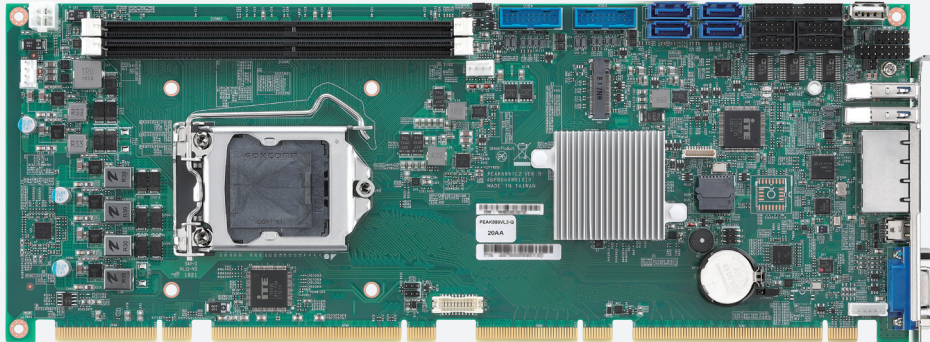




Main Features

- Intel® Coffee (8th generation Core™ i7/i5/i3) processor, 65W TDPs, LGA1151 socket
- Support Intel® Q370/H310 PCH chipset PICMG 1.3 specification
- Support 2 x DDR4 Long DIMM 288-pin socket
- Support multiple display from VGA & mini DP & DP
- 4 x SATA III, 2 x GbE LAN, 4 x COM, 1 x LPT, 4 x USB 3.1, 2 x USB 2.0, 1 x HD audio, M.2
- Optional: TPM, CPU cooler, M.2 storage

Product Overview

The PEAK 889VL2 serial is a PICMG1.3 full-size single-board computing. It is equipped with Intel® 8th generation Core™ i7/i5/i3 processors and Intel® Q370/ H310 chipset. It comes with dual DDR4 DIMM socket up to 32GB DDR4 2666MHz with non-ECC support and integrated HD graphic controller. The PEAK 889VL2-Q SKU with Intel® Q370 PCH providing high performance and rich expansion. The SATA 3.0 ports with RAID 0, 1, 5 and 10 helps provide quick access to data files and data protection. Furthermore, the advanced storage capabilities with Intel® RST features PCIe Gen3 x4 on NGFF M.2 form factor (2280) to maximize storage performance and it also features an integrated Intel® AMT 12 for easier maintenance. The PEAK 889VL2-H SKU with Intel® H310 PCH provides high performance and cost effective solution.

Specifications

CPU Support

- Intel® 8th generation Core™ i7/i5/i3, TDP 65W

Platform Control Hub

- Intel® Q370 express chipset PCH
- Intel® H310 express chipset PCH

BIOS

- AMI system BIOS
- 16 Mbit SPI depended on AMT function

Display

- VGA connector
- Mini DP connector
- DP connector (optional)

System

- 2 x Dual channel DDR4 2666 support up to 32GB, non-ECC
- 2 x LAN Intel® I219-LM & I211 PCIe GbE LAN controller

Q370 PCH

- 2 x USB 3.1 Gen1/2, 4 x USB 3.1 Gen1 and 5-port USB 2.0 2-Port through I/O bracket (USB 3.1 GEN1/2+redriver)
- 4-Port through 2.0mm box header 2 x 10 (USB 3.1 Gen1)
- 1-Port Type A (USB 2.0)
- 4-Port through backplane (USB 2.0)
- Storage device 4 x SATA III 6.0Gb/s

- 1 x M.2 2280 M key with 4 x SATA III & PCIe (NVMe Gen3), support Intel® RST

H310 PCH

- 4 x USB 3.1 Gen1 2-Port through I/O bracket (USB 3.1 Gen1)
- 2-Port through 2.0mm BOX header 2 x 10 (USB 3.1 Gen1)
- Storage device 2 x SATA III 6.0Gb/s

Internal I/O

- 1 x RS232/485/422 and +5V/RI/+12V select by COM 2
- 3 x RS232 by COM1, 3, 4
- 1 x LPT
- 1 x PS/2 JST connector
- WDT 1 ~ 255 steps by software program
- 1 x HD Audio header (compatible with NEXCOM audio daughter board PN: 10E000HDA00X0 EBK-HAD)
- 1 x Front panel connector
- 1 x ATX 4-pin power connector

I/O Interface

- 1 x PCI express x16 (PEG Gen3)
- 1 x PCI express x4 Gen 3 (Q370); (Gen 2 only for H310)
- 4 x PCI to backplane

Rear I/O

- 2 x USB 3.1 ports
- 2 x GbE LAN ports

Extension Drawing

The diagram illustrates the system architecture for two different processor configurations: Coffee Lake-S and Cannon Lake.

Coffee Lake-S LGA1151 Socket

- Memory:** DDR4 NON-ECC UDIMM (2133/2400 MT/s) and DDR4 NON-ECC UDIMM (2133/2400 MT/s) connected via DDR4 Channel A and B.
- Storage:** eDP to VGA CH7517A connected via DDI0 (port A/P).
- Display:** VGA DB15 CONN, DP WTB CONN, and Mini DP CONN connected via DDI1 (port B) and DDI2 (port C).
- Expansion:** Full-Size SHB GOLDEN FINGER A/B connected via PCIe x16.

Cannon Lake PCH-H FCBGA (Mobile only) * C246 Q370 ** H310

- Memory:** HSD (Lane 0-29) and USB 2.0.
- Storage:** Giga LAN PHY I219-LM, Giga LAN Controller I211-AT, and M.2 M-Key SSD connected via PCIe #10, #11, and #17-20 SATA #4 (HSD Lane 22-25).
- Display:** Full-Size SHB GOLDEN FINGER C connected via SATA #0a, 1a (HSD Lane 16, 17) and SATA #0b, 1b (HSD Lane 18, 19).
- Expansion:** Full-Size SHB GOLDEN FINGER A connected via PCIe #5-8 (HSD Lane 10-13) and Full-Size SHB GOLDEN FINGER D connected via PCIe #21 (HSD Lane 26) and PCIe #12 (HSD Lane 17).
- Other Components:** RJ45, PIN HEADER (2.54mm 2x5), SPI ROM, IT8786 SIO, TPM or 80 port, and various USB ports (USB 3.1 #1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80).

- PICMG 1.3 full-size SBC, H310, Intel® LGA1151, DDR4 DIMM, support dual display, 2 x LAN, 4 x USB 3.0, 4 x SATA 3.0