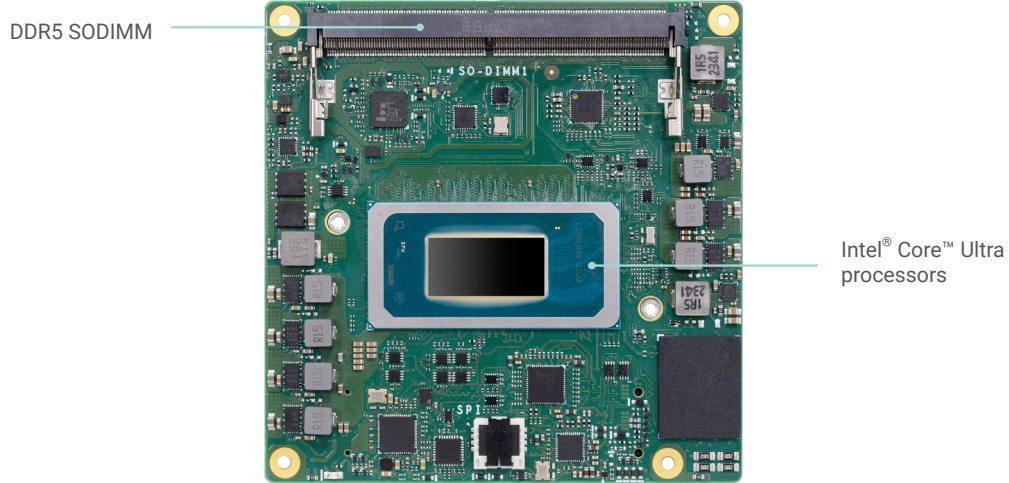
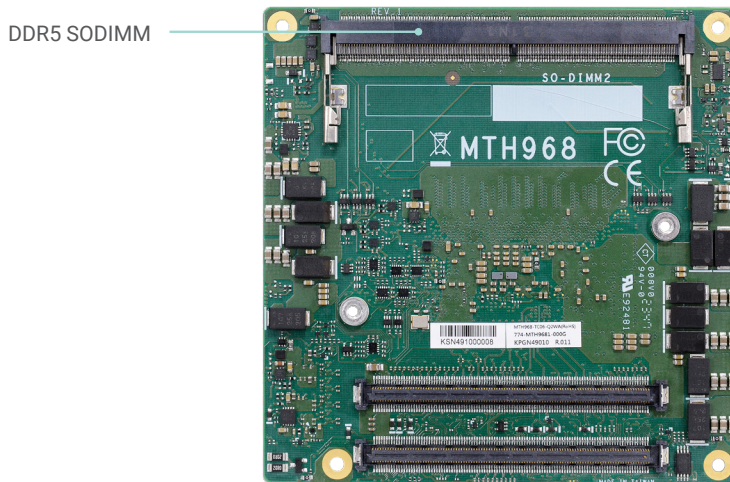


MTH968

Intel® Core™ Ultra processors
COM Express® Compact



Top View



Bottom View

KEY FEATURES



DDR5

Dual Channel DDR5
5600MHz SODIMM up
to 96GB



4K High Resolution

Supports 4K / 2K resolution



Multiple Displays

1 VGA, 1 LVDS/eDP,
2 DDI



Multiple Expansion

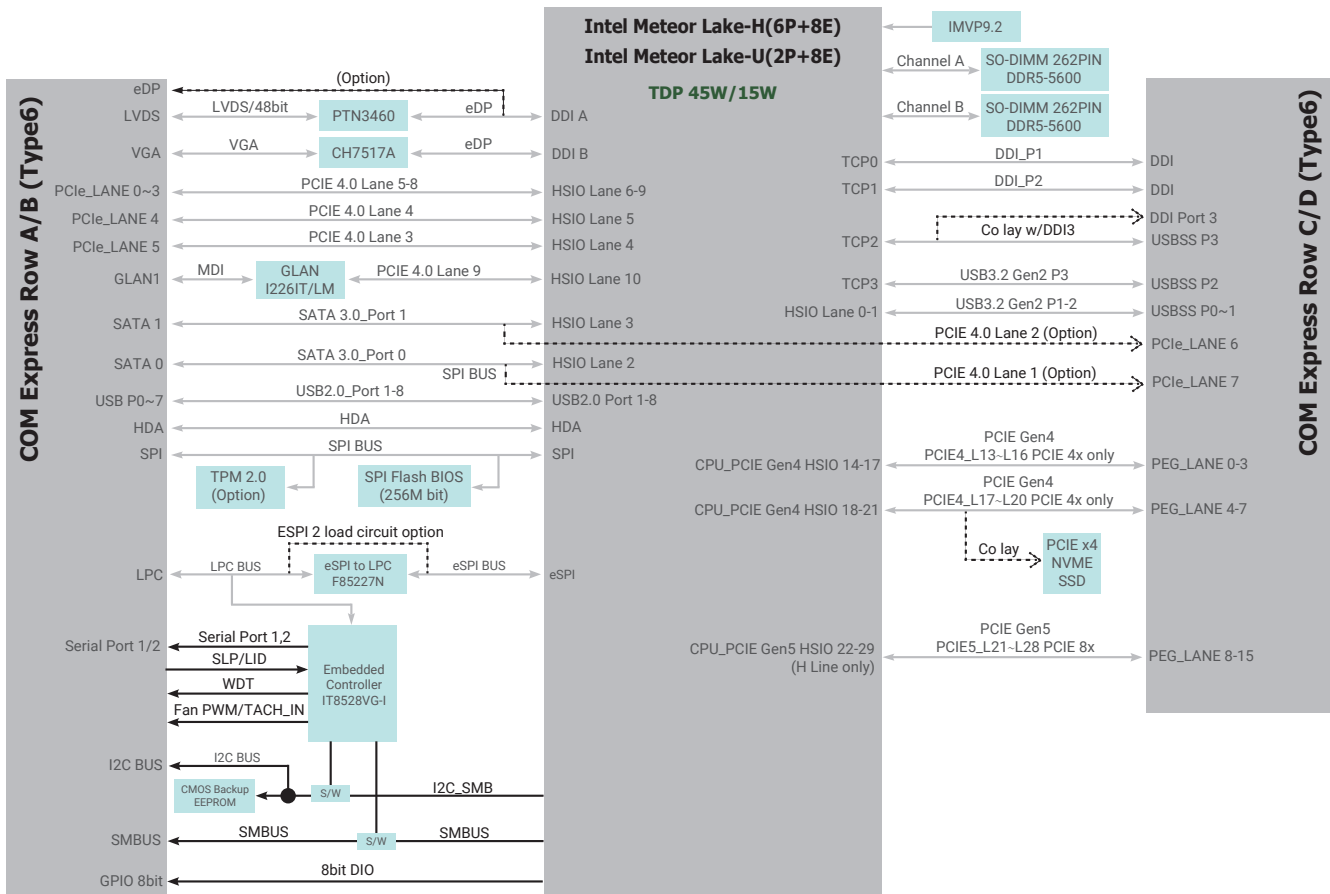
8 PCIe x1, 2 PCIe x4,
1 PCIe x8, 1 I2C,
1 SMBus, 1 LPC/eSPI,
2 UART



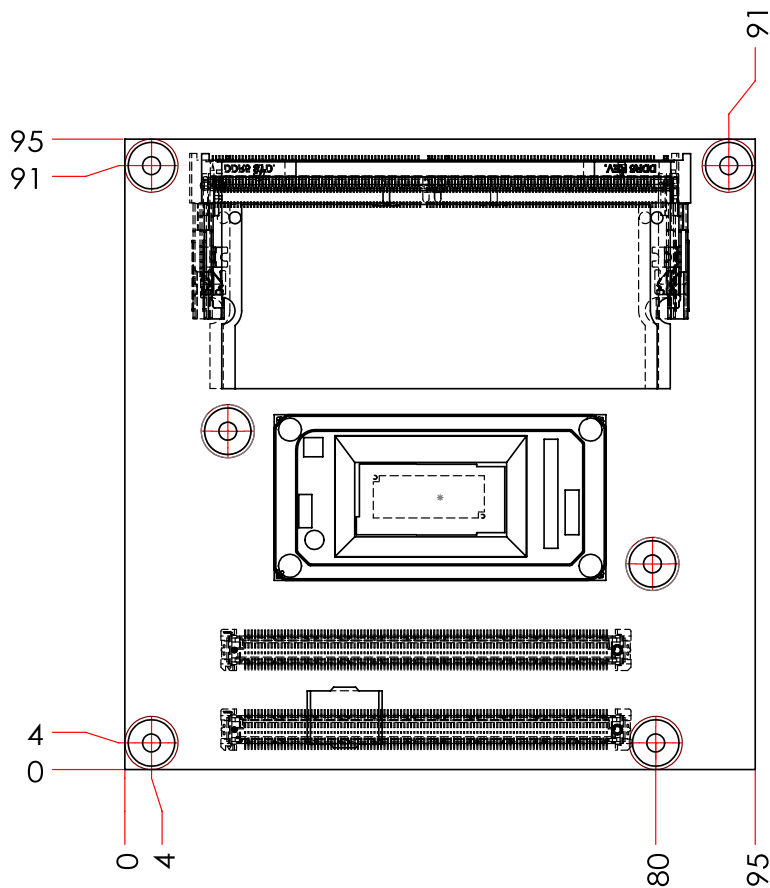
RICH I/O

1 Intel 2.5GbE,
2 USB 4.0, 4 USB 3.2,
8 USB 2.0, 2 SATA 3.0

BLOCK DIAGRAM



MECHANICAL DRAWING



SPECIFICATION

SYSTEM	Processor	Intel® Core™ Ultra Processor (Meteor Lake: U/H-series) Intel® Core™ Ultra 7 165H (6 P-Cores x 1.4 GHz, 8 E-Cores x 0.9 GHz, 24 MB cache, 28W) Intel® Core™ Ultra 7 155H (6 P-Cores x 1.4 GHz, 8 E-Cores x 0.9 GHz, 24 MB cache, 28W) Intel® Core™ Ultra 5 135H (4 P-Cores x 1.7 GHz, 8 E-Cores x 1.2 GHz, 18 MB cache, 28W) Intel® Core™ Ultra 7 165U (2 P-Cores x 1.7 GHz, 8 E-Cores x 1.2 GHz, 12 MB cache, 15W) Intel® Core™ Ultra 7 155U (2 P-Cores x 1.7 GHz, 8 E-Cores x 1.2 GHz, 12 MB cache, 15W) Intel® Core™ Ultra 5 125U (2 P-Cores x 1.3 GHz, 8 E-Cores x 0.8 GHz, 12 MB cache, 15W)
	Memory	Two 260-Pin SO-DIMM up to 96GB Dual Channel DDR5 5600MHz
	BIOS	AMI BIOS
GRAPHICS	Controller	Intel Xe LPG graphics
	Feature	DX12, Open GL 4.6, Vulkan 1.2 HW Decode: MPEG2, AVC/H264, JPEG/MJPEG, HEVC/H265, VP9 and AV1 HW Encode: AVC/H264, JPEG, HEVC/H265, VP9 and AV1.
	Display	1 x VGA 1 x LVDS/eDP (eDP available upon request) 2 x DDI (The 3rd DDI BOM option with USB3) VGA: resolution up to 1920x1200 @ 60Hz LVDS: dual channel 24-bit, resolution up to 1920x1200 @ 60Hz eDP: resolution up to 4096x2304 @ 60Hz HDMI: resolution up to 4096x2160 @ 30Hz DP++: resolution up to 4096x2304 @ 60Hz
	Multiple Displays	VGA + LVDS + 2 DDI VGA + LVDS + 3 DDI (available upon request)
EXPANSION	Interface	1 x PCIe x8 (Gen 5) on PEG, H-series only 2 x PCIe x4 (Gen4) on PEG 8 x PCIe x1 (Gen 4) 1 x SMBus 1 x SPI 2 x UART (TX/RX) 1 x LPC (co-lay with eSPI)
AUDIO	Interface	HD Audio
ETHERNET	Controller	1 x Intel® I226 series (10/100/1000Mbps/2.5G), co-lay PCIe x1 (available upon request)
I/O	USB	4 x USB 3.2 (Gen2, 1 co-lay with DDI) 8 x USB 2.0
	SATA	2 x SATA 3.0 (up to 6Gb/s), co-lay 2 PCIe x1 (available upon request)
	NVMe SSD	1 x 128GB/256GB/512GB/1024GB on board SSD (available upon request)
	DIO	1 x 8-bit DIO
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds
SECURITY	TPM	Available Upon Request
POWER	Type	8.5~20V, 5VSB, VCC_RTC (ATX mode) 8.5~20V, VCC_RTC (AT mode)
	Consumption	TBD
OS SUPPORT	Microsoft	Windows 11/10 IoT Enterprise 64-bit
	Linux	Linux
ENVIRONMENT	Temperature	Operating: 0°C~60°C Storage: -40°C~85°C
	Humidity	Operating: 10%~90% RH Storage: 10%~90% RH
	MTBF	TBD
MECHANICAL	Dimensions	COM Express® Compact 95mm (3.74") x 95mm (3.74")
	Compliance	PICMG COM Express® R3.1, Type 6
STANDARDS AND CERTIFICATIONS	Certification	CE, FCC, RoHS

ORDERING INFORMATION

Model Name	P/N	Processor	Memory	LVDS/eDP	LAN/ PCIe	SATA/ PCIe	TPM	Storage	Power	Thermal	Temp.
MTH968-BC06-165H	770-MTH9681-000G	Ultra 7 165H	2 SODIMM	LVDS	LAN	SATA	Yes	N/A	ATX/AT	Cooler	0~60°C
MTH968-BC06-155H	770-MTH9681-100G	Ultra 7 155H		LVDS						Cooler	
MTH968-BC00-135H	770-MTH9681-200G	Ultra 5 135H		LVDS						Cooler	
MTH968-BC00-165U	770-MTH9681-400G	Ultra 7 165U		eDP						Heat Sink	
MTH968-BC00-155U	770-MTH9681-500G	Ultra 7 155U		eDP						Heat Sink	
MTH968-BC00-125U	770-MTH9681-700G	Ultra 5 125U		eDP						Heat Sink	

PACKING LIST

· Cooler (For H series)	A71-108156-010G
· Heat Sink (For U series)	A71-011101-000G

OPTIONAL ITEMS

· Heat Spreader	TBD
· COM335 Carrier Board Kit	770-CM3351-000G
· COM335-C Carrier Board kit	770-CM335C1-000G