

RCX-1000 PEG

Workstation-grade Intel® Xeon®/Core™ i7/i5/i3 (CFL-R)
Expandable GPU Computing System with
NVIDIA® Tesla®/Quadro®/GeForce® Graphics



- 8 cores 9th Generation Intel® Xeon®/Core™ i7/i5/i3 (Coffee Lake Refresh) with workstation-grade Intel® C246 Chipset
- 4 DDR4 2666MHz Memory, up to 128GB (ECC/Non-ECC)
- 6 external USB 3.1 Gen 2 support up to 10Gbps data transfer
- NVIDIA® Tesla®/Quadro®/GeForce® graphics card, powered by advanced NVIDIA Turing/Pascal architecture, delivers leading AI computing productivity
- Multiple DVI, HDMI and DisplayPort display interfaces support max 7 independent displays, up to 8K Resolution
- 2 Independent GigE LAN, iAMT 12.0 supported
- 2 External SIM Socket for WiFi/4G/3G/LTE/GPRS/UMTS
- 4 Front-access 2.5" SSD Tray, RAID 0, 1, 5, 10 supported
- 32 Isolated DIO, 4 COM RS-232/422/485
- 2 PCI/PCIe Slot, 2 M.2 Socket : 1 M.2 Key M, 1 M.2 Key E
- System-oriented power optimization, up to 300W independent graphics card
- Supports wide range power input with 80V Surge Protection
- Configurable Ignition Power Control



Deep Learning



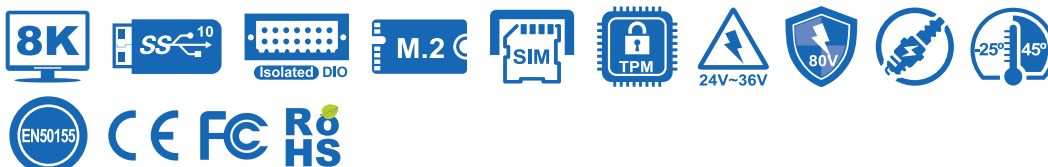
Autonomous Vehicles



Robotic Control



Public Surveillance



Specifications

System

Processor	8 cores Intel® Xeon®/Core™ i7/i5/i3 Processor (CFL-R S)
Chipset	Intel® C246
BIOS	AMI
SIO	IT8786E
Memory	4 DDR4 2666MHz SO-DIMM, up to 128GB (ECC/Non-ECC)
OS	Windows 10, Linux

I/O Interface

Serial	4 COM RS-232/422/485 (ESD 8KV)
USB	- 6 USB 3.1 Gen 2 (External) - 1 USB 2.0 (Internal)
Isolated DIO	32 Isolated DIO : 16 DI, 16 DO
LED	Power, HDD, Wireless
SIM Card	2 External SIM Card Socket

Expansion

Mini PCIe	2 Full-size for PCIe/USB/External SIM Card/mSATA
M.2	1 M.2 Key E Socket
PCI/PCIe	Up to 2 PCI/PCIe Slot, by request

Graphics

Graphics Processor	Intel® UHD Graphics 630 Independent Graphics : By request
Interface	Up to 7 independent displays : - 1 DVI : Up to 1920 x 1200 @60Hz - 1 DisplayPort : Up to 4096 x 2304 @60Hz - 1 Digital Display : Up to 4096 x 2304 @60Hz - By requested Graphics Card

Storage

SATA	4 SATA III (6Gbps) support S/W RAID 0, 1, 5, 10
mSATA	2 SATA III (Mini PCIe Type, 6Gbps)
Storage Device	- 4 Front-access 2.5"SSD/HDD Tray - 1 M.2 Key M Socket

Audio

Audio Codec	Realtek ALC892, 5.1 Channel HD Audio
Audio Interface	1 Mic-in, 1 Line-out

Ethernet

LAN 1	Intel® I219LM GigE LAN supports iAMT 12.0
LAN 2	Intel® I210 GigE LAN

Power

Power Input	- 24V to 36V, DC-in - 12V DC-in (Optional)
Power Interface	3-pin Terminal Block : V+, V-, Frame Ground
Ignition Control	16 Mode (Internal)
Remote Switch	3-pin Terminal Block
Surge Protection	Up to 80V/1ms Transient Power

Others

TPM	Optional Infineon SLB9665 supports TPM 2.0, LPC Interface
Watchdog Timer	Reset : 1 to 255 sec./min. per step
Smart Mgmt.	Wake on LAN, PXE supported
HW Monitor	Monitoring temperature, voltages. Auto throttling control when CPU overheats.

Mechanical

Dimensions	330.0mm x 210.0mm x 172.0mm (12.99" x 8.27" x 6.77")
Weight (w/o Graphics Card)	RCX-1400FR PEG : 5.6 kg (12.37lb) RCX-1400F PEG : 5.4 kg (11.87 lb)
Mounting	Wallmount by mounting bracket

Environment

Operating Temp.	-25°C to 45°C (-13°F to 113°F)
Storage Temp.	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @ 45°C
Shock/Vibration	- IEC 61373 : 2010 - Railway Applications : Rolling Stock Equipment, Shock and Vibration Tests
EMC	CE, FCC, EN50155, EN50121-3-2

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Order Information

Model	SSD Tray	PCI	PCIe x4	PCIe x1	10G USB 3.1	SIM	Isolated DIO
RCX-1430FR-PEG	4	-	1	1			
RCX-1430F-PEG	-	-	1	1			
RCX-1421FR-PEG	4	1	1	-	6	2	32
RCX-1421F-PEG	-	1	1	-			
RCX-1412FR-PEG	4	2	-	-			
RCX-1412F-PEG	-	2	-	-			

CPU List

Series	CPU	Cores	GHz	TDP (W)	CPU	Cores	GHz	TDP (W)	ECC RAM
Intel® Xeon®	E-2176G	6	4.6	80	E-2278GE	8	4.7	80	Yes
	E-2124G	4	4.5	71	E-2278GEL	8	3.9	35	
					E-2226GE	6	4.6	80	
Intel® Core™	i7-8700	6	4.6	65	i7-9700E	8	4.4	65	N/A
	i7-8700T	6	4	35	i7-9700TE		3.8	35	
	i5-8500	6	4.1	65	i5-9500E	6	4.2	65	
	i5-8500T	6	3.5	35	i5-9500TE		3.6	35	
	i3-8100	4	3.6	65	i3-9100E	4	3.7	65	
	i3-8100T	4	3.1	35	i3-9100TE		3.2	35	

Graphics Card List

Model No.	CUDA Core	Memory	Display	TDP
GeForce RTX 2060	1920	6GB GDDR6	HDMI x1, DP x3	170W
GeForce RTX 2070	2304	8GB GDDR6	HDMI x1, DP x3, DVI-D x1	175W
GeForce RTX 2080	2944	8GB GDDR6	HDMI x1, DP x3	225W
GeForce RTX 2080 Ti	4352	11GB GDDR6	HDMI x1, DP x3	260W
GeForce GTX 1660 Ti	1536	6GB GDDR6	HDMI x1, DP x1, DVI-D x1	130W
Quadro P1000	640	4GB GDDR5	Mini DP x4	47W
Quadro P2000	1024	5GB GDDR5	DP x4	75W
Quadro P4000	1792	8GB GDDR5	DP x4	105W
Quadro P6000	3840	24GB GDDR5	DP x4, DVI-D x1	250W
Quadro RTX 4000	2304	8GB GDDR6	DP x3	160W
Quadro RTX 5000	3702	16GB GDDR6	DP x4	265W
Quadro RTX 6000	4608	24GB GDDR6	DP x4	295W
Quadro RTX 8000	4608	48GB GDDR6	DP x4	295W
Quadro GV100	5120	32GB HBM2	DP x4	250W

* Tesla is available by request.

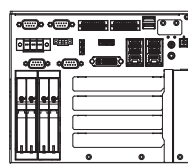
Accessories

DDR4 32G	Certified DDR4 32GB 2666MHz RAM
DDR4 16G	Certified DDR4 16GB 2666/2400/2133 MHz RAM
DDR4 8G	Certified DDR4 8GB 2666/2400/2133 MHz RAM
DDR4 4G	Certified DDR4 4GB 2666/2400/2133 MHz RAM
PWS-480W-WT	480W, 24V, 90V AC to 305V AC Power Supply, Wide-Temp, IP65
PWS-600W	600W, 24V, 90V AC to 305V AC Power Supply
PWS-600W-WT	600W, 28.8V, 90V to 305V AC Power Supply, Wide Temperature -40°C to +70°C
FAN Sink	Fan Sink for RCX-1000 Series
TMK2-20P-100	Terminal Block 20-pin to Terminal Block 20-pin Cable, 100cm
TMK2-20P-500	Terminal Block 20-pin to Terminal Block 20-pin Cable, 500cm
TMB-TMBK-20P	Terminal Board with One 20-pin Terminal Block Connector and DIN-Rail Mounting
4G Module	Mini PCIe 4G/GPS Module with Antenna
WiFi & Bluetooth	WiFi & Bluetooth Module with Antenna

Dimensions & Drawing

Unit : mm (inch)

RCX-1400FR PEG



RCX-1400F PEG

