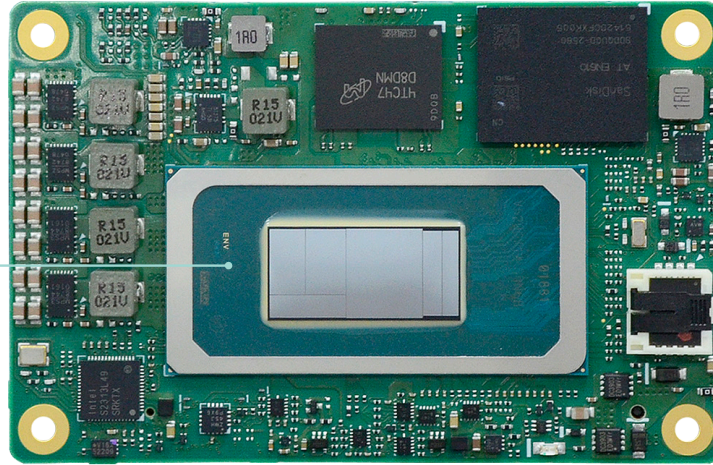


# MTU9A2

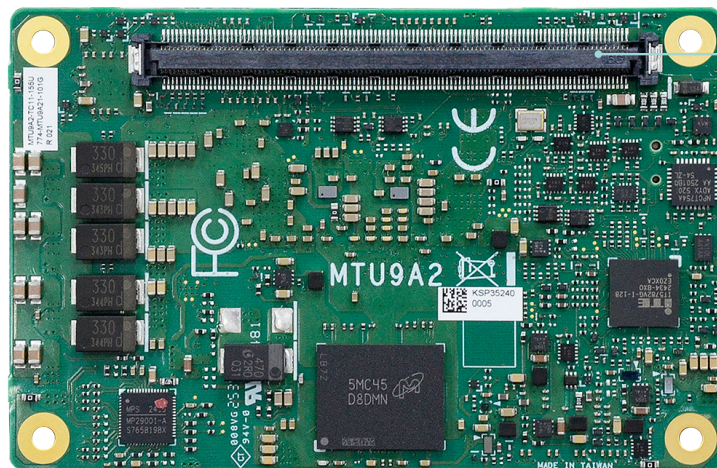
Intel Core Ultra Processors  
COM Express® Mini



Intel Core Ultra Processors



Top View



LPDDR5

Bottom View

## KEY FEATURES



### LPDDR5

LPDDR5-7467 up to 32GB



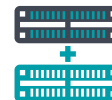
### 4K High Resolution

Supports 4K/ 2K resolution



### High Speed Ethernet

Supports 100M/1000M/2.5Gbps



### Multiple Expansion

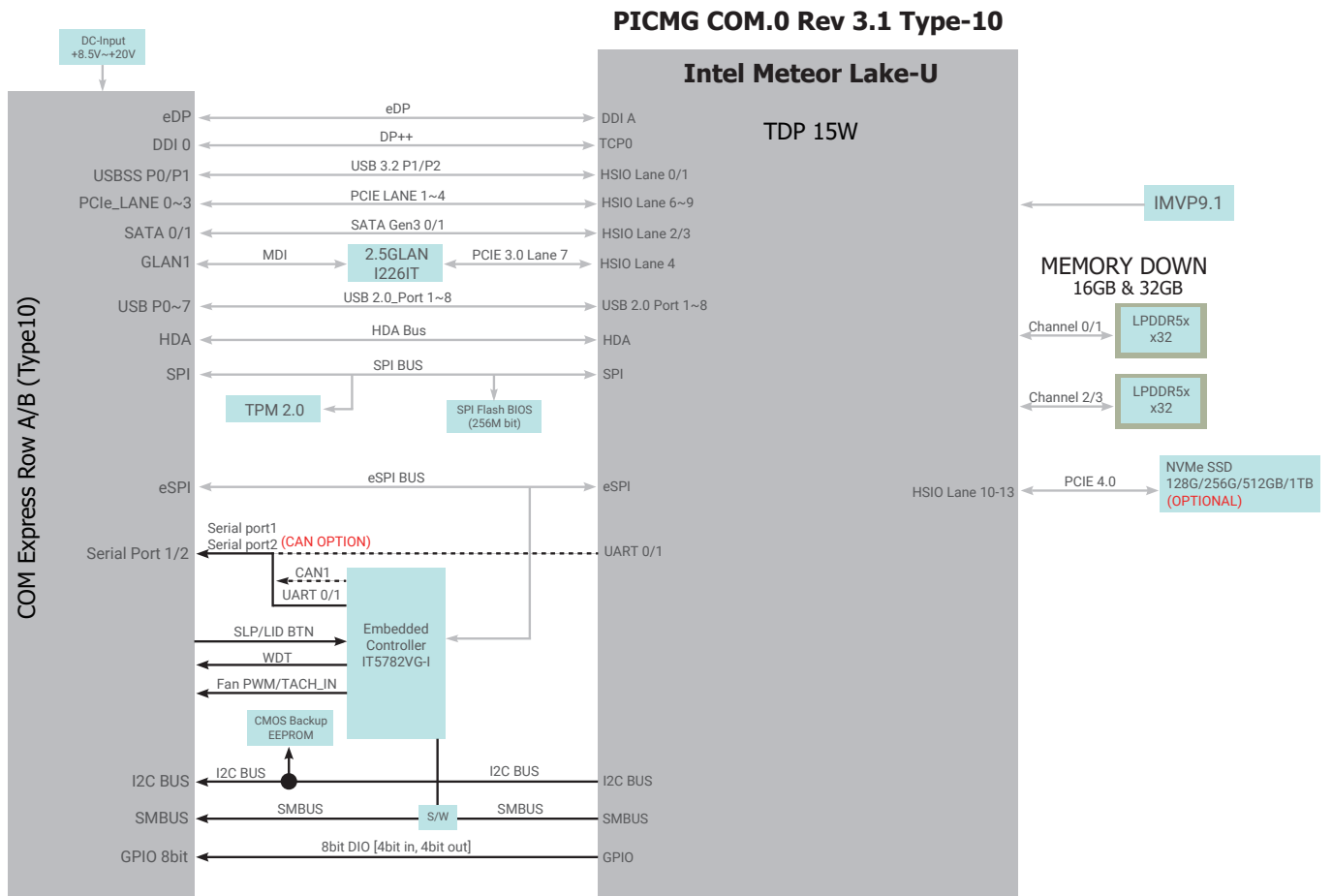
4 PCIe x1, 1 SMBus, 1 I<sup>2</sup>C



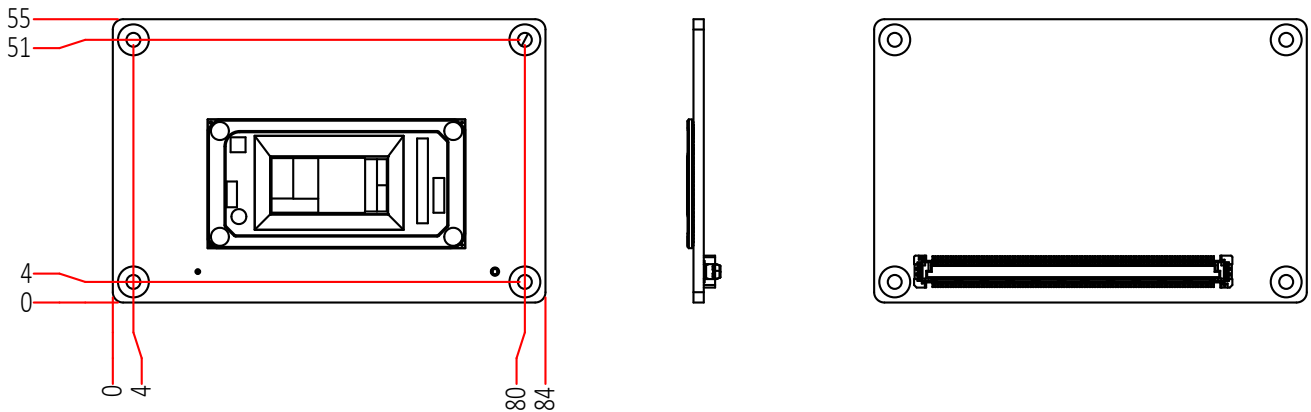
### Rich I/O

2 USB 3.2, 8 USB 2.0

# BLOCK DIAGRAM



# MECHANICAL DRAWING



## SPECIFICATION

SYSTEM	Processor	Intel Core Ultra U-series processors (Code Name : Meteor Lake U) Intel Core Ultra 7 Processor 165U (2 P-Cores x 1.7 GHz, 8 E-Cores x 1.2 GHz, 12MB cache,15W) Intel Core Ultra 7 Processor 155U (2 P-Cores x 1.7 GHz, 8 E-Cores x 1.2 GHz, 12MB cache,15W) Intel Core Ultra 5 Processor 125U (2 P-Cores x 1.3 GHz, 8 E-Cores x 0.8 GHz, 12MB cache,15W)	
	Memory	LPDDR5 up to 32GB Dual Channel LPDDR5 7467MHz 8GB supported by project basis. In-band ECC (IB ECC) Supported by Ubuntu	
	BIOS	AMI SPI 256Mbit	
GRAPHICS	Controller	Intel® UHD	
	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 DDI 1 x eDP eDP: resolution up to 4096x2160 @ 60Hz HDMI: resolution up to 4096x2160 @ 30Hz DP++: resolution up to 4096x2160 @ 60Hz, 3840x2160 @60Hz	
	Dual Displays	DDI + eDP	
EXPANSION	Interface	4 x PCIe x1 (Gen 3) 1 x I2C 1 x SMBus 1 x eSPI 1 x GSPI 2 x UART (TX/RX)	
AUDIO	Interface	HD Audio	
ETHERNET	Controller	1 x Intel® I226-IT (10/100/1000Mbps/2.5Gbps)	
I/O	USB	2 x USB 3.2 Gen2 8 x USB 2.0	
	SATA	2 x SATA 3.0 (up to 6Gb/s)	
	NVMe SSD	1 x 128GB/256GB/512GB/1024GB onboard NVME 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	TPM 2.0	
POWER	Type	8.5V~20V, 5VSB, VCC_RTC (ATX mode) 8.5V~20V, VCC_RTC (AT mode)	
	Consumption	TBD	
OS SUPPORT	OS Support (UEFI Only)	Windows 10 IoT Enterprise 64-bit	
		Windows 11	
		Linux	
ENVIRONMENT	Temperature	Operating: -40 to 85°C	
		Storage: -40 to 85°C	
	Humidity	Operating: 5 to 90% RH	
Storage: 5 to 90% RH			
MTBF	TBD		
MECHANISM	Dimensions	COM Express® Mini	84mm (3.3") x 55mm (2.16")
	Compliance	PICMG COM Express® R3.1, Type 10	
STANDARDS AND CERTIFICATIONS	Certifications	CE, FCC, UKCA, RoHS	

## ORDERING INFORMATION

Model Name	P/N	CPU	Memory	eDP	TPM 2.0	Thermal	Operating Temp.
MTU9A2-TC30-165U	770-MTU9A21-000G	Intel® Core Ultra 7 Processor 165U, 10 Cores, 15W	32GB	eDP	TPM 2.0	Cooler	-40~85°C
MTU9A2-TC10-155U	770-MTU9A21-100G	Intel® Core Ultra 7 Processor 155U, 10 Cores, 15W	16GB				
MTU9A2-TC10-125U	770-MTU9A21-300G	Intel® Core Ultra 5 Processor 125U, 10 Cores, 15W	16GB				

## PACKING LIST

Cooler	A71-108310-A00G
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## OPTIONAL ITEMS

Heatspreader	TBD
COM335 Carrier Board Kit	770-CM3351-000G