

RCS-9000F GTX1080

Workstation-grade 7th Generation Intel® Xeon®/Core™ i7 GPU Computing System with Intel® C236 & NVIDIA GeForce® GTX1080, NVIDIA Pascal™ architecture, 2 GigE LAN, 7 USB 3.0, 4 COM, 3 SIM, 2 PCI/PCIe Slot, 32 Isolated DIO, High Performance, Flexible, Expandable



- LGA 1151 Socket supports workstation-grade 7th generation Intel® Xeon®/Core™ i7 Processor (Kaby Lake) with C236
- Display : 3 DVI, 1 HDMI and 4 DisplayPort, up to 7 independent HD displays
- 2 Independent GigE LAN, iAMT 11.0 supported
- 10V to 36V DC Power Input w/80V Surge Protection
- 2560 CUDA® cores NVIDIA GeForce® GTX1080 supports NVIDIA Pascal™ GPU architecture, up to 8K resolution
- 4 Front-access 2.5" SSD/HDD Tray, 1 CFast Socket
- 3 SIM Card Socket for 3G/4G/LTE/WiFi/GPRS/UMTS
- 2 PCI/PCIe Slot, 3 Mini PCIe, 4 COM
- 7 USB 3.0, 32 Isolated DIO
- Configurable Ignition Power Control



Machine Vision

Deep Learning

Robot Control

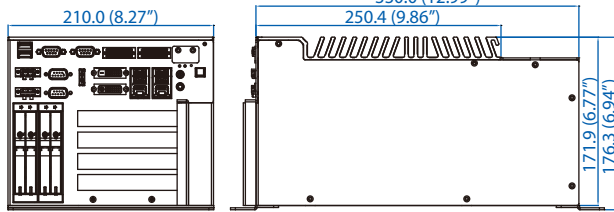
Vehicle Computing

Machine Automation

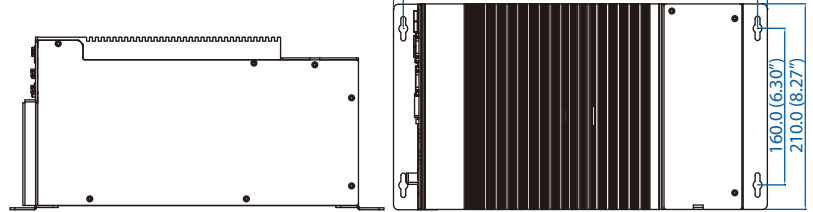


Dimensions & Drawing Unit: mm (inch)

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Specifications

System

Processor	Quad Core Intel® Xeon®/Core™ i7 Processor (Kaby Lake-S/Skylake-S)
Chipset	Intel® C236
BIOS	AMI
SIO	IT8786E
Memory	2 DDR4 2133MHz SO-DIMM, up to 32GB
OS	Windows 10, Windows 8.1, Windows 7, Linux

I/O Interface

Serial	4 COM RS-232/422/485 (ESD 8KV)
USB	• 7 USB 3.0 (6 External, 1 Internal) • 2 USB 2.0 (Internal)
Isolated DIO	32 Isolated DIO : 16 DI, 16 DO
LED	Power, HDD
SIM Card	3 SIM Card Socket (2 External, 1 Internal)

Expansion

Mini PCIe	3 Mini PCIe Socket : • 2 Full-size for PCIe/USB/External SIM Card • 1 Full-size for PCIe/USB/Internal SIM Card/mSATA
PCIe	Up to 2 PCIe Slot, by request
PCI	Up to 2 PCI Slot, by request

Graphics

Processor	• Intel® HD Graphics 630/530 • NVIDIA GeForce® GTX1080
Interface	8 Display interfaces : • 3 DVI : Up to 1920 x 1200 @ 60 Hz • 3 DisplayPort : Up to 7680 x 3840 @ 60Hz • 1 DisplayPort : Up to 4096 x 2304 @ 60Hz • 1 HDMI : Up to 4096 x 2160 @ 60Hz

Storage

SATA	4 SATA III (6Gbps)
mSATA	1 SATA III (Mini PCIe Type, 6Gbps)
Storage Device	• 1 CFast Socket (Internal) • 4 2.5" SSD/HDD Tray/Bracket (External/Internal)

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 11.0
LAN 2	Intel® I210 GigE LAN

Power

Power Input	10V to 36V, DC-in
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 Management	Wake on LAN, PXE supported
HW Monitor	Monitoring temperature, voltages. Auto throttling control when CPU overheats.

Mechanical

Dimensions (WxLxH)	172mm x 330mm x 210mm (6.8" x 13" x 8.3")
Weight	RCS-9400F GTX1080 : 4.4 kg (9.7 lb) RCS-9400FH GTX1080 : 5.1 kg (11.2 lb) RCS-9400FR GTX1080 : 5.6 kg (12.3 lb) RCS-9400FHR GTX1080 : 6.3 kg (13.9 lb)
Mounting	Wallmount by mounting bracket

Environment

Operating Temp.	35W TDP CPU : • Core™ i7 : -25°C to 60°C (-13°F to 140°F) • Xeon® E3-1268L v5 : -25°C to 60°C (-13°F to 140°F)
	65W TDP CPU : Core™ i7 : -25°C to 55°C (-13°F to 131°F)
	80W TDP CPU : Xeon® E3-1275 v6, E3-1275 v5, E3-1225 v5 : -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% @ 60°C
Shock	IEC 60068-2-27, SSD: 50G @ wallmount, Half-sine, 11ms
Vibration	IEC 60068-2-64, SSD: 5Grms, 5Hz to 500Hz, 3 Axis
EMC	CE, FCC, EN50155, EN50121-3-2

Order Information

RCS-9430F-GTX1080	• RCS-9400, NVIDIA GeForce® GTX1080, 2 GigE LAN, 1 PCIe x4, 1 PCIe x1, 4 COM, 7 USB 3.0, 3 SIM, Isolated DIO
RCS-9430FH-GTX1080	• RCS-9400 w/ 65W CPU, NVIDIA GeForce® GTX1080, 2 GigE LAN, 1 PCIe x4, 1 PCIe x1, 4 COM, 7 USB 3.0, 3 SIM, Isolated DIO
RCS-9430FR-GTX1080	• RCS-9400, NVIDIA GeForce® GTX1080, 2 GigE LAN, 1 PCIe x4, 1 PCIe x1, 4 Front-access SSD Tray, 4 COM, 7 USB 3.0, 3 SIM, Isolated DIO
RCS-9430FHR-GTX1080	• RCS-9400 w/ 65W CPU, NVIDIA GeForce® GTX1080, 2 GigE LAN, 1 PCIe x4, 1 PCIe x1, 4 Front-access SSD Tray, 4 COM, 7 USB 3.0, 3 SIM, Isolated DIO
RCS-9421F-GTX1080	• RCS-9400, NVIDIA GeForce® GTX1080, 2 GigE LAN, 1 PCIe x4, 1 PCI, 4 COM, 7 USB 3.0, 3 SIM, Isolated DIO
RCS-9421FH-GTX1080	• RCS-9400 w/ 65W CPU, NVIDIA GeForce® GTX1080, 2 GigE LAN, 1 PCIe x4, 1 PCI, 4 COM, 7 USB 3.0, 3 SIM, Isolated DIO
RCS-9421FR-GTX1080	• RCS-9400, NVIDIA GeForce® GTX1080, 2 GigE LAN, 1 PCIe x4, 1 PCI, 4 Front-access SSD Tray, 4 COM, 7 USB 3.0, 3 SIM, Isolated DIO
RCS-9421FHR-GTX1080	• RCS-9400 w/ 65W CPU, NVIDIA GeForce® GTX1080, 2 GigE LAN, 1 PCIe x4, 1 PCI, 4 Front-access SSD Tray, 4 COM, 7 USB 3.0, 3 SIM, Isolated DIO
RCS-9412F-GTX1080	• RCS-9400, NVIDIA GeForce® GTX1080, 2 GigE LAN, 2 PCI, 4 COM, 7 USB 3.0, 3 SIM, Isolated DIO
RCS-9412FH-GTX1080	• RCS-9400 w/ 65W CPU, NVIDIA GeForce® GTX1080, 2 GigE LAN, 2 PCI, 4 COM, 7 USB 3.0, 3 SIM, Isolated DIO
RCS-9412FR-GTX1080	• RCS-9400, NVIDIA GeForce® GTX1080, 2 GigE LAN, 2 PCI, 4 Front-access SSD Tray, 4 COM, 7 USB 3.0, 3 SIM, Isolated DIO
RCS-9412FHR-GTX1080	• RCS-9400 w/ 65W CPU, NVIDIA GeForce® GTX1080, 2 GigE LAN, 2 PCI, 4 Front-access SSD Tray, 4 COM, 7 USB 3.0, 3 SIM, Isolated DIO

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
DDR4 16G	• Certified DDR4 16GB 2133MHz RAM
DDR4 8G	• Certified DDR4 8GB 2133MHz RAM
DDR4 4G	• Certified DDR4 4GB 2133MHz RAM
PWA-280W-WT	• 280W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
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
4G Module	• Mini PCIe 4G/GPS Module with Antenna
WiFi & Bluetooth	• Mini PCIe WiFi & Bluetooth Module with Antenna

CPU List

Series	CPU	Cache (MB)	Turbo Freq. (GHz)	TDP (W)	ECC Memory
Intel® Xeon®	E3-1275 v6	8	4.2	80	Y
	E3-1275 v5		4	80	
	E3-1225 v5		3.7	80	
	E3-1268L v5		3.4	35	
Intel® Core™	i7-7700	8	4.2	65	NA
	i7-7700T		3.8	35	
	i7-6700		4	65	
	i7-6700TE		3.4	35	

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