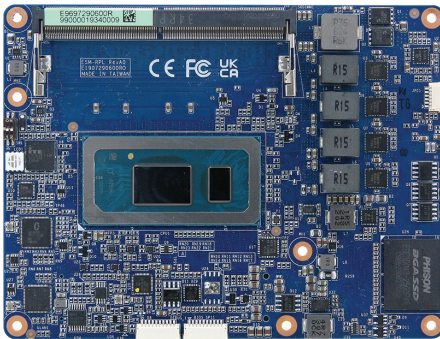


ESM-RPL

Type6 COM Express Module with Intel® 13th Generation
Core™ i3/i5/i7 Embedded Mobile Processor



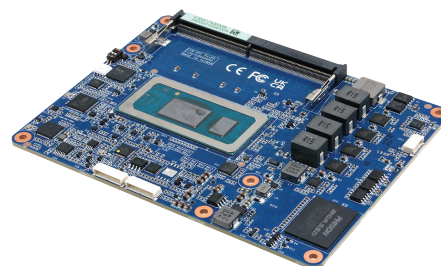
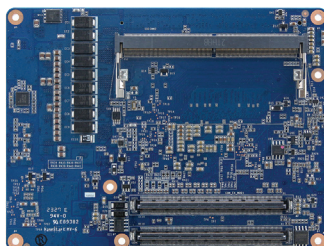
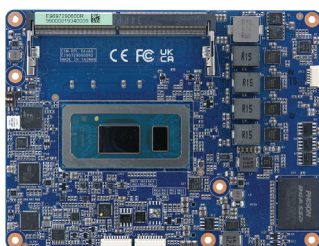
Features

- 13th Gen Intel® Raptor Lake H-Series (45W), P-Series (28W) Processor onboard
- Intel® Iris® Xe Graphics on i7/i5 processors
- Supports 4 Independent Displays up to 4K (3DDI+eDP)
- 2 x SO-DIMM support DDR5 4800MT/s max up to 64GB
- Supports 4 x USB 3.2 Gen2, 8 x USB 2.0
- Optional Onboard TPM 2.0
- 9V-19V Wide Range DC-In
- Select processor supports extended temperature -40°C ~ 70°C (-40°F ~ 158°F)

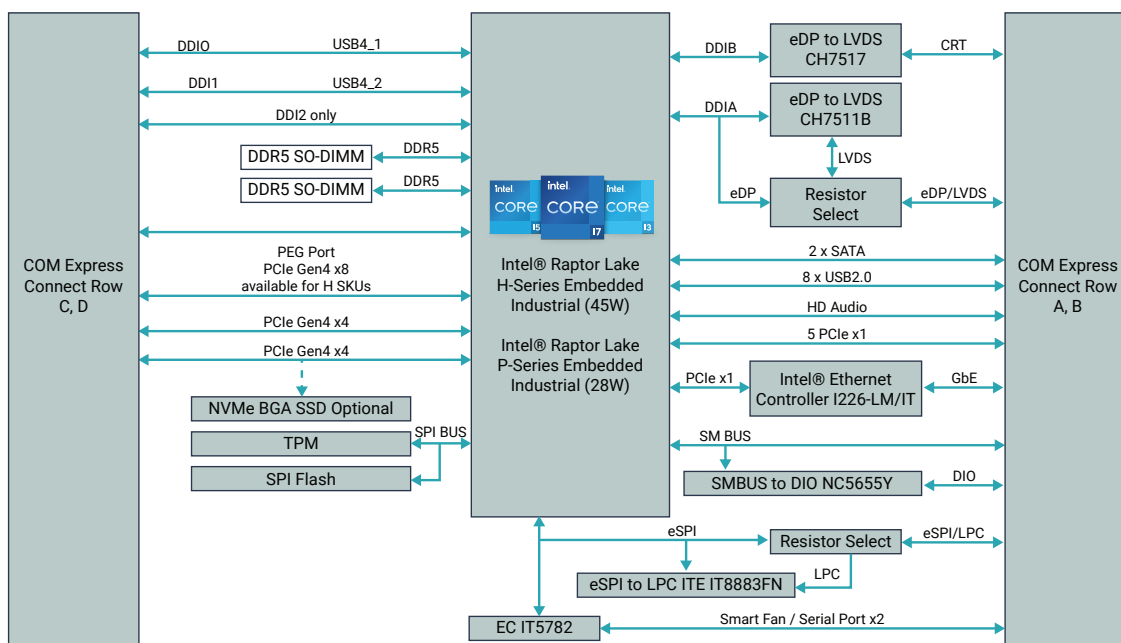
SPECIFICATIONS

System	
CPU	13th Gen Intel® Raptor Lake BGA Processor: Intel® Raptor Lake H-Series Embedded Industrial (45W) Intel® Raptor Lake P-Series Embedded Industrial (28W)
PCH	Intel® Raptor Lake SoC Integrated
System Memory	2 x 262-pin SO-DIMM support DDR5 4800MT/s up to 64GB
BIOS	AMI uEFI BIOS, 256 Mbit SPI Flash ROM
I/O Chip	EC iTE IT5782
Ethernet	Intel® I226-LM/IT Ethernet Controller (2.5GbE)
Audio	Intel® HD Audio
Storage	Optional Onboard storage NVMe SSD
Watchdog Timer	H/W Reset, 1Sec. ~ 65535Sec. and 1Sec./Step
H/W Status Monitor	Monitoring System Temperature Voltage and FAN Status with Auto Throttling Control
Expansion	1 x PCIe x8 (Gen4), (select SKU, H series) 2 x PCIe x4 (Gen4) Default: 5 x PCIe x1 (Gen3), 2 x SATA (2 Lanes Shares with SATA)
TPM	Optional Onboard TPM 2.0
OS Support	Windows 10 Enterprise 2021 LTSC Ubuntu 22.04 (Kernel 5.15) above
Display	
Chipset	Intel® Iris® Xe Graphics on i7/i5 processors Intel® UHD Graphics on i3/Celeron® processors Intel® Gfx up to 96 EU
Resolution	3 x DDI, VGA, eDP/LVDS (Optional) VGA (optional): via DP-to-VGA IC, Max. Resolution 1920x1200@60Hz LVDS: Single/Dual Channel 18/24-bit LVDS from eDP-to-LVDS IC, Max. Resolution 1920x1200@60Hz in Dual Mode or eDP (optional): in the place of LVDS, 4 lanes, eDP 1.4b (optional)
Multi-Display	Supports 4 Independent Displays up to 4K (3DDI+eDP)
I/O	
USB	2 x USB 4 by TCP Ports (Optional) 4 x USB 3.2 Gen2 8 x USB 2.0
SATA	Supports 2 x SATA III (6.0Gb/s)
COM Port / UART	2 x UART (RX/TX Only)
MIO	8-bit GPIO, 1 x SMBus, 1 x LPC, 1 x I2C, 1 x GP_SPI (TBC), 1 x SPI
Mechanical, Power, and Environment	
Power Requirement	9V-19V Wide Range DC-In
Power Type	AT/ATX
Operating Temperature	Standard: 0 ~ 60 °C (32 ~ 140 °F) Industrial (select SKUs): -40°C ~ 70°C (-40°F ~ 158°F)
Storage Temperature	-40°C ~ 85°C (-40°F ~ 185°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Certification	Compliant to CE, FCC Class, RoHS Compliant
Form Factor	COM Express Rev. 3.1 Type 6 COM Express Module
Dimensions	4.92" x 3.74" (125mm x 95mm)
Weight	0.44lbs (0.2kg)

SPECIFICATIONS / ADDITIONAL PRODUCT PHOTOS



BLOCK DIAGRAM



ORDERING INFORMATION

Model Name	Description
ESM-RPL i7-1370PE	Intel® Core™ i7-1370PE CPU 28W, COM Express Module
ESM-RPL i5-1340PE	Intel® Core™ i5-1340PE CPU 28W, COM Express Module
ESM-RPL i3-1320PE	Intel® Core™ i3-1320PE CPU 28W, COM Express Module
ESM-RPL i7-13800HE	Intel® Core™ i7-13800HE CPU 45W, COM Express Module
ESM-RPL i5-13600HE	Intel® Core™ i5-13600HE CPU 45W, COM Express Module
ESM-RPL i3-13300HE	Intel® Core™ i3-13300HE CPU 45W, COM Express Module
ESM-RPL i7-1370PRE	Intel® Core™ i7-1370PRE CPU 28W, Wide-Temp, COM Express Module
ESM-RPL i5-1350PRE	Intel® Core™ i5-1350PRE CPU 28W, Wide-Temp, COM Express Module
ESM-RPL i3-1320PRE	Intel® Core™ i3-1320PRE CPU 28W, Wide-Temp, COM Express Module
ESM-RPL i7-13800HRE	Intel® Core™ i7-13800HRE CPU 28W, Wide-Temp, COM Express Module
ESM-RPL i5-13600HRE	Intel® Core™ i5-13600HRE CPU 28W, Wide-Temp, COM Express Module
ESM-RPL i3-13300HRE	Intel® Core™ i3-13300HRE CPU 28W, Wide-Temp, COM Express Module

PACKING LIST

- ✓ 1 x ESM-RPL Module
- ✓ 1 x Desiccant (5g)
- ✓ 2 x Screws



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