INDUSTRIAL COMPUTER

KCO-2000-RPL

Fanned Industrial Computer with 2U Short-Depth,12/13th Gen Intel® Core® Processor and Q670E PCH, PCIe Gen 5, USB Type-C

Features

- 2U Slim Form Factor (SFF) Chassis with Tool-less Mounting Options
- Industrial Grade Micro-ATX Motherboard with Intel® Q670E PCH
- Support 12th/13th Gen Intel® Core™ Processors (LGA 1700, 65W Max TDP)
- 4x 288-pin DDR4 DIMM. Max. up to 128GB
- 1x 1GbE, 1x 2.5GbE Ports Support Wake-on-LAN, PXE
- 4x DP++ Independent Displays
- 1x PCIe x16 (Gen 5), 2x PCIe x4 (Gen 4, Gen 3), 1x PCIe x16 (Gen 4, 4-lane)
- 2x M.2 M Key, 1x M.2 E Key
- 6x RS-232 COM Ports (4x internal)
- 6x USB 3.1 Gen 2, 1x USB 3.2 Gen 2x2 Type C
- Support uEFI Secure Boot, TPM 2.0
- Tool-less Washable Dust Filter
- Internal 250W Flex Power Supply
- 12.73"(W) x 10.75:(D) x 3.45"(H)
- UL 62368 Ed. 3, FCC, CE

Specifications

System	
Processor	Support 12th/13th Gen Intel® Core™ i9/i7/i5/i3 Alder lake-S, Raptor Lake-S Processor (LGA 1700, 65W Max TDP) - Intel® Core™ i9-13900E/i9-12900E, up to 24 Cores, 36MB Cache, up to 5.2 GHz, 65W - Intel® Core™ i7-13700E/i7-12700E, up to 16 Cores, 30MB cache, up to 5.10 GHz, 65W - Intel® Core™ i5-13500E/i5-12500E, up to 14 Core, 18MB Cache, up to 4.5 GHz, 65W - Intel® Core™ i3-13100E/i3-12100E, up to 4 Cores, 12MB Cache, up to 4.4 GHz, 65W
System Chipset	Intel® Q670E PCH
LAN Chipset	GbE1: Intel® I219LM; 1GbE (Support Wake-on-LAN and PXE) GbE2: Intel® I225-V; 2.5GbE (Support Wake-on-LAN and PXE)
Audio Codec	Realtek ALC888S HD Audio Codec, support 5.1 channel
System Memory	4x DDR4 2133/2400/2666MHz DIMM. 128 GB Max
Graphics	Intel® Integrated Iris Xe Graphic (CPU Dependent)
BIOS	AMI uEFI 256MB SPI flash
Watchdog	Software Programmable Supports 1~255 sec. System Reset
iAMT	Intel® AMT 12.0 supported
TPM	TPM 2.0

Display	
Display Port	4x DP++

Storage	
M.2	1x M.2 M / NVMe PCIe x4 Gen 4 / 2242, 2260, 2280 1x M.2 M / NVMe PCIe x4 Gen 4/ SATA / 2242, 2260, 2280 1x M.2 E / PCIe x1 Gen 3/ USB 2.0 / 2230
SATA	4x SATA III (6Gb/s)
SSD/HDD	1x Hot-Swappable 2.5" SATA Drive Bay (support H=7mm)

Expansion	
PCIe	1x PCIe x16 Slot (Gen 5) 1x PCIe x16 Slot (Gen 4, 4-Lane) 1x PCIe x4 Slot (Gen 4, Open End) 1x PCIe x4 Slot (Gen 3, Open End)

I/O	
Audio	1x Mic-in, 1x Line-in, 1x Line-out
COM	2x RS-232
LAN	2x RJ45
USB	6x USB 3.1 Gen 2 (10 Gbps) 1x USB 3.2 Gen 2x2 (20 Gbps) Type C 4x USB 2.0

Internal I/O	
Audio	1x Front panel audio
COM	4x RS-232
DIO	1x 8-bit DIO (4-in/4-out)
SATA	4 x SATA Gen 3, support RAID 0/1/5/10)
USB	2x USB 3.0 Gen 1
Others	1x SPI header 1x Front panel 1x CPU fan 2x System fan

Operating System	
Windows	Windows 10
Linux	Linux Kernel 5.X

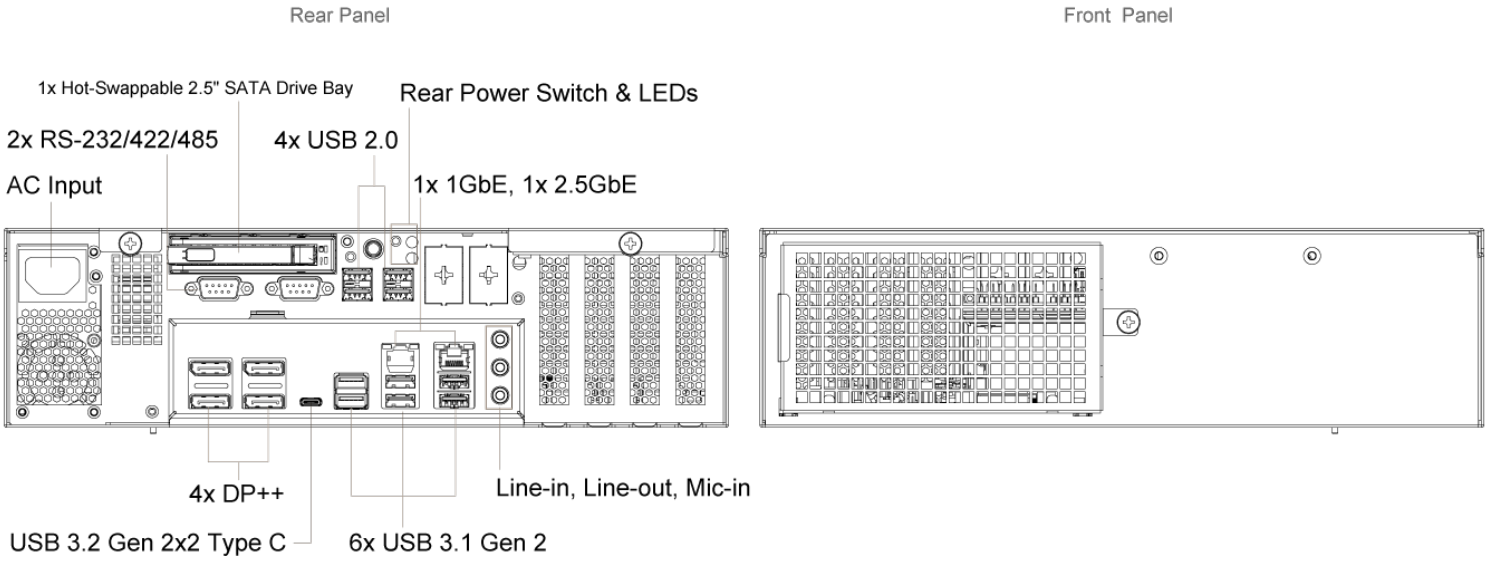
Power	
Power Management	ACPI 5.0 compliant
Power Mode	100-240V AC @ 50/60Hz
Power Connector	IEC 60320 C14

Environment	
Operating Temperature	0 °C to 40 °C
Storage Temperature	-40 °C to 85 °C
Relative Humidity	10% ~ 90% relative humidity, non-condensing
Certification	UL 62368 Ed. 3, FCC, CE
Vibration	1 Grms, 5 - 500 Hz, 0.5 hr/axis
Shock	With SSD: 20G, half sine, 11ms

Physical	
Form Factor	2U
Dimensions	324(W) x 276(D) x 89(H) mm
Weights	11 lbs (barebone w/ chassis, mb, and PSU only)
Construction	Heavy Duty Metal
Mounting Options	Rack Mountable

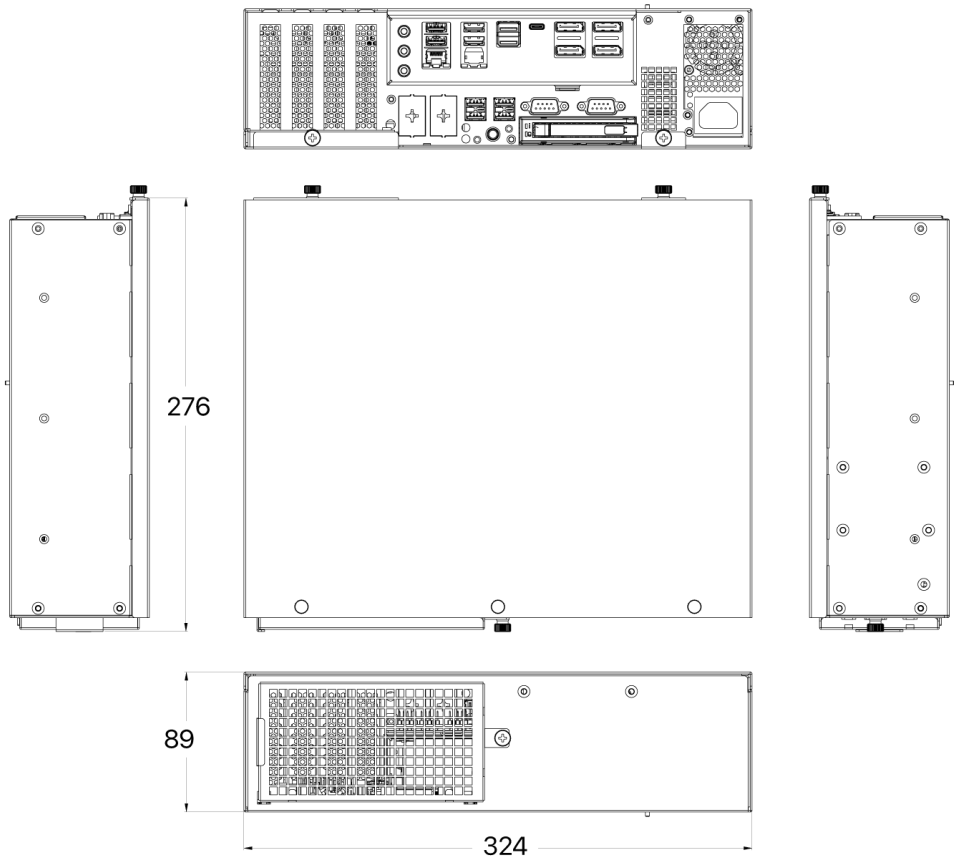
* All specifications and photos are subject to change without notice.

External I/O Mechanical Layout



Dimension

Unit: mm



KCO-2000-RPL

Available Models

Model No.	Description
KCO-2000-RPL-P	Fanned Industrial Computer with 2U Short-Depth,12/13th Gen Intel® Core® Processor and Q670E PCH, PCIe Gen 5, USB Type-C

Optional Accessories

Model No.	Description
999930	US POWER CORD
1-TPCD00002	Power Cord, European Type, 180cm
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm

Compatible GPU AVL

Model	RAM	CUDA Cores	TDP	TOPS/TFLOPS	Displays	System Interface	Form Factor
NVIDIA RTX A2000	12G	3328	70W	7.99 TFLOPS	4x mDP	PCIe 4.0 x16	2.7" H x 6.6" L, Low Profile, Dual Slot
NVIDIA RTX 2000 ADA	16G	2816	70W	12 TFLOPS	4x mDP	PCIe 4.0 x8	2.7" H x 6.6" L, Dual slot
NVIDIA RTX 4000 SFF ADA	20G	6144	70W	19.2 TFLOPS	4x mDP	PCIe 4.0 x16	2.7" H x 6.6" L, Low Profile, Dual Slot

Compliances and Standards

Vibration	1 Grms, 5 - 500 Hz, 0.5 hr/axis IEC60068-2-64:2008 Designed to comply with MIL-STD-810G Method 514.7 Procedure I
Shock	With SSD: 20G, half sine, 11ms IEC60068-2-27:2008 Designed to comply with MIL-STD-810G Method 516.7 Procedure I
Operating Temperature	0 °C to 40 °C IEC60068-2-1:2007 (Cold test procedure) IEC60068-2-2:2007 (Dry heat test procedure) IEC60068-2-3:2007 (Damp heat, steady state, test procedure) IEC60068-2-14:2009 (Wide temperature range thermal shock)
EMC	• FCC Class A • CE • ICES-003 • UKCA • Industrial EMC Compliance - EN 61000-4-2: 2009 - EN IEC 61000-4-3: 2020 - EN 61000-4-4: 2012 - EN 61000-4-5: 2014 +A1: 2017 - EN 61000-4-6: 2014
Safety	• UL Safety: UL62368-1, 3rd Ed., (cULus) • Test procedure: CB Scheme • Standard: IEC 62368-1:2018

Exports And Tariff Codes

ECCN	5A992.c
HTS	8542.31.0001
ScheduleB	84.71

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