

## Main Features

- Intel® Coffee (8th generation Core™ i7/i5/i3) processor, 65W TDPs, LGA1151 socket
- Support Intel® Q370/H310 (default) PCH chipset PICMG 1.3 specification
- Support 2 x DDR4 Long DIMM 288 pin socket
- Support multiple display from DP1.2/DVI-I (DVI & VGA)
- 4 x SATA III, 2 x GbE LAN, 4 x COM, 1 x LPT, 4 x USB 3.0, 2 x USB 2.0, 8bit DIO, HD audio, 1 x M.2
- Optional: CPU cooler, M.2 storage

## Product Overview

The PEAK 889 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 64GB DDR4 2666MHz with non-ECC support and integrated HD graphic controller. The PEAK 889Q 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 889H 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
- Dual BIOS for 4 x PCIe x1 and 1 x PCIe x4

### Display

- DVI-I connector
  - (DVI-D resolution up to 1600 x 1200 @ 60Hz)
  - (CRT resolution up to 1920 x 1200 @ 60Hz)
- DP connector (DP1.2 resolution up to 4096 x 2304 @ 60Hz)
  - \* Supporting 4K display required two DDR channels of same size

### System

- 2 x Dual channel DDR4 2666 support up to 64GB, non-ECC
- 2 x LAN Intel® I219-LM & I211 PCIe GbE LAN controller

### Q370 PCH

- 6 x USB 3.1, 2 x USB 3.0 and 4-port USB 2.0
  - 2-Port through I/O bracket (USB 3.1/GEN2 +redriver)
  - 4-Port through 2.0mm header 2x4 (USB 3.1)
  - 1-Port type A (USB 2.0)
  - 4-Port through backplane (USB 2.0)
- Storage device
  - 4 x SATA III 6.0Gb/s
  - SATA 1, 2 use switch to PICMG 1.3 connector C to B/P (BIOS setting)
  - 1 x M.2 2280 M key with SATA III & PCIe x4 (NVMe Gen3), support Intel® RST

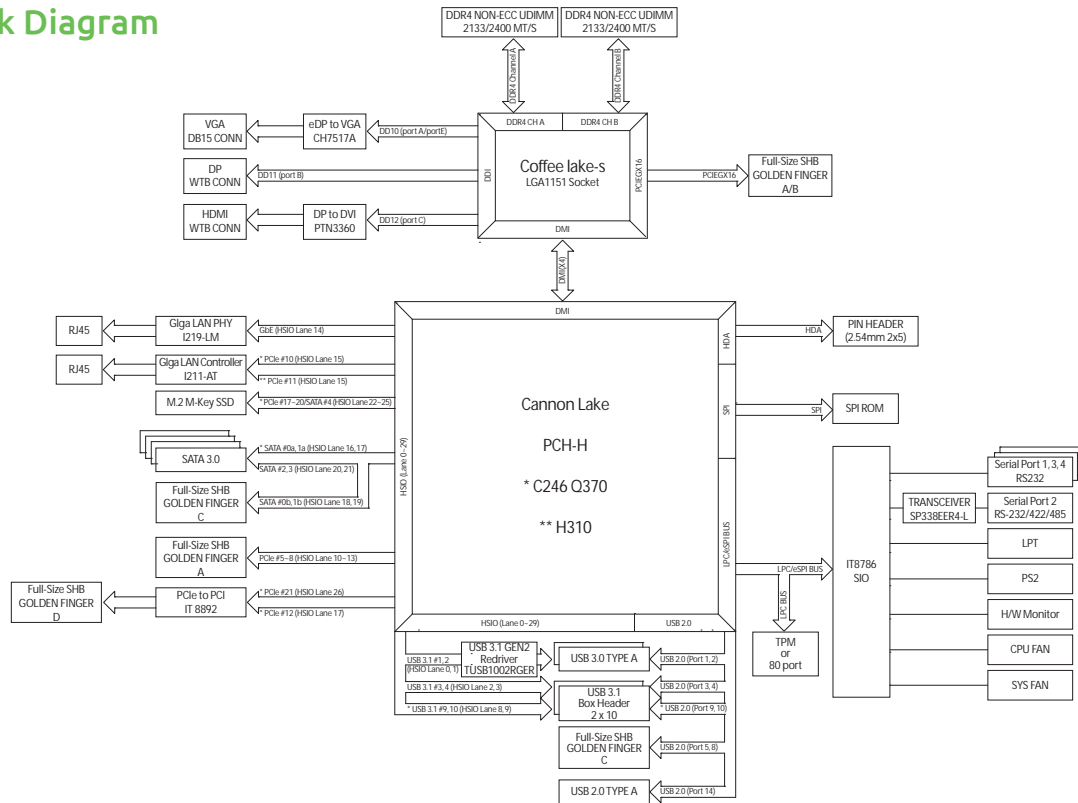
### Power Requirements

- Power source from backplane through golden finger and AUX +12V
- Support ATX/AT function by jumper setting
- BIOS default is (ATX MODE)

### H310 PCH

- 4 x USB 3.0
  - 2-Port through I/O bracket (USB 3.0/Gen1)
  - 2-Port through 2.0mm header 2x4 (USB 3.0)
- Storage device
  - 3 x SATA III 6.0Gb/s
  - SATA 1, 2 use switch to PICMG 1.3 connector C to B/P (BIOS setting)
  - 1 x M.2 2280 M key with SATA III & PCIe x4 (NVMe Gen3)

## Block Diagram



### 4 x Serial Ports

- 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 header
- 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 and 1 x PCI express x4 to backplane
- 4 x PCI to backplane

### Rear I/O

- 2 x USB 3.1 ports
- 2 x GbE LAN ports
- 1 x DVI-I connector

### Power Requirements

- Power source from backplane through golden finger and AUX +12V
- Support ATX/AT function by jumper setting
- BIOS default is (ATX mode)

### Mechanical & Environment

- Operating temperature: -20°C~60°C
- Storage temperature: -20°C~80°C
- Relative humidity: operating 10%~90%, non-condensing

### Dimension

- 338.58 mm x 126.39 mm, 8 layers (single side)

### Operating System

- Windows® 10 64-bit

### Certificate

- EMC & Safety (TBD)
- CE/FCC Class A (TBD)

## Ordering Information

### Art. No. 156441 PEAK 889VL2-Q

PICMG 1.3 full-size SBC, Q370, Intel® LGA1151, DDR4 DIMM, support triple display, 2 x LAN, 6 x USB 3.0, 4 x SATA 3.0, M.2 (support PCIe storage)

### Art. No. 156442 PEAK 889VL2-H

PICMG 1.3 full-size SBC, H310, Intel® LGA1151, DDR4 DIMM, support dual display, 2 x LAN, 4 x USB 3.0, 3 x SATA 3.0, M.2 (support SATA storage)

Last update: 06/29/2018