

# RCS-9412FR/FHR GTX1080

Intel® Xeon®/Core™ i7/i5/i3 GPU Computing System with Intel® C236 & NVIDIA® GeForce® GTX 1080, NVIDIA® Pascal™ architecture, 2 GigE LAN, 4 SSD Tray, 2 PCI, 7 USB 3.0, 4 COM, 3 SIM, 32 Isolated DIO, High Performance, Flexible, Expandable



## Features

- LGA 1151 Socket supports workstation-grade 7th generation Intel® Xeon®/Core™ i7/i5/i3 Processor with Intel® C236 Chipset
- 2560 CUDA® cores NVIDIA® GeForce® GTX 1080 supports NVIDIA® Pascal™ GPU architecture, up to 8K resolution
- 3 DVI, 1 HDMI and 4 DisplayPort, up to 7 independent HD displays
- 3 SIM Card Socket for WiFi/4G/3G/LTE/GPRS/UMTS
- 4 Front-access 2.5" SSD/HDD Tray, 1 CFast Socket
- Expansion : 2 PCI, 3 Mini PCIe
- 7 USB 3.0, 32 Isolated DIO, 4 COM
- 2 Independent GigE LAN, iAMT 11.0 supported
- 12V to 36V DC-in with 80V Surge Protection
- Configurable Ignition Power Control



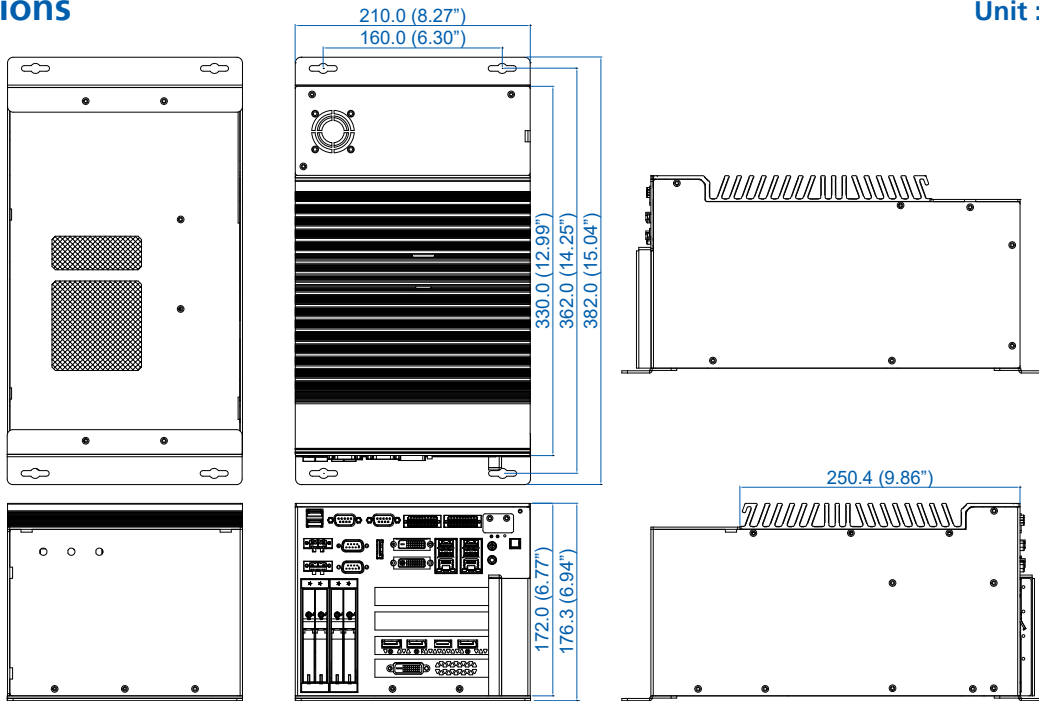
## Specifications

System	
Processor	Intel® Xeon®/Core™ i7/i5/i3 Processor (Kaby Lake-S/Skylake-S)
Chipset	Intel® C236
BIOS	AMI
SIO	IT8786E
Memory	2 DDR4 2400/2133 MHz SO-DIMM, up to 32GB
I/O Interface	
Serial	4 COM RS-232/422/485 (ESD 8KV)
USB	<ul style="list-style-type: none"> <li>▪ 7 USB 3.0 (6 External, 1 Internal)</li> <li>▪ 2 USB 2.0 (Internal)</li> </ul>
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 : <ul style="list-style-type: none"> <li>▪ 2 Full-size for PCIe/USB/External SIM Card</li> <li>▪ 1 Full-size for PCIe/USB/Internal SIM Card/mSATA</li> </ul>
PCI	2 PCI
Graphics	
Graphics Processor	<ul style="list-style-type: none"> <li>▪ Intel® HD Graphics P630/P530/630/530</li> <li>▪ NVIDIA® GeForce® GTX 1080</li> </ul>
Interface	8 Display interfaces : <ul style="list-style-type: none"> <li>▪ 3 DVI : Up to 1920 x 1200 @ 60 Hz</li> <li>▪ 3 DisplayPort : Up to 7680 x 3840 @ 60Hz</li> <li>▪ 1 DisplayPort : Up to 4096 x 2304 @ 60Hz</li> <li>▪ 1 HDMI : Up to 4096 x 2160 @ 60Hz</li> </ul>
Storage	
SATA	4 SATA III (6Gbps) support S/W RAID 0, 1, 5, 10
mSATA	1 SATA III (Mini PCIe Type, 6Gbps)
Storage Device	<ul style="list-style-type: none"> <li>▪ 1 CFast Socket (Internal)</li> <li>▪ 4 2.5" SSD/HDD Tray (External)</li> </ul>
Audio	
Audio Codec	Realtek ALC888S-VD, 7.1 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

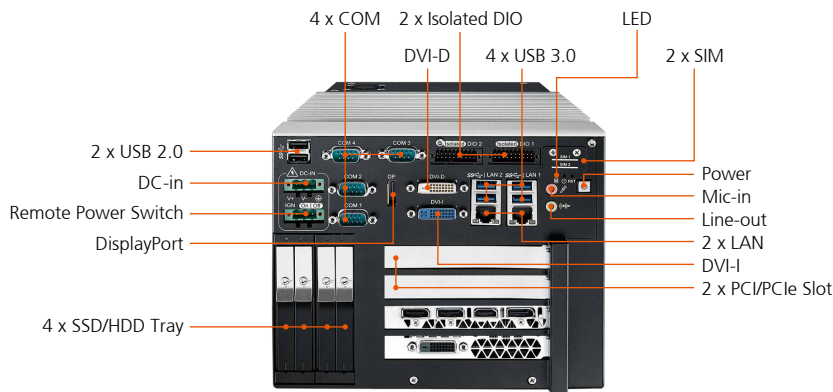
Power	
Power Input	35W TDP CPU : 12V to 36V, DC-in 65W/80W TDP CPU : 16V to 36V, DC-in
Power Interface	3-pin Terminal Block : V+, V-, Frame Ground
Ignition Control	16 Mode (Internal)
Remote Switch	3-pin terminal block : On, Off, IGN
Surge Protection	Up to 80V/1ms Transient Power
Others	
TPM	Optional 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.
Software Support	
OS	Windows 10, Windows 8.1, Windows 7, Linux
Mechanical	
Dimensions (W x L x H)	172mm x 330mm x 210mm (6.8" x 13" x 8.3")
Weight	RCS-9412FR GTX1080 : 5.6 kg (12.3 lb) RCS-9412FHR GTX1080 : 6.3 kg (13.9 lb)
Mounting	Wallmount by mounting bracket
Environment	
Operating Temperature	35W TDP CPU : <ul style="list-style-type: none"> <li>▪ Xeon® E3-1268L v5 : -25°C to 60°C (-13°F to 140°F)</li> <li>▪ Core™ i7 : -25°C to 60°C (-13°F to 140°F)</li> </ul> 65W TDP CPU : <ul style="list-style-type: none"> <li>Core™ i7 : -25°C to 55°C (-13°F to 131°F)</li> </ul> 80W TDP CPU : <ul style="list-style-type: none"> <li>Xeon® E3-1275 v6, E3-1275 v5, E3-1225 v5 : -25°C to 45°C (-13°F to 113°F)</li> </ul>
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @ 75°C
Shock	<ul style="list-style-type: none"> <li>▪ IEC 60068-2-27</li> <li>▪ SSD : 50G @ wallmount, Half-sine, 11ms</li> </ul>
Vibration	<ul style="list-style-type: none"> <li>▪ IEC 60068-2-64</li> <li>▪ SSD : 5Grms, 5Hz to 500Hz, 3 Axis</li> </ul>
EMC	CE, FCC, EN50155, EN50121-3-2

## Dimensions

Unit : mm/ inch



## Front I/O



## Order Information

<b>RCS-9412FR GTX1080</b>	RCS-9400F, NVIDIA® GeForce® GTX1080, 2 GigE LAN, 2 PCI, 4 SSD Tray, 4 COM, 7 USB 3.0, 3 SIM, Isolated DIO
<b>RCS-9412FHR GTX1080</b>	RCS-9400F w/65W CPU, NVIDIA® GeForce® GTX1080, 2 GigE LAN, 2 PCI, 4 SSD Tray, 4 COM, 7 USB 3.0, 3 SIM, Isolated DIO

### Accessories

<b>DDR4 16G</b>	Certified DDR4 16GB 2400/2133 MHz RAM
<b>DDR4 8G</b>	Certified DDR4 8GB 2400/2133 MHz RAM
<b>DDR4 4G</b>	Certified DDR4 4GB 2400/2133 MHz RAM
<b>PWA-280W-WT</b>	280W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
<b>PWA-160W-WT</b>	160W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
<b>PWA-120W</b>	120W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block
<b>PWS-480W-WT</b>	480W, 24V, 90V AC to 305V AC Power Supply, Wide-Temp, IP65
<b>PWS-600W</b>	600W, 24V, 90V AC to 305V AC Power Supply
<b>TMK2-20P-100</b>	Terminal Block 20-pin to Terminal Block 20-pin Cable, 100cm
<b>TMK2-20P-500</b>	Terminal Block 20-pin to Terminal Block 20-pin Cable, 500cm
<b>TMB-TMBK-20P</b>	Terminal Board with One 20-pin Terminal Block Connector and DIN-Rail Mounting
<b>4G Module</b>	Mini PCIe 4G/GPS Module with Antenna
<b>WiFi &amp; Bluetooth</b>	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	Yes
	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	
	i5-7500	6	3.8	65	NA
	i5-7500T		3.3	35	
	i5-6500		3.6	65	
	i5-6500TE	3.3	35	Yes	
	i3-7101E	3	3.9		65
	i3-7101TE		3.4		35
i3-6100	4	3.7	65		
i3-6100TE		2.7	35		