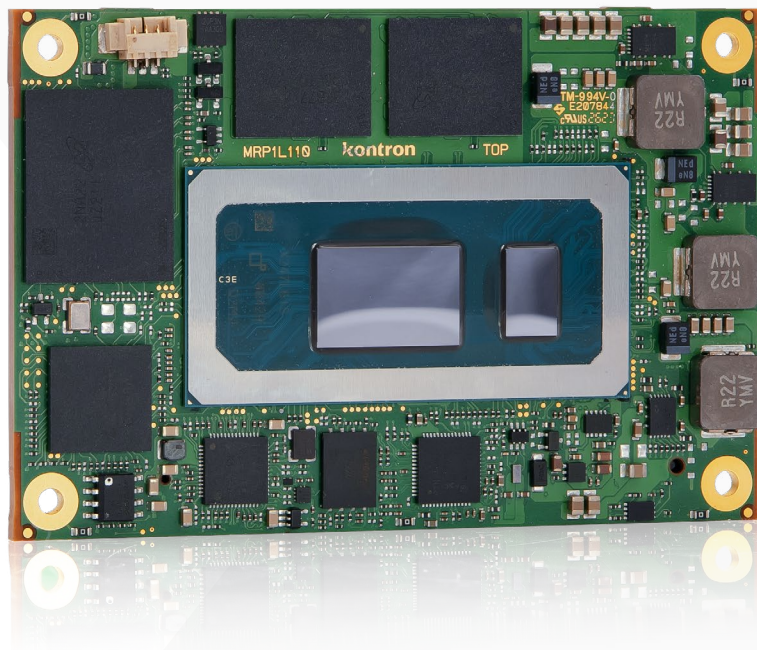


# COMe-mRP10 (E2)



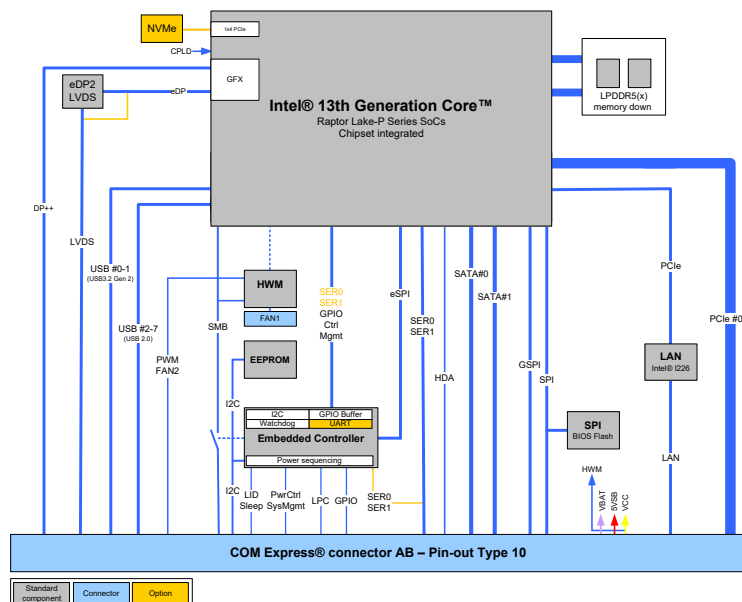
## COM Express® Mini Type 10 with 13th Generation Intel® Core™/Pentium® Processors

- ▶ Up to 32 GByte LPDDR5(x) memory down
- ▶ Up to 2.5 Gb Ethernet with TSN support
- ▶ Optional NVMe SSD onboard
- ▶ Industrial grade versions

COMPLIANCE	COM Express® Mini Pin-out Type 10
DIMENSIONS (H x W)	84 x 55 mm
CPU	Intel® 13th Generation Core™ family For details see table (CPU variants) given below
CHIPSET	Integrated SoC
MAIN MEMORY	Dual-Channel LPDDR5(x) memory down to 32 GByte
GRAPHICS CONTROLLER	Intel® Iris® Xe Graphics on i7/i5 processors Intel® UHD Graphics on i3/Pentium® processors
ETHERNET CONTROLLER	Intel® I226LM/I226IT
ETHERNET	Up to 2.5Gb Ethernet with TSN support (depending on SKU)
STORAGE	2x SATA 6Gb/s
FLASH ONBOARD	Up to 1 TByte NVMe SSD (on request)
PCI EXPRESS®	4x PCIe 3.0
DISPLAY	DDI1: DP++, LVDS: Single Channel 18/24bit
USB	2x USB 3.2 Gen2 (incl. USB 2.0) + 6x USB 2.0
SERIAL	2x serial interface (RX/TX only)
AUDIO	Intel® High Definition Audio
OTHER FEATURES	(G) SPI, LPC, SMB, Fast I <sup>2</sup> C, Staged Watchdog, RTC
FEATURES ON REQUEST	vPRO (AMT/TXT/AES Support), eDP instead of LVDS, NVMe SSD
POWER MANAGEMENT	ACPI 6.0
POWER SUPPLY	8.5 V – 20 V Wide Range*, Single Supply Power
BIOS	AMI Aptio V
OPERATING SYSTEM	Windows® 10, Linux, VxWorks (project based)
TEMPERATURE	Commercial temperature: 0 °C to +60 °C operating, -30 °C to +85 °C non-operating 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)

\*) A range down to 4.75 V is possible under specific conditions. Please get in contact with us for further information

## Block Diagram



13TH GEN RAPTOR LAKE U-SERIES EMBEDDED (15 W)				
CPU	i7-1365UE	i5-1345UE	i3-1315UE	U300E
CORES	10	10	6	5
NUMBER OF P-CORES	2	2	2	1
FREQUENCY BASE /TURBO (P-CORES)	1.7/4.9 GHz	1.4/4.6 GHz	1.2/4.5 GHz	1.1/4.3 GHz
NUMBER OF E-CORES	8	8	4	4
FREQUENCY BASE /TURBO (E-CORES)	1.2/3.7 GHz	1.1/3.4 GHz	0.9/3.3 GHz	0.9/3.2 GHz
TDP	15/12 W	15/12 W	15/12 W	15/12 W
CACHE	12 MByte	12 MByte	10 MByte	8 MByte
IBECC	no	no	no	no
TCC/TSN	no	no	no	no

13TH GEN RAPTOR LAKE U-SERIES INDUSTRIAL (15 W)			
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	15/12 W	15/12 W
CACHE	12 MByte	12 MByte	10 MByte
IBECC	yes	yes	yes
TCC/TSN	yes	yes	yes

## Variants

PART NO.	CPU	PCH	MEM. DOWN	SO-DIMM	FLASH	OP. TEMPERATURE
34014-3200-17-7	i7-1365UE	-	32 GByte	-	-	0 °C – 60 °C
34014-1600-17-7	i7-1365UE	-	16 GByte	-	-	0 °C – 60 °C
34014-3200-14-5	i5-1345UE	-	32 GByte	-	-	0 °C – 60 °C
34014-1600-14-5	i5-1345UE	-	16 GByte	-	-	0 °C – 60 °C
34014-1600-12-3	i3-1315UE	-	16 GByte	-	-	0 °C – 60 °C
34014-8000-11-1	U300E	-	8 GByte	-	-	0 °C – 60 °C
34015-3200-17-7	i7-1365URE	-	32 GByte	-	-	-40 °C – 85 °C
34015-1600-17-7	i7-1365URE	-	16 GByte	-	-	-40 °C – 85 °C
34015-3200-14-5	i5-1345URE	-	32 GByte	-	-	-40 °C – 85 °C
34015-1600-14-5	i5-1345URE	-	16 GByte	-	-	-40 °C – 85 °C
34015-1600-12-3	i3-1315URE	-	16 GByte	-	-	-40 °C – 85 °C
34015-8000-12-3	i3-1315URE	-	8 GByte	-	-	-40 °C – 85 °C

ARTICLE	PART NO.	DESCRIPTION
COME EVAL CARRIER T10 GEN2	34101-0000-00-2	COM Express® Evaluation Carrier Type 10 Gen2

## Cooling

ARTICLE	PART NO.	DESCRIPTION
HSP COMe-mRP10 CU-CORE THREADED	34014-0000-99-0	Heatspreader for COM-mRP10, Cu-core, threaded mounting holes
HSP COMe-mRP10 CU-CORE THROUGH	34014-0000-99-1	Heatspreader for COM-mRP10, Cu-core, through mounting holes
HSP COMe-mRP10 CU-CORE SLIM THREAD	34014-0000-99-2	Heatspreader for COMe-mRP10, Cu-core, slim, threaded mounting holes
HSP COMe-mRP10 CU-CORE SLIM THROUGH	34014-0000-99-3	Heatspreader for COMe-mRP10, Cu-core, slim, through mounting holes
COMe MINI ACTIVE UNI COOLER2 (W/O HSP)	34099-0000-99-0	COM Express® Mini Universal Active Cooler for Heatspreader Mounting
COMe MINI PASSIVE UNI COOLER2 (W/O HSP)	34099-0000-99-1	COM Express® Mini Universal Passive Cooler for Heatspreader Mounting

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