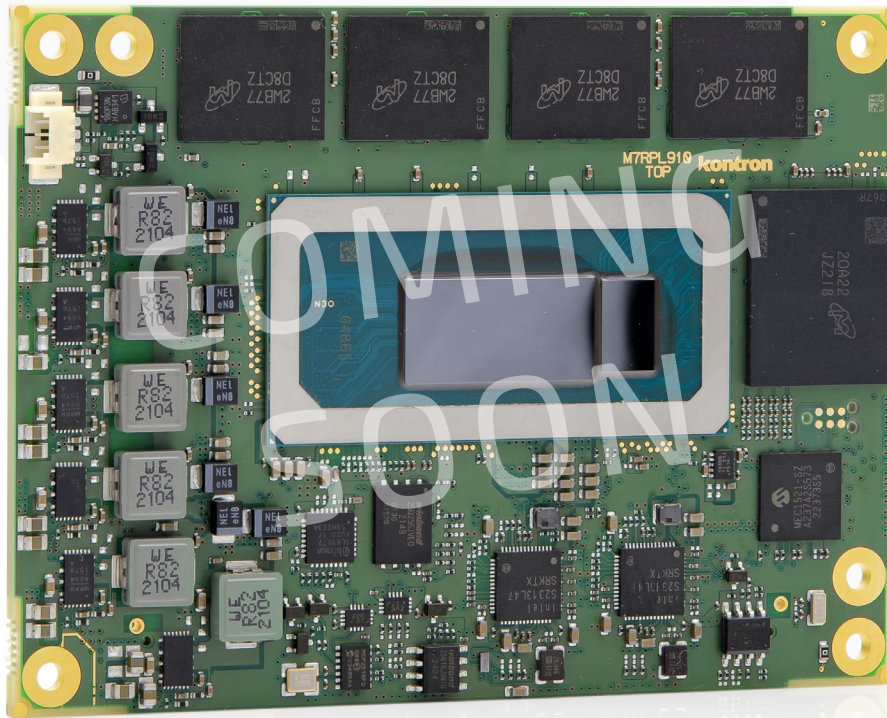


COMh-m7RP (E2)

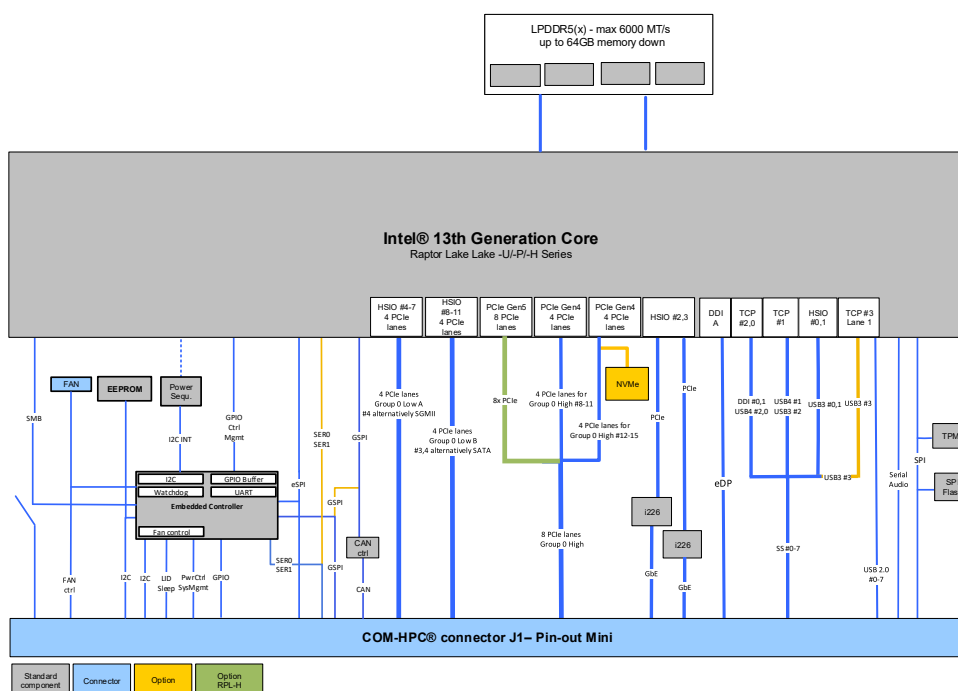


COM-HPC® Mini with 13th Generation Intel® Core™ Processors

- ▶ High performance on small form factor
- ▶ Up to 64 GByte LPDDR5 6000 MT/s - In-Band ECC
- ▶ 16 PCIe lanes
- ▶ 2x 2.5 GbE with TSN support
- ▶ Optional NVMe SSD onboard
- ▶ Industrial grade temperature

COMPLIANCE	COM-HPC® Mini
DIMENSIONS (H x W)	95 mm x 70 mm
CPU (SoC)	Intel® 13th Generation Core™ family (U-Series, P-Series, H-Series) For details see table (CPU variants) given below
CHIPSET	Integrated in SoC
MAIN MEMORY	Up to 64 GByte LPDDR5 6000 MT/s memory down (In-Band ECC)
GRAPHICS CONTROLLER	SoC: Intel® Iris® Xe Graphics on i7/i5 processors; Intel® UHD Graphics on i3/Pentium® processors
ETHERNET CONTROLLER	2x Intel® i226-IT
ETHERNET	2x 2.5 Gb Ethernet with TSN
STORAGE	Optional: 2x SATA 6Gb/s
FLASH ONBOARD	Up to 1 TByte NVMe SSD (on request)
PCI EXPRESS®	Default: 8x PCIe Gen3 (8 x1 / 4 x2 / 2 x4) + 8x PCIe Gen4 (2 x4) On request with H-Series: 8x PCIe Gen3 (8 x1 / 4 x2 / 2 x4) + 8x PCIe Gen5 (1 x8)
DISPLAY	1x DDI:DP++; on request 2x DDI:DP++ 1x eDP
USB	Default: 2x USB 4.0, 2x USB 3.2 Gen2; (1x DDI) On request: 1x USB 4.0, 4x USB 3.2 Gen2; (1x DDI) On request: 3x USB 4.0, 2x USB 3.2 Gen2; no DDI On request: no USB 4.0, 4x USB 3.2 Gen2; (2x DDI) 8x USB 2.0 (USB2.0 part of USB4 and USB3)
SERIAL	2x serial interface (RX/TX only)
AUDIO	Intel® High Definition Audio
OTHER FEATURES	CAN, (G) SPI, SMB, Fast I²C, Staged Watchdog, RTC
SPECIAL FEATURES	Industrial grade temperature
FEATURES ON REQUEST	NVMe up to 1TByte, with H-Series: 8x PCIe Gen5 instead of Gen4
POWER MANAGEMENT	ACPI 6.0
POWER SUPPLY	8.0 V – 20 V Wide Range, Single Supply Power
BIOS	AMI Aptio V
OPERATING SYSTEM	Windows 10 Enterprise LTSC (later Windows 11), Linux)
TEMPERATURE	COMh-m7RP E2 - industrial temperature: -40 °C to +85 °C operating, -40 °C to +85 °C non-operating
HUMIDITY	93% relative Humidity at 40°C, non-condensing (according to IEC 60068-2-78)

Block Diagram



13TH GEN RAPTOR LAKE H-SERIES (45W)			
CPU	i7-13800HRE	i5-13600HRE	i3-13300HRE
CORES	14	12	8
NUMBER OF P-CORES	6	4	4
FREQUENCY BASE/TURBO (P-CORES)	2.5/5.0 GHz	2.7/4.8 GHz	2.1/4.6 GHz
NUMBER OF E-CORES	8	8	4
FREQUENCY BASE/TURBO (E-CORES)	1.8/4.0 GHz	1.9/3.6 GHz	1.5/3.4 GHz
TDP	45/35 W		
CACHE	24 MByte	18 MByte	12 MByte
IBECC	yes		
TCC/TSN	yes		
TJUNCTION MIN	-40°C		
TJUNCTION MAX	100°C		
USE CONDITION	Embedded / Industrial*		

13th GEN RAPTOR LAKE P-SERIES (28W)			
CPU	i7-1370PRE	i5-1350PRE	i3-1320PRE
CORES	14	12	8
NUMBER OF P-CORES	6	4	4
FREQUENCY BASE/TURBO (P-CORES)	1.9/4.8 GHz	1.8/4.6 GHz	1.7/4.5 GHz
NUMBER OF E-CORES	8	8	4
FREQUENCY BASE/TURBO (E-CORES)	1.2/3.7 GHz	1.3/3.4 GHz	1.2/3.3 GHz
TDP	28/20 W		
CACHE	24 MByte	12 MByte	12 MByte
IBECC	yes		
TCC/TSN	yes		
TJUNCTION MIN	-40°C		
TJUNCTION MAX	100°C		
USE CONDITION	Embedded / Industrial*		

13TH GEN RAPTOR LAKE U-SERIES (15W)			
CPU	i7-1365URE	i5-1345URE	i3-1315URE
CORES	10	10	6
NUMBER OF P-CORES	2	2	2
FREQUENCY BASE/TURBO (P-CORES)	1.7/4.9 GHz	1.4/4.6 GHz	1.2/4.5 GHz
NUMBER OF E-CORES	8	8	4
FREQUENCY BASE/TURBO (E-CORES)	1.2/3.7 GHz	1.1/3.4 GHz	0.9/3.3 GHz
TDP	15/12 W		
CACHE	12 MByte	12 MByte	10 MByte
IBECC	yes		
TCC/TSN	yes		
TJUNCTION MIN	-40°C		
TJUNCTION MAX	100°C		
USE CONDITION	Embedded / Industrial*		

*For Industrial use condition turbo needs to be disabled

Variants

COMh-m7RP (E2)

PART NO.	CPU	LPDDR5 MEMORY DOWN	ETH PHY	DDI	USB 4.0	USB 3.2 Gen2	FLASH - NVME	OP.TEMP.
HM702-3200-80-7	i7-13800HRE	32 GB	2 x2.5GbE	1	2	2	no	-40 °C - 85 °C
HM702-1600-60-5	i5-13600HRE	16 GB	2 x2.5GbE	1	2	2	no	-40 °C - 85 °C
HM702-1600-30-3	i3-13300HRE	16 GB	2 x2.5GbE	1	2	2	no	-40 °C - 85 °C
HM702-3200-70-7	i7-1370PRE	32 GB	2 x2.5GbE	1	2	2	no	-40 °C - 85 °C
HM702-1600-50-5	i5-1350PRE	16 GB	2 x2.5GbE	1	2	2	no	-40 °C - 85 °C
HM702-1600-20-3	i3-1320PRE	16 GB	2 x2.5GbE	1	2	2	no	-40 °C - 85 °C
HM702-1600-65-7	i7-1365URE	16 GB	2 x2.5GbE	1	2	2	no	-40 °C - 85 °C
HM702-1600-45-5	i5-1345URE	16 GB	2 x2.5GbE	1	2	2	no	-40 °C - 85 °C
HM702-0800-15-3	i3-1315URE	8 GB	2 x2.5GbE	1	2	2	no	-40 °C - 85 °C

Please contact your sales representative for other versions

Carrier

ARTICLE	PART NO.	DESCRIPTION
COMh/MINI EVALUATION CARRIER	HM701-0000-10-0	COM-HPC® Evaluation Carrier Mini

Cooling

ARTICLE	PART NO.	DESCRIPTION
HSP COMh-m7RP (E2) THREAD	HM702-0000-99-0	Heatspreader for COMh-m7RP commercial and E2, Cu-core, threaded mounting holes
HSP COMh-m7RP (E2) THROUGH	HM702-0000-99-1	Heatspreader for COMh-m7RP commercial and E2, Cu-core, through mounting holes
COMh Mini active uni cooler (W/O HSP)	HM799-0000-99-0	COM-HPC® Universal Active Cooler for Heatspreader Mounting
COMh Mini passive uni cooler (W/O HSP)	HM799-0000-99-1	COM-HPC® Universal Passive Cooler for Heatspreader Mounting

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