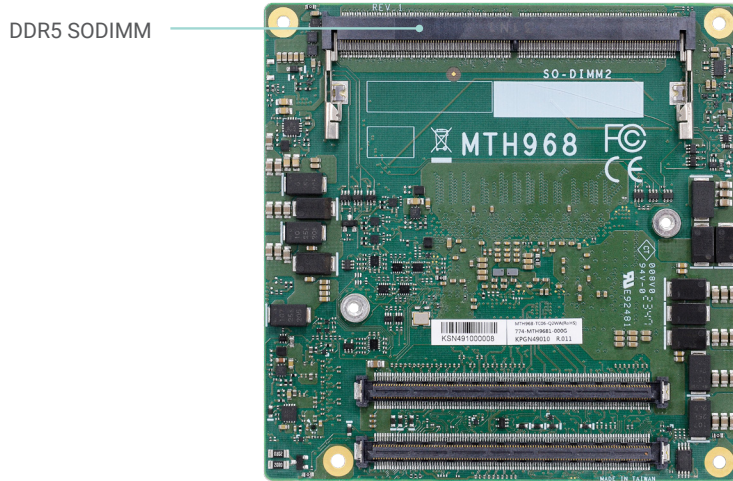
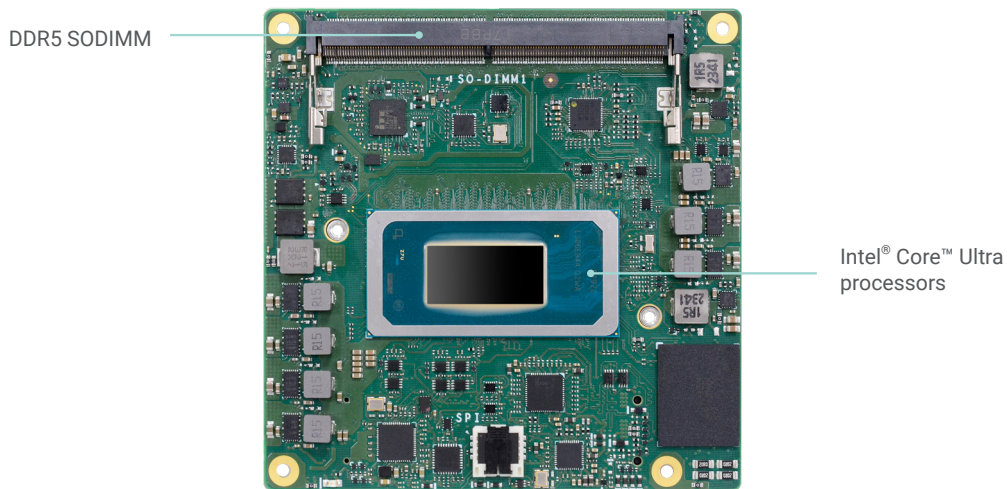


MTH968

Intel® Core™ Ultra processors
COM Express® Compact



Front View



Bottom View

KEY FEATURES



DDR5

Dual Channel DDR5
5600MHz SODIMM up
to 64GB



4K High Resolution

Supports 4K / 2K reso-
lution



Multiple Displays

1 VGA, 1 LVDS/eDP,
3 DDI



Multiple Expansion

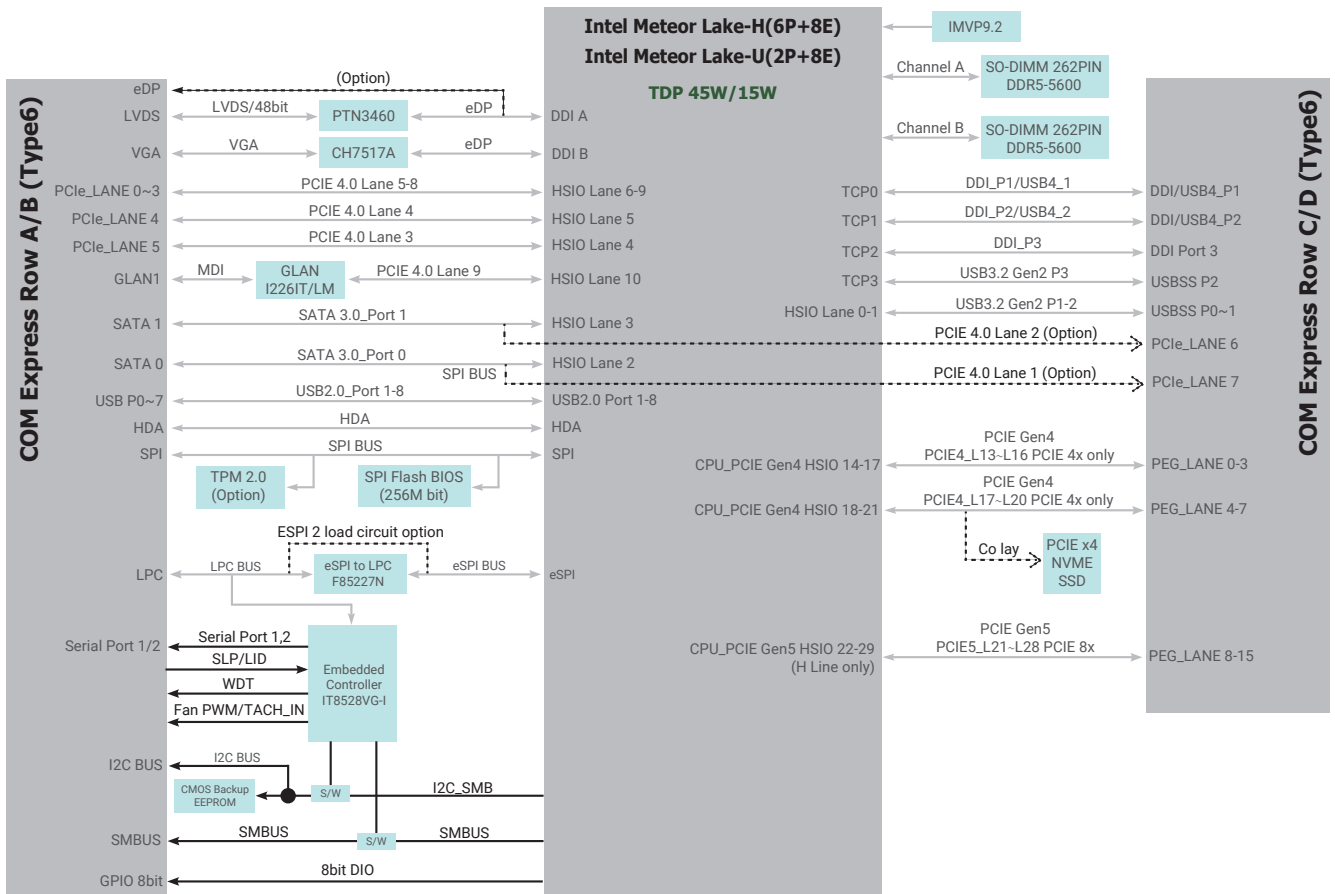
8 PCIe x1, 2 PCIe x4,
1 PCIe x8, 1 I2C,
1 SMBus, 1 LPC/eSPI,
2 UART



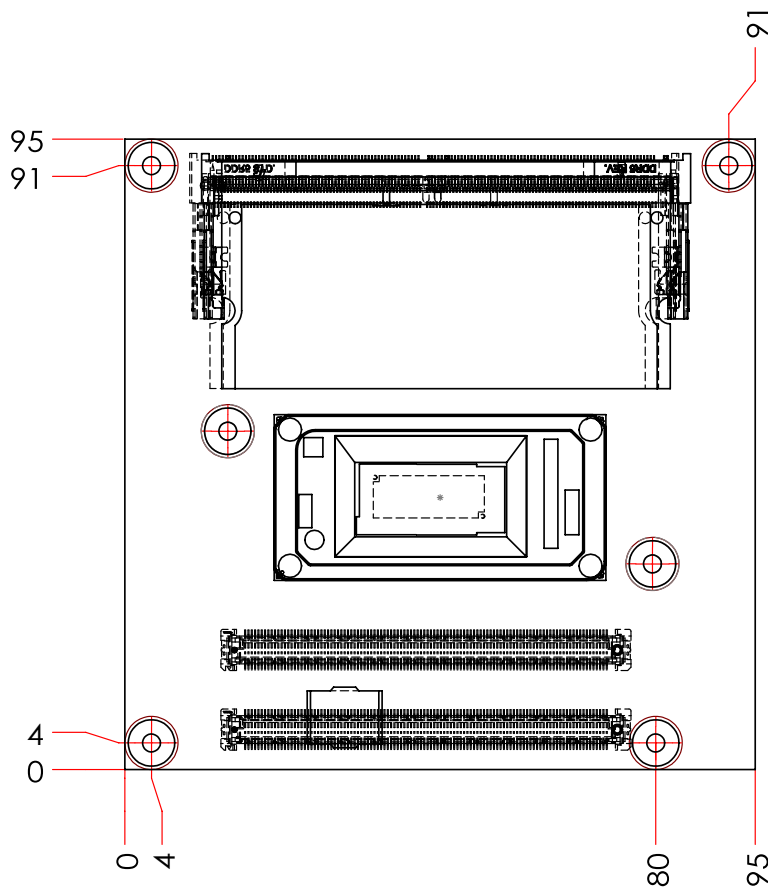
RICH I/O

1 Intel 2.5GbE,
2 USB 4.0, 3 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 5 125H (4 P-Cores x 1.2 GHz, 8 E-Cores x 0.7 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 135U (2 P-Cores x 1.6 GHz, 8 E-Cores x 1.1 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 64GB Dual Channel DDR5 5600MHz	
	BIOS	AMI BIOS	
GRAPHICS	Controller	Intel® Iris® Xe graphics	
	Feature	DX12, Open GL 4.6, Vulkan 1.2 (Windows) Mesa 3D, Open GL 4.6, Vulkan 1.2 (Linux) HW Decode : 4K60 8b 4:2:0 AVC HW Encode : 4K60 10b 4:4:4 HEVC/VP9/SCC 4K60 8b 4:2:0 AVC	
	Display	1 x VGA 1 x LVDS/eDP (eDP available upon request) 3 x DDI (2 DDI option with USB4) 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 + 3 DDI VGA + LVDS + 3 DDI (available upon request)	
EXPANSION	Interface	8 PCIe x1 (Gen4, Lanes 6/7 by option) 1 PCIe x8 (Gen 5, H-Line only) 2 PCIe x4 (Gen4, PEG_LANE4-7 option with NVMe SSD) 1 I2C 1 SMBUS 1 LPC/eSPI 2 UART	
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	2 x USB 4.0 (BOM option with DDI) 3 x USB 3.2 Gen 2 8 x USB 2.0	
	SATA	2 x SATA 3.0 (up to 6Gb/s), co-lay PCIe x1 (available upon request)	
	NVMe SSD	1 x 64GB/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) 8.5~12V, VCC_RTC (AT mode)	
	Consumption	TBD	
OS SUPPORT	Microsoft	Windows 10 IoT Enterprise 64-bit Windows 11	
	Linux	Linux	
ENVIRONMENT	Temperature	Operating: 0°C~60°C (For H-Series Processor) -40°C~85°C (For U-Series Processor)	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	64GB NVMe SSD	ATX/AT	Cooler	0 to 60C
MTH968-BC06-155H	770-MTH9681-100G	Ultra 7 155H	2 SODIMM	LVDS	LAN	SATA	Yes	64GB NVMe SSD	ATX/AT	Cooler	0 to 60C
MTH968-BC00-135H	770-MTH9681-200G	Ultra 5 135H	2 SODIMM	LVDS	LAN	SATA	Yes	N/A	ATX/AT	Cooler	0 to 60C
MTH968-BC00-125H	770-MTH9681-300G	Ultra 5 125H	2 SODIMM	LVDS	LAN	SATA	Yes	N/A	ATX/AT	Cooler	0 to 60C
MTH968-TC00-165U	770-MTH9681-400G	Ultra 7 165U	2 SODIMM	eDP	LAN	SATA	Yes	N/A	ATX/AT	Heat Sink	-40 to 85C
MTH968-TC00-155U	770-MTH9681-500G	Ultra 7 155U	2 SODIMM	eDP	LAN	SATA	Yes	N/A	ATX/AT	Heat Sink	-40 to 85C
MTH968-TC00-135U	770-MTH9681-600G	Ultra 5 135U	2 SODIMM	eDP	LAN	SATA	Yes	N/A	ATX/AT	Heat Sink	-40 to 85C
MTH968-TC00-125U	770-MTH9681-700G	Ultra 5 125U	2 SODIMM	eDP	LAN	SATA	Yes	N/A	ATX/AT	Heat Sink	-40 to 85C

PACKING LIST

· Cooler	A71-108156-010G
· Heat Sink	A71-011101-000G

OPTIONAL ITEMS

Heat Spreader	TBD
COM335 Carrier Board Kit	770-CM3351-000G