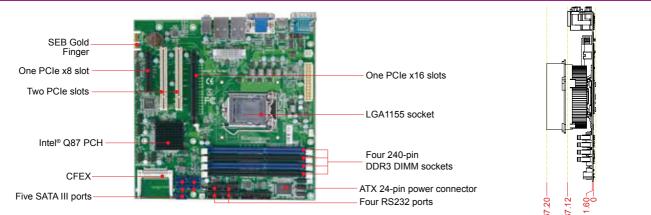
## RUBY-D720VG2AR Intel Core 4th generation family by LGA1150 package µATX with DDR3 SDRAM, Triple display, Dual Gigabit Ethernet, and USB Ports



RUBY-D720VG2AR is based on Intel® Q87 chipset and desktop processor sku like Core Intel Core 4th Gen. Build with PCI and PCI Express expensions, it is suitable for Medical, Industrial automation, and digital signage ap-plications.

## **FEATURES**

- Intel Core 4th generation family by LGA1150 package
- Four Long-DIMMs support dual channel DDR3 non-ECC SDRAM up to 32GB
- Rear I/O, USB2.0/3.0 dual Gigabit Ethernet, COM Port and SATA III ports support Intel RAID 0, 1, 5, 10.
- One PCle x16 (Gen3), One PCle x8 (Gen2, x4 signal), One PICe x1 gold finger and two PCl slot.
- Intel<sup>®</sup> Active Management Technology 9.0



## **ORDERING GUIDE**



## **PACKING LIST**

One RUBY-D716VG2AR ATX Industrial Main Board
One Installation DVD
One SATA III cable
One I/O shield



GENERAL	
Processor	<ul> <li>Intel<sup>®</sup> Core<sup>™</sup> 4th generation family by LGA1150 package processor</li> <li>DMI x4 Link: 5.0GT/s</li> <li>Support Intel<sup>®</sup> Turbo Boost, Hyper-Threading, Virtualization, Thermal Monitoring, Trusted Execution and SpeedStep Technology (depends on CPU sku)</li> </ul>
Chipset	Intel® Q87 PCH
BIOS	AMI BIOS
Memory	Support up to 32GB DDR3 1333/1600 SDRAM on four 240-pin DIMM sockets (dual channel)
Storage Devices	- Support 5x SATA drives - Support 1x CFEX slot - Support RAID 0,1,5,10
Watchdog Timer	Programmable via S/W from 0.5 sec. to 254.5 sec.
Expansion Interface	<ul> <li>1x PCI Express x16 Gen3 up to 8.0 GT/s</li> <li>1x PCI Express x8 (PCIe x4 signal Gen2 up to 5.0 GT/s)</li> <li>2x PCI devices at 32 bit 33 MHz</li> <li>1x PCIe x1 gold finger</li> </ul>

I/O INTERFACE			
Super I/O	ITE IT8728F		
Audio	<ul> <li>Intel® Q87 PCH built-in High Definition Audio up to 192-kHz 32-bit</li> <li>Realtek ALC892 HDA codec, 5.1 channels</li> </ul>		
Ethernet	<ul> <li>Intel® WGI218LM + WGI210AT gigabit ethernet controller</li> <li>Dual 10BASE-T / 100BASE-TX / 1000BASE-T Etherne</li> <li>Dual RJ-45 connector with two LED indicators</li> </ul>		
Serial Port	- 1x RS232 on rear I/O - 1x RS232/422/485 selectable port on rear I/O - 4x RS232 with header		
USB	- 4x USB 3.0 Ports on rear I/O - 8x USB 2.0 Ports on board		
Keyboard & Mouse	PS/2 on board dedicated to keyboard & mouse		
GPIO	On board programmable 8-bit Digital I/Os		

DISPLAY	
Graphic Controller	<ul> <li>Intel<sup>®</sup> Core<sup>™</sup> 4th gen. processors integrated graphic engine</li> <li>Provided improved 3D multimedia capabilities including Microsoft DirectX 11.1, Shader Model 4.0, MPEG-2 and OpenGL 3.2</li> </ul>
Display Interface	- VGA: Resolution up to 2560x1600 @ 60Hz - DVI-D: up to 1920x1200 @ 60Hz - HDMI: up to 1920x1200 @ 60Hz Support Triple Display

Mechanical &	Environment
Dimension	- 243.8(L) x 243.8(W); 9.6"(L) x 9.6"(W) - PCB: 6 layers
Power Supply	ATX 24-pin power input
Environment	<ul> <li>Operation Temperature: 0~60 °C (with highest performance on 50 °C)</li> <li>Storage Temperature: -20~80 °C</li> <li>Relative Humidity: 5~90%, non-condensing</li> </ul>
MTBF	Over 120,000 hours at 40°C