RM645-RPS630

R680E
Q670E

BTL-S/14th/13th/12th Gen Intel® Core™
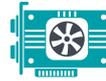Rackmount Edge-Server System

KEY FEATURES

Powerful 4U Edge AI Server
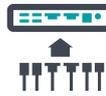Rackmount system with BTL-S/14th/13th/12th Gen Intel® Core Processors

Multiple PCIe card expansion available
2 PCIe x16, 4 PCIe x4, 1 PCI, 2 M.2 M key, 1 M.2 E Key, 1 M.2 A Key

High-Availability Storage
Accommodating 4x 2.5-inch hot-swap drive bays and more 4 x bays by project support.

Versatile I/O
Rich 4 Intel 2.5GbE, 4 USB 3.2 Gen2, 4 USB 3.2 Gen1 and 6 COM, 2 USB 2.0 support by project

Quad Displays
VGA, 2 DP++, HDMI

(intel) **IoT Solutions Alliance**

PANEL

COMING SOON

SPECIFICATION

Model Name		RM645-RPS630 (R680E)	RM645-RPS630 (Q670E)
SYSTEM	Processor	**Intel® Bartlett Lake-S Hybrid LGA 1700 Socket Processors** Intel® Core™ 7 251E (24 Cores, 36M Cache, up to 5.6 GHz); 65W Intel® Core™ 7 251TE (24 Cores, 36M Cache, up to 5.4 GHz); 45W Intel® Core™ 5 221E (14 Cores, 24M Cache, up to 5.2 GHz); 65W Intel® Core™ 5 221TE (14 Cores, 24M Cache, up to 5.0 GHz); 45W Intel® Core™ 5 211E (10 Cores, 20M Cache, up to 4.9 GHz); 65W Intel® Core™ 5 211TE (10 Cores, 20M Cache, up to 4.8 GHz); 45W Intel® Core™ 3 201E (4 Cores, 12M Cache, up to 4.8 GHz); 60W Intel® Core™ 3 201TE (4 Cores, 12M Cache, up to 4.6 GHz); 45W Intel® 300 (2 Cores, 6M Cache, up to 3.9 GHz); 45W Intel® 300T (2 Cores, 6M Cache, up to 3.4 GHz); 35W **14th Generation Intel® LGA 1700 Socket Processors, TDP support up to 125W** Intel® Core™ I9-14901E (8 Cores, 36M Cache, up to 5.6 GHz); 65W Intel® Core™ I5-14401E (6 Cores, 24M Cache, up to 4.7 GHz); 65W Intel® Core™ I9-14900 (24 Cores, 36M Cache, up to 5.8 GHz); 65W Intel® Core™ I9-14900T (24 Cores, 36M Cache, up to 5.5 GHz); 35W Intel® Core™ I7-14700 (20 Cores, 33M Cache, up to 5.4 GHz); 65W Intel® Core™ I7-14700T (20 Cores, 33M Cache, up to 5.2 GHz); 35W Intel® Core™ I5-14500 (14 Cores, 24M Cache, up to 5 GHz); 65W Intel® Core™ I5-14500T (14 Cores, 24M Cache, up to 4.8 GHz); 35W Intel® Core™ I5-14400 (10 Cores, 20M Cache, up to 4.7 GHz); 65W Intel® Core™ I5-14400T (10 Cores, 20M Cache, up to 4.5 GHz); 35W Intel® Core™ I3-14100 (4 Cores, 12M Cache, up to 4.7 GHz); 60W Intel® Core™ I3-14100T (4 Cores, 12M Cache, up to 4.4 GHz); 35W Intel® 300 (2 Cores, 6M Cache, up to 3.9 GHz); 46W Intel® 300T (2 Cores, 6M Cache, up to 3.4 GHz); 35W **13th Generation Intel® LGA 1700 Socket Processors, TDP support up to 125W** Intel® Core™ I9-13900E (24 Cores, 36M Cache, up to 5.2 GHz); 65W Intel® Core™ I9-13900TE (24 Cores, 36M Cache, up to 5.0 GHz); 35W Intel® Core™ I7-13700E (16 Cores, 30M Cache, up to 5.1 GHz); 65W Intel® Core™ I7-13700TE (16 Cores, 30M Cache, up to 4.8 GHz); 35W Intel® Core™ I7-13700T (16 Cores, 30M Cache, up to 4.9 GHz); 35W Intel® Core™ I5-13500E (14 Cores, 24M Cache, up to 4.6 GHz); 65W Intel® Core™ I5-13500TE (14 Cores, 24M Cache, up to 4.5 GHz); 35W Intel® Core™ I5-13500T (14 Cores, 24M Cache, up to 4.6 GHz); 35W Intel® Core™ I5-13400E (10 Cores, 20M Cache, up to 4.6 GHz); 65W Intel® Core™ I3-13100E (4 Cores, 12M Cache, up to 4.4 GHz); 65W Intel® Core™ I3-13100TE (4 Cores, 12M Cache, up to 4.1 GHz); 35W Intel® Core™ I3-13100T (4 Cores, 12M Cache, up to 4.2 GHz); 35W **12th Generation Intel® LGA 1700 Socket Processors, TDP support up to 125W** Intel® Core™ i9-12900E (16 Cores, 30M Cache, up to 5.0 GHz); 65W Intel® Core™ i9-12900TE (16 Cores, 30M Cache, up to 4.8 GHz); 35W Intel® Core™ i7-12700E (12 Cores, 25M Cache, up to 4.8 GHz); 65W Intel® Core™ i7-12700TE (12 Cores, 25M Cache, up to 4.6 GHz); 35W Intel® Core™ i5-12500E (6 Cores, 18M Cache, up to 4.5 GHz); 65W Intel® Core™ i5-12500TE (6 Cores, 18M Cache, up to 4.3 GHz); 35W Intel® Core™ i3-12100E (4 Cores, 12M Cache, up to 4.2 GHz); 60W Intel® Core™ i3-12100TE (4 Cores, 12M Cache, up to 4.0 GHz); 35W Intel® Pentium® G7400E (2 Cores, 6M Cache, 3.6 GHz); 46W Intel® Pentium® G7400TE (2 Cores, 6M Cache, 3.0 GHz); 35W Intel® Celeron® G6900E (2 Cores, 4M Cache, 3.0 GHz); 46W Intel® Celeron® G6900TE (2 Cores, 4M Cache, 2.4 GHz); 35W	
	Chipset	Intel® R680E Chipset	Intel® Q670E Chipset
	Memory	Four 288-pin UDIMM up to 192GB (ECC/Non-ECC) Dual Channel DDR5 up to 4400 MHz	Four 288-pin UDIMM up to 192GB (Non-ECC) Dual Channel DDR5 up to 4400 MHz
GRAPHICS	Controller	Intel® UHD Graphics 700 series	Intel® UHD Graphics 700 series
	Feature	OpenGL 4.5, DirectX 12, OpenCL 2.1 HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9 HW Encode: MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9	OpenGL 4.5, DirectX 12, OpenCL 2.1 HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9 HW Encode: MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9
	Display	1 x VGA 2 x DP++ 1 x HDMI 2.0a **VGA:** resolution up to 1920x1200 @ 60Hz **DP++:** resolution up to 4096x2304 @ 60Hz **HDMI:** resolution up to 4096x2160 @ 24Hz	1 x VGA 2 x DP++ 1 x HDMI 2.0a **VGA:** resolution up to 1920x1200 @ 60Hz **DP++:** resolution up to 4096x2304 @ 60Hz **HDMI:** resolution up to 4096x2160 @ 24Hz
	Quad Displays	VGA + 2 DP++ + HDMI	VGA + 2 DP++ + HDMI
STORAGE	External	4 x 2.5" hotswap bay	4 x 2.5" hotswap bay

SPECIFICATION

Model Name		RM645-RPS630 (R680E)	RM645-RPS630 (Q670E)

EXPANSION	PCIe Interface	2 x PCIe x16 (Gen4, 16 or 8+8)
		 - Support PCIE1/PCIE4: single at x16(PCIE1)
		 - Support PCIE1/PCIE4:
		   dual at x8(PCIE1)/x8(PCIE4)
		 - Support PCIE1:
		   Riser card x16 or x8/x8 selected by BOM change
		3 x PCIe x4 (Gen 4, open edge)
		1 x PCIe x4 (Gen 3, open edge, opt. share M.2-M2,
		  function selected by BIOS.)
		1 x PCI
			2 x PCIe x16 (Gen4, 16 or 8+8)
			 - Support PCIE1/PCIE4: single at x16(PCIE1)
			 - Support PCIE1/PCIE4:
			   dual at x8(PCIE1)/x8(PCIE4)
			 - Support PCIE1:
			   Riser card x16 or x8/x8 selected by BOM change
			3 x PCIe x4 (Gen 4, open edge)
			1 x PCIe x4 (Gen 3, open edge, opt. share M.2-M2,
			  function selected by BIOS.)
			1 x PCI

	M.2 Interface	1 x M.2 2230 E key
		  (PCIe/USB 2.0/Intel CNVi/Wifi 6E)
		1 x M.2 A key for M2-OOB
		1 x M.2 2242/2260/2280 M key
		  (PCIe x4 Gen4 NVMe, SATA)
		1 x M.2 2242/2260/2280 M key
		  (default, PCIe x4 Gen3 NVMe share PCIe#6,
		   function selected by BIOS)
			1 x M.2 2230 E key
			  (PCIe/USB 2.0/Intel CNVi/Wifi 6E)
			1 x M.2 2242/2260/2280 M key
			  (PCIe x4 Gen4 NVMe, SATA)
			1 x M.2 2242/2260/2280 M key
			  (default, PCIe x4 Gen3 NVMe share PCIe#6,
			   function selected by BIOS.)

AUDIO	Audio Codec	Realtek ALC888S	Realtek ALC888S
ETHERNET	Controller	1 x Intel® I226-LM (Core i9/i7/i5 support iAMT) 1 x Intel® I210-AT (co-lay I226-V) 2 x Intel® I226-V	1 x Intel® I226-LM (Core i9/i7/i5 support iAMT) 1 x Intel® I226-V
Front I/O	Ethernet	3 x 2.5GbE (RJ-45) 1 x 1GbE (RJ-45, opt. 2.5GbE)	2 x 2.5GbE (RJ-45)
	USB	4 x USB 3.2 Gen2 4 x USB 3.2 Gen1	4 x USB 3.2 Gen2 4 x USB 3.2 Gen1
	Display	1 x VGA 2 x DP++ 1 x HDMI	1 x VGA 2 x DP++ 1 x HDMI
	Audio	1 x Line-out 1 x Mic-in 1 x Line-in (opt.)	1 x Line-out 1 x Mic-in 1 x Line-in (opt.)
Power	Supply	ATX PS2/ Redundant (Opt)	ATX PS2/ Redundant (Opt)
	Consumption	TBD	TBD
COOLING	Fan	2x 12CM system Fan	2x 12CM system Fan
OS Support	Windows	Windows 10 IoT Enterprise 64-bit Windows 11 LTSC	Windows 10 IoT Enterprise 64-bit Windows 11 LTSC
ENVIRONMENT	Operating Temperature	0°C~40°C	0°C~40°C
MECHANISM	Construction	Heavy Industrial Steel	Heavy Industrial Steel
	Mounting	Rack mount kit	Rack mount kit
	Dimensions (W x H x D)	481.6 x 175.6 x 470.8mm	481.6 x 175.6 x 470.8mm
	Weight	TBD	TBD
	Color	Black	Black