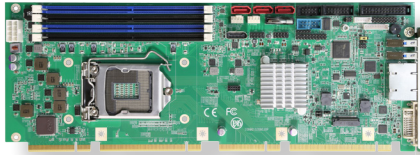


HiCORE-i89Q1/i89Q2

Intel® LGA1151 6th/7th Gen. Core™ Full-size SBC



HiCORE-i89Q1



HiCORE-i89Q2

System

CPU	Support 6th/7th Generation Intel® Core™ i7/i5/i3 processors in LGA1151 socket
Chipset	Intel® PCH Q170
Memory	4 x 288-pin DDR4 Long-DIMM sockets, supporting 2133/1866MHz SDRAM up to 64GB
BIOS	AMI UEFI BIOS
TPM	Supports TPM 1.2 & 2.0 daughterboard via LPC connector (optional)
Watchdog Timer	1~255 levels reset

I/O

Super I/O	Fintek F81768
USB Port	4 x USB 2.0 ports to Golden finger 4 x USB 2.0 ports w/ pin-header 2 x USB 3.0/2.0 ports on bracket
Serial Port	1 x RS-232
Expansion Bus	1 x RS-232/422/485 selectable 1 x PCIe x4 Lanes or 4 x PCIe x1 Lanes 1 x PCIe x16 lanes Gen. 3 4 x PCI masters LPC interface
Storage	Six Serial ATA ports with 600MB/s HDD transfer rate - 3 ports on board - 1 port to NGFF M.2 socket-M - 2 port to Golden finger SATA RAID 0, 1, 5, 10 supported
Ethernet Chipset	1 x Intel® i219LM PCIe GbE PHY 1 x Intel® i210AT PCIe GbE controller
Audio Interface	One 1x9-pin wafer connector for HD Audio daughterboard
Digital I/O	8-bit programmable digital input/output
KB/MS	6-pin wafer connector for keyboard and mouse via Y-cable
Parallel Port	SPP/EPP/ECP mode selectable

Display

Graphic Chipset	Integrated Intel® HD Graphics (depends on CPU)
Graphic Interface	1 x DVI-I port on board (HiCORE-i89Q1) or 1 x VGA port on board (HiCORE-i89Q2) 1 x DisplayPort

Features

- **PICMG 1.3 Specification**
- Support Intel® LGA1151 6th/7th Gen. i3/i5/i7 Core processors
- Integrated Dual Gigabit Ethernets
- DDR4 Non-ECC Long-DIMM supported
- SATA RAID 0, 1, 5, 10 supported
- Support Intel® M.2 SSD

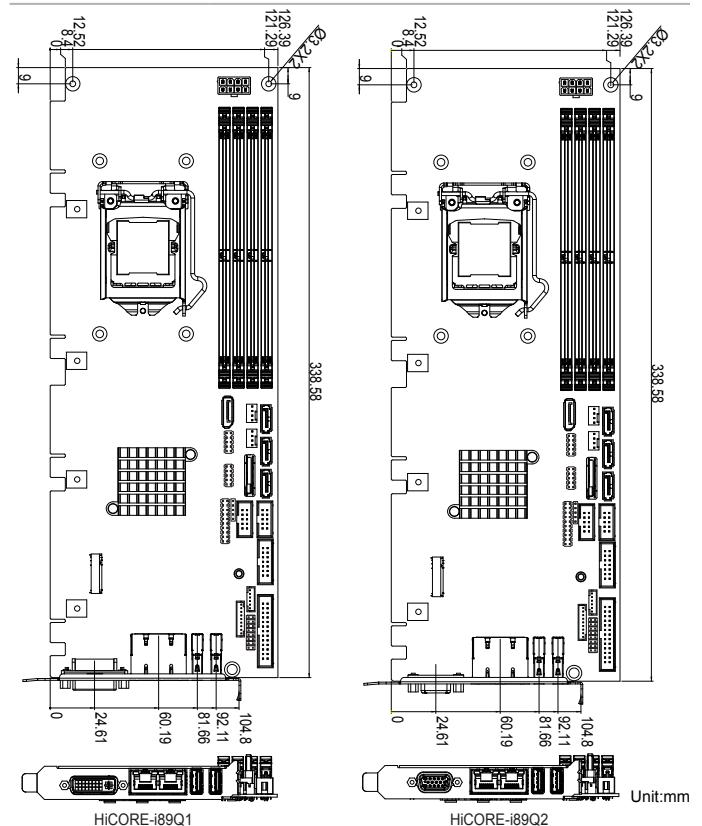
OS Support

Windows 10 64-bit
Linux: Ubuntu

Mechanical & Environmental

Power Input	DC 12V, 5V
Power Consumption	2.66A@12V
Operating Temp.	0 ~ 60°C (32 ~ 122°F)
Operating Humidity	10 ~ 95% @ 60°C (non-condensing)
Dimensions (L x W)	338 x 126 mm (13.3" x 4.96")

Dimensions

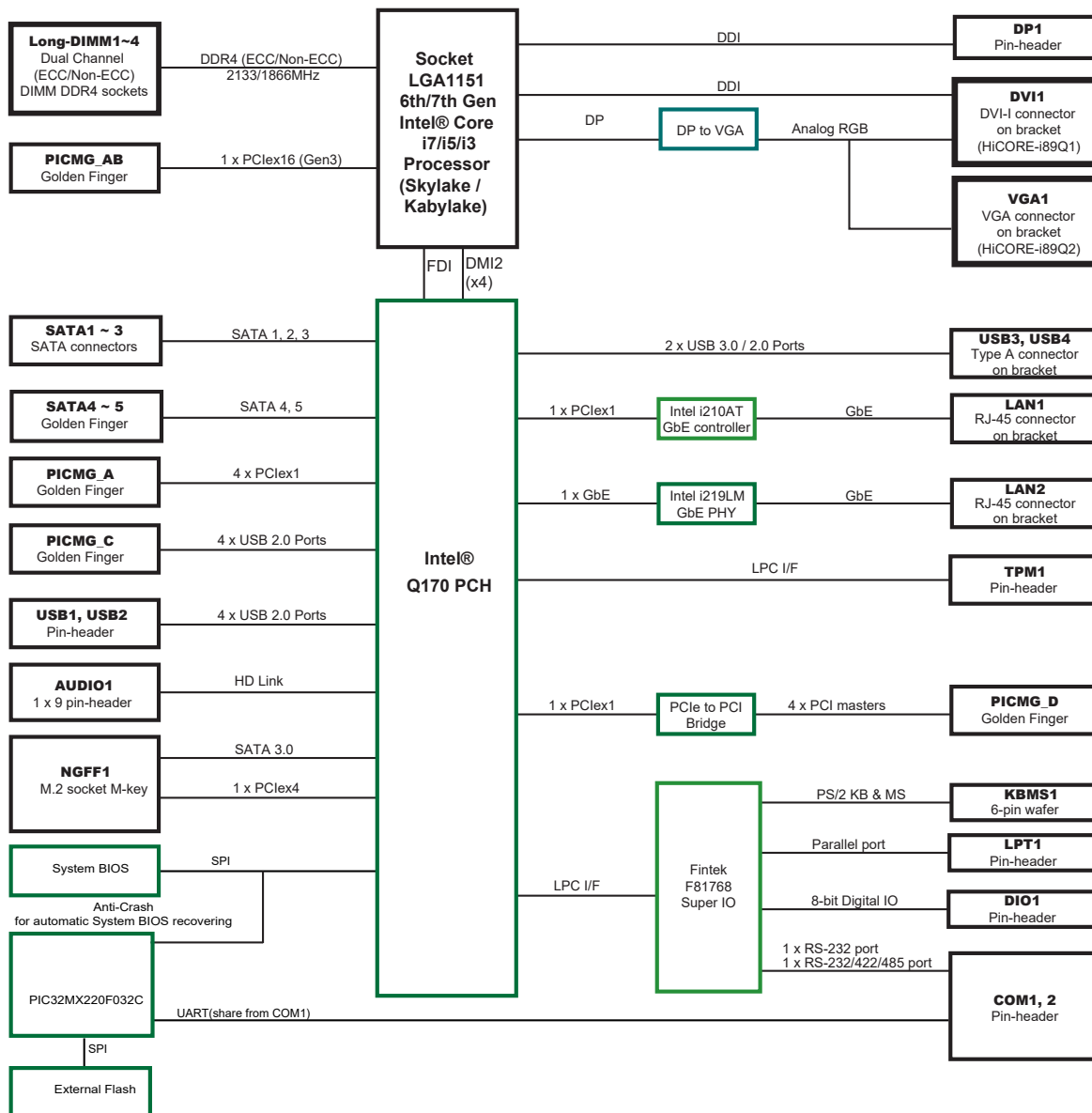


Recommended CPU List:

i7-6700 Quad-Core 3.4GHz / i7-7700 Quad-Core 3.6GHz
i5-6500 Quad-Core 3.6GHz / i5-7500 Quad-Core 3.4GHz
i3-6100 Dual-Core 3.7GHz / i3-7100 Dual-Core 3.9GHz



Block Diagram



Ordering Information

HiCORE-i89Q1-D-x4	Socket LGA1151/PCH Q170 for 6th/7th Generation Intel® Core™ i7/ i5/ i3 processors PICMG 1.3 full size SBC with BIOS for 1 x PCIe x4 w/ DVI-I
HiCORE-i89Q1-D-x1	Socket LGA1151/PCH Q170 for 6th/7th Generation Intel® Core™ i7/ i5/ i3 processors PICMG 1.3 full size SBC with BIOS for 4 x PCIe x1 w/ DVI-I
HiCORE-i89Q2-V-x4	Socket LGA1151/PCH Q170 for 6th/7th Generation Intel® Core™ i7/ i5/ i3 processors PICMG 1.3 full size SBC with BIOS for 1 x PCIe x4 w/ VGA
HiCORE-i89Q2-V-x1	Socket LGA1151/PCH Q170 for 6th/7th Generation Intel® Core™ i7/ i5/ i3 processors PICMG 1.3 full size SBC with BIOS for 4 x PCIe x1 w/ VGA

Optional Accessories

PBPE-07SA	7-slot PICMG 1.3 backplane
PBPE-13SA	13-slot PICMG 1.3 backplane
PBPE-10SA (OEM request)	10-slot PICMG 1.3 backplane
HS-89Q1-C1	Copper CPU cooler for Intel® Core™ processor series
DP Cable	Male DP port to female DP port cable
FCDB-1111	Realtek ALC888 HD Audio daughterboard
SCDB-3291	TPM 1.2 Daughter board with Infineon OPTIGA TPM SLB9660
SCDB-3292	TPM 2.0 Daughter board with Infineon OPTIGA TPM SLB9665