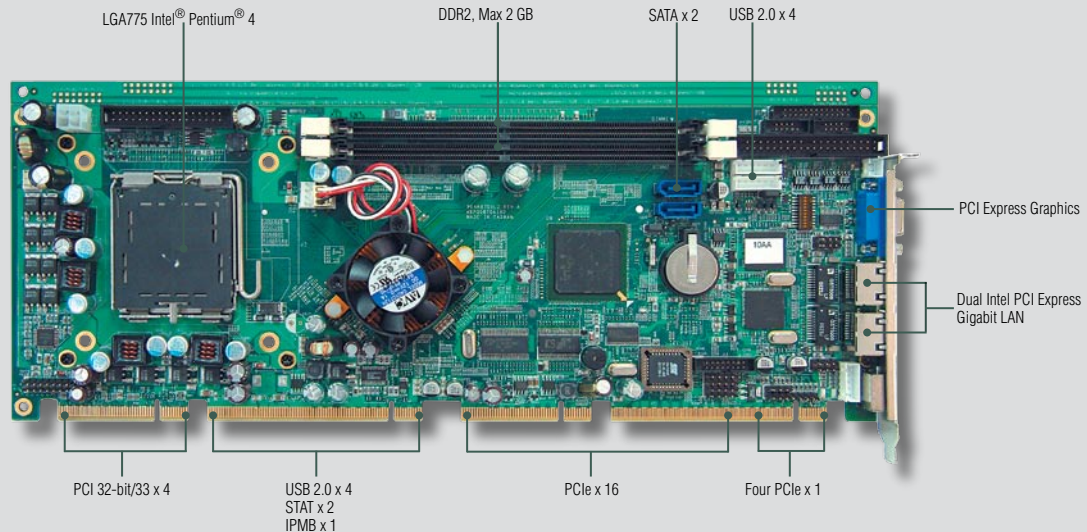


PEAK 870VL2



Intel® Pentium® 4 LGA775 PCI Express Gigabit LAN x 2/SIO x 2/VGA



Main Features

- Single socket LGA775 Supports Intel® Pentium® 4/Pentium® D/Celeron® D Processors up to 3.8 GHz with 533/800 MHz FSB
- DDR2 240-pin DIMM x 2 Supports dual channel non-ECC DDR2 533/667 MHz up to 2 GB
- RC82573L PCI Express Gigabit Ethernet LAN x 2
- SATA x 4, USB 2.0 x 8, COM port x 2, Parallel port x 1, Floppy port x 1
- RoHS Compliant

Product Overview

PEAK 870VL2 is the first PICMG 1.3 full-size SBC featuring a socket LGA775 Intel® Pentium 4/Pentium® D/Celeron® D processor with 533/800 MHz FSB supporting speeds up to 3.8 GHz and Hyper-Threading technology. The product incorporates the Intel® 945G and ICH7 chipsets, which support Intel's new dual core processors.

The Intel 945G supports dual channel non-ECC DDR2 533/667 MHz memory up to 2 GB maximum in two DIMM slots and includes an integrated graphics controller. The South Bridge ICH7R offers Ultra ATA 100 and SATA HDD ports, a parallel port, floppy port, and other versatile I/O ports such as two serial ports, eight USB ports, two PCI Express GbE LAN ports as well as others.

The PEAK 870VL2's design is based on the PICMG 1.3 specification. NEXCOM offers the following 2U and 4U backplanes that support the PICMG 1.3 specification:

- 2U Backplane: NBP 2U220
- 4U Backplane: NBP 14570

The PEAK870VL2's socket LGA775 Pentium 4 processor and PCI Express LAN ports make it the best solution for the most advanced industrial applications.

Specifications

CPU Support

- Single socket LGA775
- Supports Intel Pentium 4 with 533/800 MHz FSB, speeds up to 3.8 GHz
- Supports Intel Celeron D with 533 MHz FSB
- Supports Intel Pentium D with 800 MHz FSB
- Supports Hyper-Threading Technology

Main Memory

- Two 240-pin DIMM, for up to 2 GB dual channel Non-ECC DDR2 533/667 SDRAM

Chipset

- Intel® 945G and ICH7R chipset

BIOS

- Award System BIOS
- Plug & Play support
- Advanced Power Management and Advanced Configuration & Power Interface support

On-board LAN

- RC82573L PCI Express Gigabit Ethernet LAN x 2
- Supports Boot from LAN

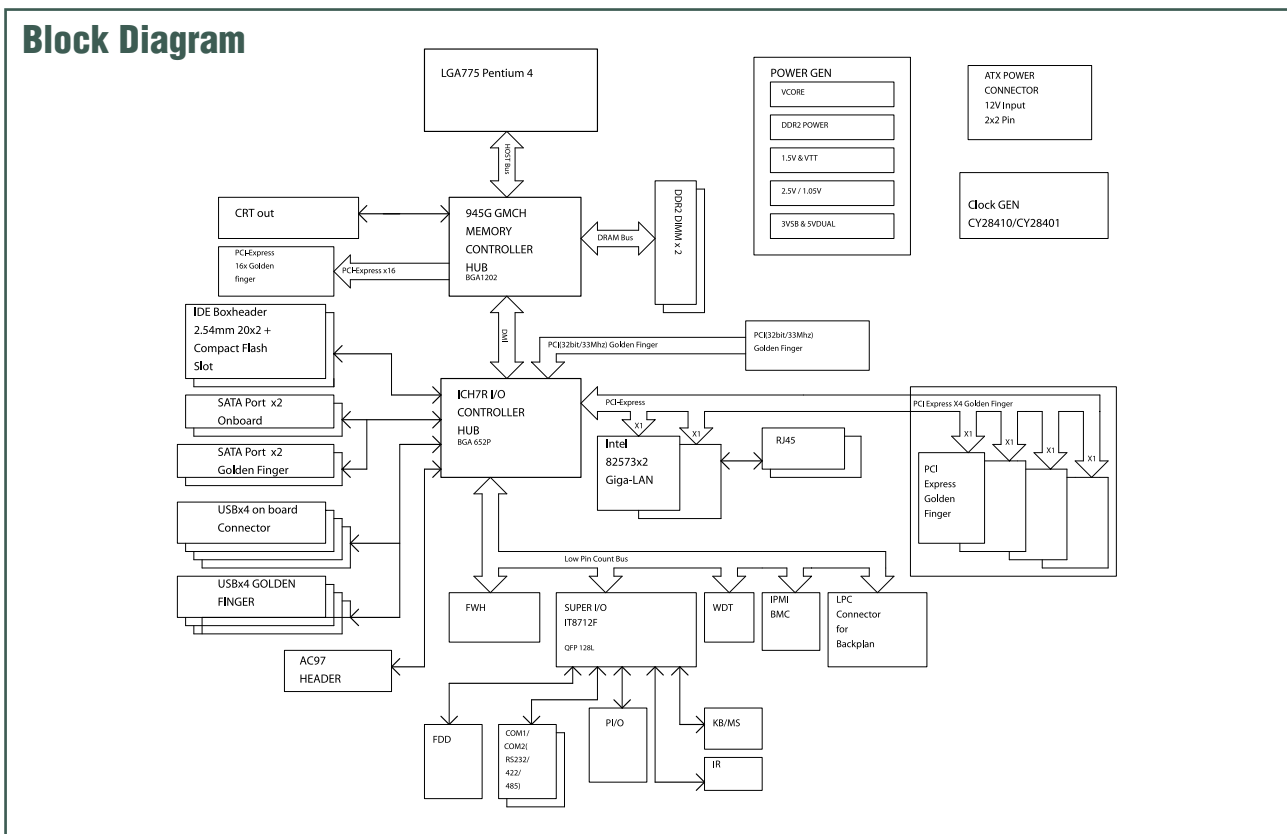
Display

- Chipset with built-in integrated graphics device
- Analog display support up to 2048 x 1536 @ 85 Hz for CRT

I/O Interface

- COM port x 2 with 10-pin headers (COM 2 reserved for RS422/RS485 as option)
- USB 2.0 ports x 8 (4 on board, 4 to backplane), bandwidth: 480 Mb/s
- Ultra ATA 100/66/33, 40-pin connector x 1
- Disk on Module: 2-pin power connector for DOM
- SATA HDD: 4 serial ATA ports, bandwidth: 150 MB/s, Support RAID 0,1
- Parallel port: 26-pin connector x 1
- Floppy: 34-pin connector x 1
- AC' 97 Audio Codec, Realtek ALC655
- GPIO: Supports 4 sets general purpose I/O each with TTL level (5 V) interface
- I/O On bracket 2.5
- VGA DB-15 connector x 1
- RJ45 Gigabit Ethernet LAN port x 2
- PS/2 Keyboard/Mouse x 1
- On-board buzzer x 1
- 2-pin power on button switch
- SMBus 2.0 controller (2-pin header) to backplane
- On-board 2-pin header for reset
- 4-pin for speaker

Block Diagram



- 5-pin for key lock/power LED/HDD Power LED
- 4-pin fan JST connector x 1 (for CPU); 3-pin fan connector x 2
- 5-pin connector x 1 for chassis or backplane front Keyboard/Mouse

Watchdog Timer

- 1-minute increments from 1 to 255 minutes
- 1-second increments from 1 to 255 seconds

On-board RTC

- On-chip RTC with battery backup
- External Li battery x 1

Disk On Module

- 2-pin power connector for DOM

System Monitor

- System monitor controller from Super I/O
- 8 voltages (For +1.5 V, +3.3 V, +5 V, -5 V, +12 V, -12 V, Vcore and +5 Vsb)
- 2 temperature (For CPU and system)
- 3 fan speed monitors (one for CPU and two for systems)

Power Input

- Power source from backplane through golden finger
- Supports both ATX or BTX power supplies
- 4-pin +12 V power input connector

Power Requirements

- Maximum designed power based on Pentium 4 3.8 GHz CPU
- 5 V: 18 A
- 12 V: 20 A

- 3.3 V: 5 A
- 5 Vsb: 2 A

Dimensions

- 338.58 mm (L) x 126.39 mm (W)

Environment

- Board level operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 90% (Non-condensing)

Certifications

- CE approval
- FCC Class A

Ordering information

- **PEAK870VL2 (P/N: 1P0870VL00X0)** RoHS Compliant
PICMG 1.3 Full-Size SBC, Intel 945G Chipset, LGA775 P4 CPU up to 3.8 GHz, 533/800 MHz FSB, Dual Core Pentium D support. Max. 2 GB DDR2 400 DIMM, VGA integrated, Intel 82573L PCI Express Gigabit Ethernet x 2, Serial ATA Ports x 4