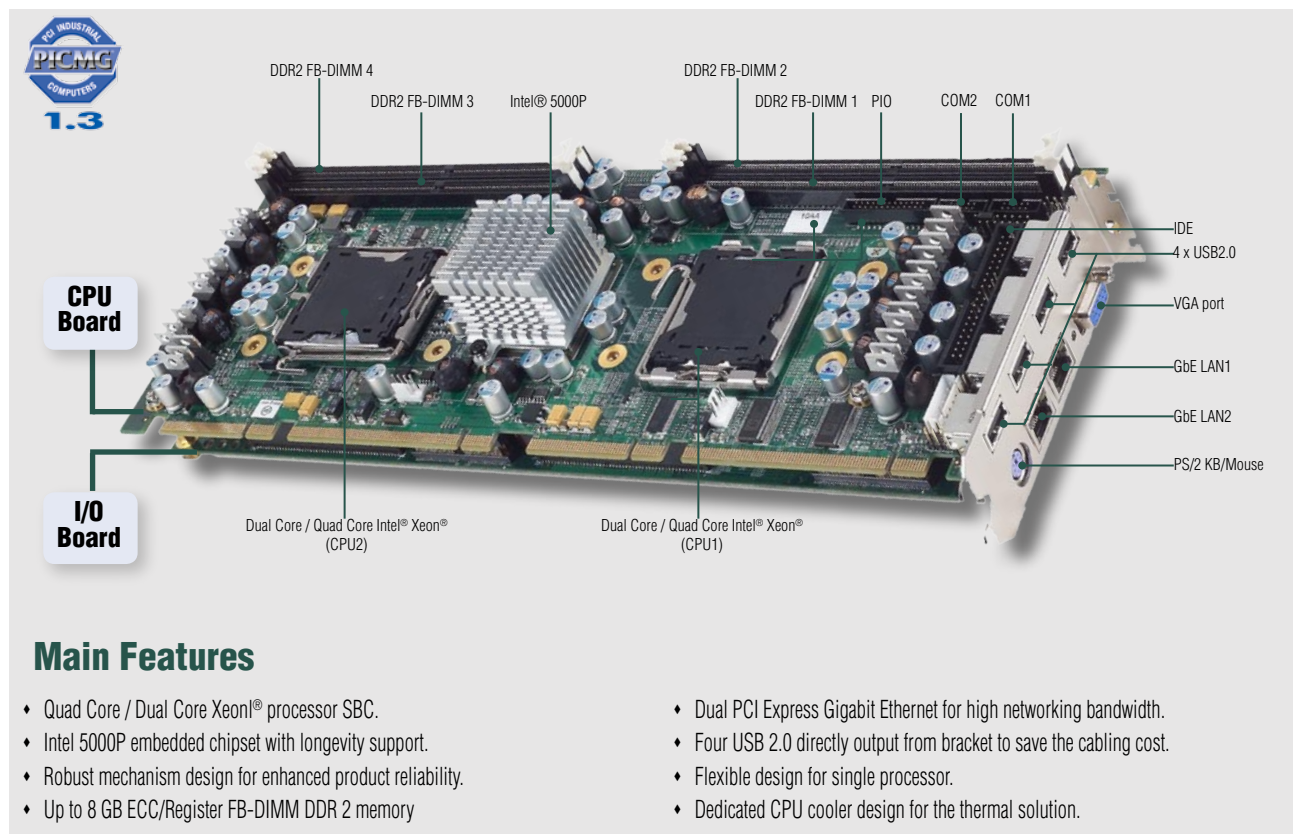


# PEAK 8920VL2



Full-Size PICMG1.3 LGA771 for Intel® Dual Core Xeon processor w/ Fully Buffered DIMM



## Main Features

- ◆ Quad Core / Dual Core Xeon® processor SBC.
- ◆ Intel 5000P embedded chipset with longevity support.
- ◆ Robust mechanism design for enhanced product reliability.
- ◆ Up to 8 GB ECC/Register FB-DIMM DDR 2 memory
- ◆ Dual PCI Express Gigabit Ethernet for high networking bandwidth.
- ◆ Four USB 2.0 directly output from bracket to save the cabling cost.
- ◆ Flexible design for single processor.
- ◆ Dedicated CPU cooler design for the thermal solution.

## Product Overview

The PEAK 8920VL2 supports LGA771 dual core Intel® Xeon® Processor 5100 series with 4 MB L2 cache and the Intel® Core™ micro architecture up to 2.33 GHz with 1333 MHz FSB. Featuring an Intel® 5000P Chipset + Intel® ESB2, the PEAK 8920VL2 delivers higher throughput with dual point-to-point system buses, faster memory for I/O bandwidth, and Fully Buffered DIMM (FB-DIMM) support.

The SBC PEAK 8920 is successor to flagship PEAK 7220, which complied with PICMG 1.3 to ensure easy configuration, highest quality standard, and seamless compatibility with products from other manufactures.

## Specifications

### CPU Support

- ◆ Support Dual-Core Intel® Xeon® processor 5000 series and Quad-Core Intel® Xeon® Processor 5300 series (80W)
- ◆ Intel Embedded Processor List ( Intel® Longevity CPU):
  - ◆ Dual Core Intel® Xeon® Processor (5130 & 5140)
  - ◆ Dual Core Intel® Xeon® Processor LV (5128, 5138, 5148)
- ◆ 1066/1333 MHz FSB support

### Main Memory

- ◆ 4 x 240-pin four channel DDR 2 FB-DIMM
- ◆ Support ECC / Register DDR2 memory up to 8GB

### Chipset

- ◆ Intel® 5000P memory controller Hub
- ◆ Intel® 6321ESB I/O controller Hub

### BIOS

- ◆ AMI BIOS
- ◆ Plug & Play support
- ◆ 8M-bit flash ROM
- ◆ Support Soft off, Wake on LAN, Power On by PS2 Keyboard Function Key, RTC alarm Power On
- ◆ Power on after power failure

### On-board LAN

- ◆ 2 x Intel® 82573L PCI Express Gigabit Ethernet
- ◆ Support Boot From LAN (PXE)
- ◆ Support Wake On LAN (When 5Vsb power available)
- ◆ 2 x RJ45 with LED

### Display

- ◆ ATI RS1000 PCI graphic Controller
- ◆ 32MB DDR2 SDRAM VGA Memory
- ◆ 1 x DB15 VGA port

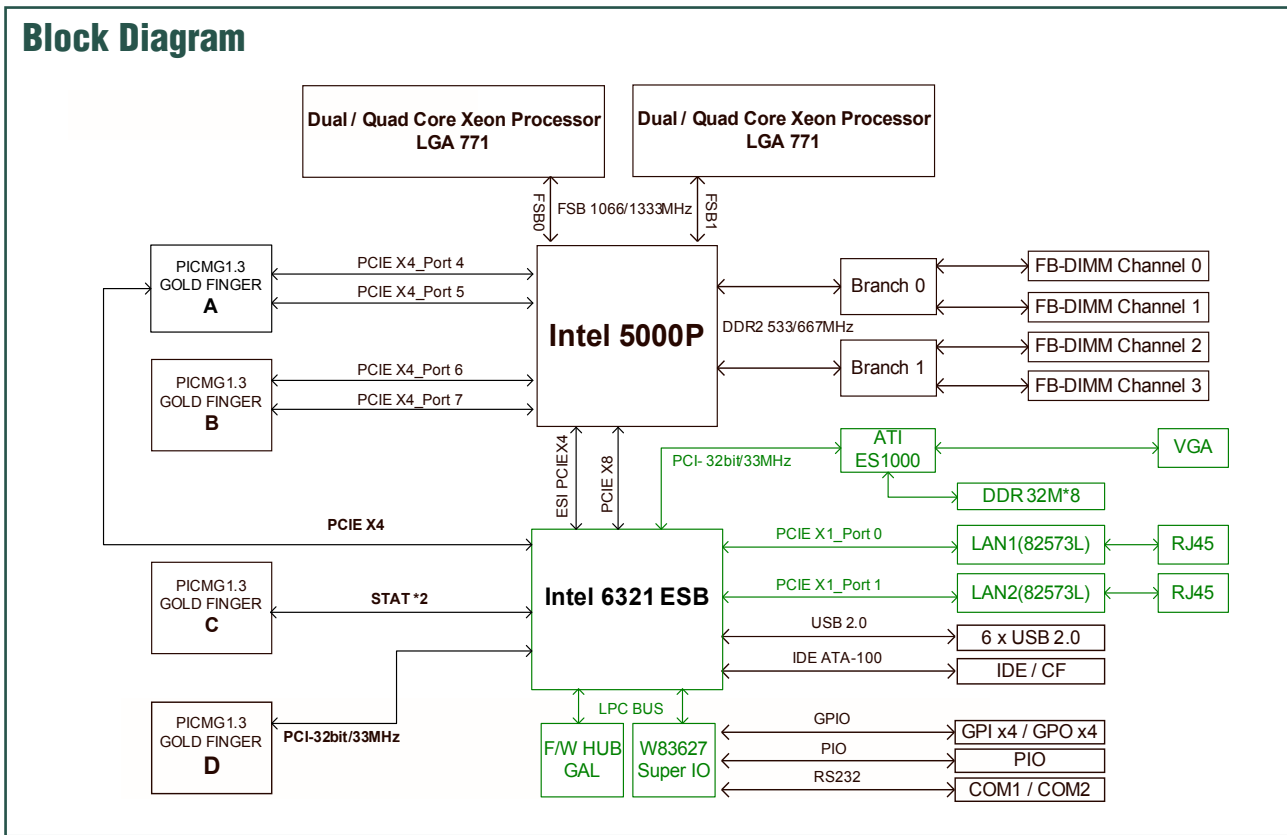
### I/O Interface

- ◆ USB 2.0: 4 ports through I/O bracket
- ◆ USB 2.0: 2 ports, with 1x6 JST (2.5mm )
- ◆ Serial port: 2 ports, with 2x5 box-header (2.0mm) support RS-232 only
- ◆ Parallel port: 1 port , with 2x13 box-header (2.0mm), Bi-directional, EPP/ECP
- ◆ PS/2: 1 x Mini-Din Keyboard/Mouse
- ◆ GPIO: Support 4 sets of general purpose I/O each with TTL level (5V) interface
- ◆ FAN: 2 x 4-pin FAN JST connectors (for CPU coolers )
- ◆ 1 x on board buzzer
- ◆ 1 x 2-pin power on switch
- ◆ 1 x SMBus 2.0 to Backplane
- ◆ 1 x 2-pin header for reset
- ◆ 1 x 5-pin header for key lock
- ◆ 2 x 2-pin headers for power LED / HDD LED

### Storage

- ◆ SATA: 2 ports, support RAID 0,1 through Backplane
- ◆ IDE: 1 x 40-pin IDE connector, support Ultra ATA 66/100/133
- ◆ 1 x 2-pin JST (2.5mm) power connector for DOM (Disk On Module)

## Block Diagram



### Watchdog Timer

- Watchdog Timer is programmable by software from 0 to 255 seconds (Tolerance 15% under room temperature 25°C)

### On-board RTC

- On-chip RTC with battery back up
- 1 x External Li-Lon battery

### Power Input

- Power source from backplane through PICMG 1.3 Golden Finger, support ATX mode

CPU Type (2 x Dual Core Xeon 3.0G) (4 x FBD DDR2 2.0GB)	+12V	+5V	+3.3V	+5Vsb
Full-Loading Mode	21.4 A	2.07 A	3.85 A	0.04 A
Light-Loading Mode	10.59 A	1.69 A	3.63 A	0.04 A

#### NOTE:

- 1.Full Loading: Utilize CPU 100% with Burn-in test running
- 2.Light Loading: Utilize CPU loading below 5% without data or application running.

### Dimensions

- PICMG 1.3 form factor  
338.58 mm (L) x 122 mm (W) (13.3" x 4.8")

### Environment

- Operating Temperature: 0°C - 60°C (for Board Level Only)
- Storage Temperature: -20°C to 85°C
- Relative Humidity:  
Operating: 10%~90% (non-condensing)  
Non-Operating: 5%~95% (non-condensing)

### Certifications

- CE approval
- FCC Class A

## Ordering information

- **PEAK 8920VL2 (P/N: 1P00892000X0)** RoHS Compliant  
PICMG 1.3 Full-Size SHB Express (System Host Board), Intel® 5000P Chipset, LGA 771 socket support Dual Core /Quad Core Intel® Xeon® processors w/ 4 DDR2 FB-DIMM / 2 Express GbE / 6 USB 2.0 / VGA/ 2 SATA.

## NEXCOM Backplane support list

<b>NBP 14111</b>	PICMG1.3 Passive Backplane 14-slots w/ 1 PICMG 1.3 SHB / 1 PCIe x16 slot / 4 PCI slots / 8 PCI-X slots
<b>NBP 14210</b>	PICMG1.3 Passive Backplane 14-slots w/ 1 PICMG 1.3 SHB / 1 PCIe x16 slot / 1 PCIe x4 slot / 10 PCI slots
<b>NBP 20016</b>	PICMG1.3 Passive Backplane 20-slots w/ 1 PICMG 1.3 SHB / 16 PCI-X slots

### PEAK 8920VL2 Top View

