/A

Ordering Information

Standard	
CEM570 U7-155H (P/N: E38D570101)	COM Express Type 6 Basic module with Intel® Core™ U7-155H, DDI, LVDS, 2.5GbE LAN, 64GB NVMe, and TPM
CEM570 U5-125U (P/N: E38D570104)	COM Express Type 6 Basic module with Intel® Core™ U5-125U, DDI, LVDS, 2.5GbE LAN, and TPM
Optional	
CEM570-U7-165H (P/N: TBD)	COM Express Type 6 Basic module with Intel® Core™ U7-165H, DDI, LVDS, 2.5GbE LAN, 64GB NVMe, and TPM
CEM570-U5-125H (P/N: TBD)	COM Express Type 6 Basic module with Intel® Core™ U5-125H, DDI, LVDS, 2.5GbE LAN, 64GB NVMe, and TPM
CEM570-U7-155U (P/N: TBD)	COM Express Type 6 Basic module with Intel® Core™ U7-155U, DDI, LVDS, 2.5GbE LAN, 64GB NVMe, and TPM
CEM570-U7-125U (P/N: TBD)	COM Express Type 6 Basic module with Intel® Core™ U7-125U, DDI, LVDS, 2.5GbE LAN, 64GB NVMe, and TPM
CEB94011 (P/N: E394011101)	COM Express Type 6 evaluation board
E39R170100	Cooler CEM570 L125 W95 T43.5
E39R170101	Heatspreader CEM570 L125 W95 T10.95

Block Diagram