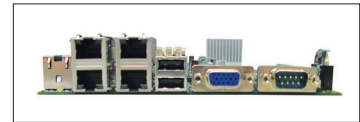
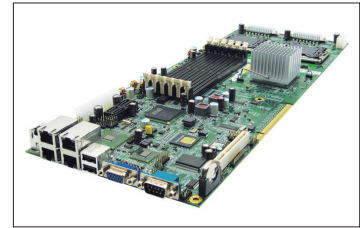
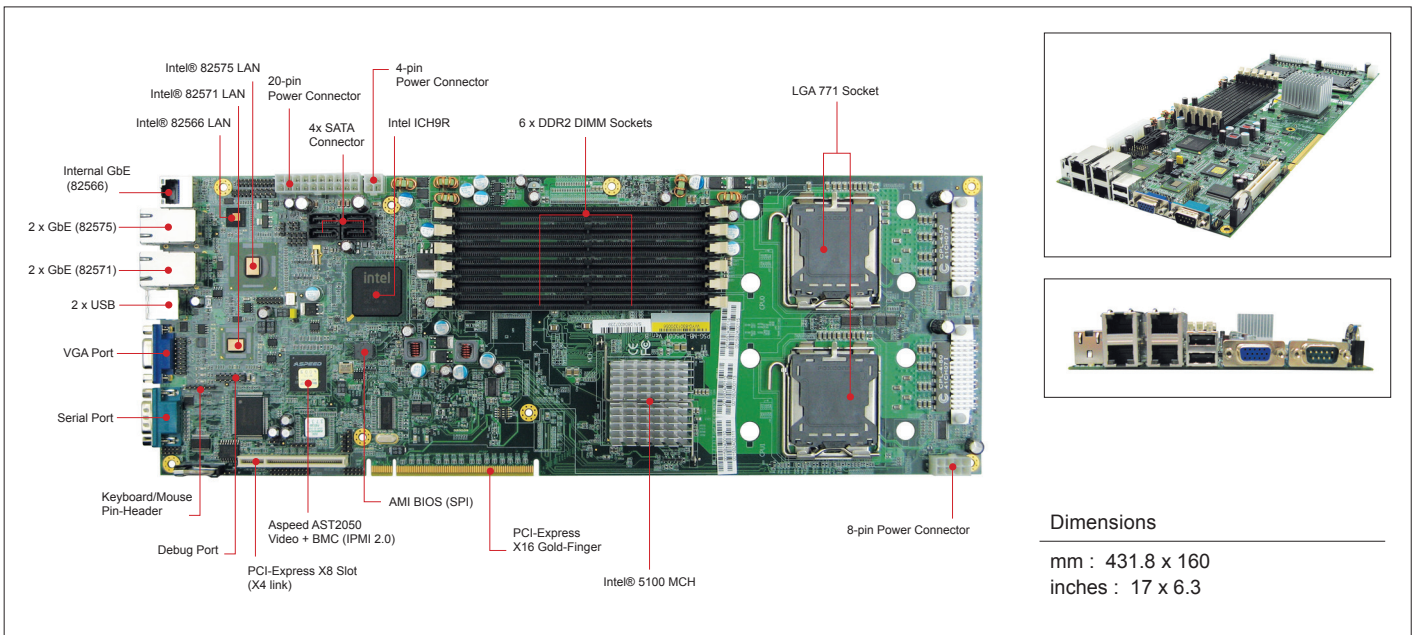


# Aquarius Motherboard



PSG-M-AQDP5100-110



**Dimensions**

mm : 431.8 x 160  
 inches : 17 x 6.3

The Aquarius series motherboard features the revolutionary MAX I/O™ technology, allowing for maximum flexibility of I/O usage, never before available in the industry.

Built upon the MAX I/O™ technology, the Aquarius series allows users to maximize the input/output (I/O) usage by utilizing the PCI Express directly at the source and eliminating the need for expensive switches. Users can cost-effectively manage PCI Express with the available bandwidth by choosing one of many riser cards for their IO expansion requirement. Max I/O™ supports any brand of PCI-based HBAs and that puts the decision of how to use PCI Express in the hands of the user, not in the hands of the board supplier.

The Aquarius motherboards also deliver an accommodating footprint design that allows two full-height and one low-profile off-the-shelf expansion cards in 1U rack space. The unique RTX form factor utilizes full internal chassis height for optimum I/O configurations.

For more information about Max I/O™, please visit [www.aicipc.com/maxio](http://www.aicipc.com/maxio)

**Features & Benefits**

- 1 Supports two(2) Intel® Quad-Core or Dual-Core 5000 series processors for significantly increased server performance without an increase in power consumption
- 2 5 - 7 years of product life cycle (Based on chipset roadmap)
- 3 Baseboard Management Controller (BMC)
  - IPMI 2.0 spec
  - iKVM, Media redirection, SMASH support
  - KCS (keyboard controller style), IOL (IPMI over LAN), SOL (Serial over LAN) interface
  - Temp, voltage and fan speed monitoring
  - Smart fan speed control
  - System identity, fan fail alarm, system status alarm LED
  - Remote power ON/OFF/RESET
  - RMCP+, SNMP, DHCP in IOL support
  - AES-128 encryption in RMCP+
- 4 Four(4) external Intel® Gigabit Ethernet ports provide high-performance network connections, plus one internal Intel Gigabit Ethernet port for heartbeat when using dual-node system.
- 5 Rackmount Technology Extension (RTX) form factor utilizes full internal chassis height for optimum I/O configurations



# SPECIFICATIONS

## System

Processor Support	Dual LGA771 sockets to support Intel® Dual-Core/Quad-Core Xeon® processors 5100/5200/5300/5400 series (Woodcrest, Clovertown, Wolfdale-DP, Harpertown)
System Bus	1066/1333 MHz
System Chipset	<ul style="list-style-type: none"> <li>Intel® 5100 (San Clemente)</li> <li>Intel® 82801IR (ICH9R)</li> </ul>
System Memory	Six(6) DIMM slots support up to 48 GB of DDR2 533/667 MHz Registered ECC memory
Expansion	1 x PCIe X8 slot (X4 lane, low-profile) 1 x PCIe X16 Gold-Finger (can be converted into various combination of slots to support full-length, full-height expansion cards) <u>Riser card options:</u> <ul style="list-style-type: none"> <li>1 x PCIe X16</li> <li>2 x PCIe X8</li> <li>1 x PCIe X8 + 1 x PCI-X (top slot)</li> <li>2 x PCIe X8 (double-width slots, 2U)</li> <li>4 x PCI-X (top slot, 2U)</li> <li>1 x PCIe X8 + 1 x PCIe X8 (X4 lane) + 2 x PCI-X (2U)</li> <li>1 x PCIe X8 + 2 x PCI-X + 1 x PCI32 (5V) (2U)</li> <li>4 x PCIe X8 (X4 lanes) (2U)</li> </ul>

## System BIOS

BIOS Type	<ul style="list-style-type: none"> <li>AMI BIOS</li> <li>SPI (Serial Peripheral Interface) FLASH Interface</li> </ul>
BIOS Features	<ul style="list-style-type: none"> <li>ACPI 1.0/2.0/3.0</li> <li>PXE 2.0</li> <li>WOL</li> <li>AC loss recovery</li> <li>IPMI KCS interface</li> <li>SMBIOS 2.0</li> <li>Serial console redirection</li> </ul>


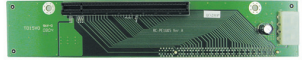

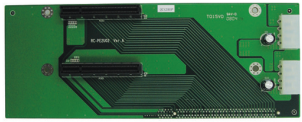

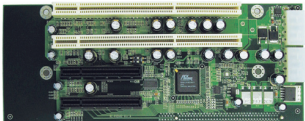

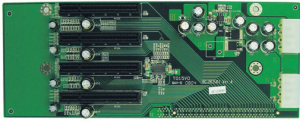
## On-board Devices

SATA	Built-in Intel® ICH9R SATA2 controller with RAID support
IPMI	Aspeed AST2050 BMC <ul style="list-style-type: none"> <li>Intelligent Platform Management Interface 2.0 (IPMI 2.0)</li> <li>iKVM, Media Redirection, IPMI over LAN, Serial over LAN</li> <li>SMASH support</li> </ul>
Network Controller	<ul style="list-style-type: none"> <li>Intel® 82571EB (Ophir) PCIe Dual-port GbE controller; external</li> <li>Intel® 82575EB (Zoar) PCIe Dual-port GbE controller; external (BMC Management)</li> <li>Intel® 82566DM (Nineveh) GLCI on ICH9R Single-port GbE PHY; internal (optional)</li> </ul>
Graphics	Aspeed AST2050 graphics controller <ul style="list-style-type: none"> <li>8 MB of system memory</li> <li>1600 x 1200 @ 60 Hz</li> </ul>
Super I/O	Winbond W83627DHG

## Input/Output

Serial ATA	4 x SATA2 ports
LAN	<ul style="list-style-type: none"> <li>4 x External RJ-45 ports</li> <li>1 x Internal RJ-45 port (optional)</li> </ul>
USB	<ul style="list-style-type: none"> <li>2 x External USB ports</li> <li>2 x Internal USB pin-headers</li> </ul>
VGA	<ul style="list-style-type: none"> <li>1 x External VGA port</li> <li>1 x Internal VGA pin-header</li> </ul>
Serial Port	<ul style="list-style-type: none"> <li>1 x External DB-9 serial port</li> <li>1 x Internal DB-9 serial pin-header</li> </ul>
Others	<ul style="list-style-type: none"> <li>1 x Keyboard + 1 x Mouse via pin-header</li> <li>Debug port, GPIO port</li> </ul>

## Ordering Information

Riser Card Options	
<b>PSG-RC-00PL-10-110</b> (PSG Code: PE1U01)	 <p>1U on-board PCIe X8 to 1 PCIe X8 (low-profile) Riser for Aquarius/Aries/Aquila</p>
<b>PSG-RC-AQ1U-10-110</b> (PSG Code: PE1U05)	 <p>1U Gold finger PCIe X16 to 1 PCIe X16 Riser for Aquarius/Castor</p>
<b>PSG-RC-AQ1U-20-111</b> (PSG Code: PE1U04)	 <p>1U Gold finger PCIe X16 to 2 PCIe X8 Riser for Aquarius/Castor</p>
<b>PSG-RC-AQ1U-11-110</b> (PSG Code: PX1U02)	 <p>1U Gold finger PCIe X16 to 1 PCIe X8 + 1 PCI-X Riser (top slot) for Aquarius/Castor</p>
<b>PSG-RC-AQ2U-20-110</b> (PSG Code: PE2U02)	 <p>2U Gold finger PCIe X16 to 2PCIe X8 Riser (double-width slots) for Aquarius</p>
<b>PSG-RC-AQ2U-04-110</b> (PSG Code: PX2U04)	 <p>2U Gold finger PCIe X16 to 4 PCI-X Riser (top slot) for Aquarius/Castor</p>
<b>PSG-RC-AQ2U-22-110</b> (PSG Code: PX2U02)	 <p>2U Gold finger PCIe X16 to 1 PCIe X8 + 1 PCIe X8 (X4 lanes) + 2 PCI-X Riser for Aquarius</p>
<b>PSG-RC-AQ2U-121-110</b> (PSG Code: PX2U03)	 <p>2U Gold finger PCIe X16 to 1 PCIe X8 + 2 PCI-X + 1 PCI32 (5V) Riser for Aquarius/Castor</p>
<b>PSG-RC-AQ2U-40-110</b> (PSG Code: PE2U01)	 <p>2U Gold finger PCIe X16 to 4 PCIe X8 (X4 lanes) Riser for Aquarius/Castor</p>