# Single Board Computer

***Full-size***

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**PCIE-Q870-i2**

***Full-size PICMG 1.3 CPU Card supports LGA 1150 Intel® Core™ i7/i5/i3, Pentium® and Celeron® CPU per Intel® Q87, DDR3, VGA, iDP, Dual PCIe GbE, mSATA, PCIe Mini, iRIS-2400 and RoHS***

Dual-channel DDR3

Front panel

RS-422/485

1600/1333 MHz

2 x USB 3.1 Gen 1

6 x SATA 6Gb/s LPT

4 x RS-232

## LGA 1150

**Intel® Q87**

TPM

4 x USB 2.0 iDP

DDR3

1600

***USB***

USB 3.1 SATA 6Gb/s PCIe GbE

mSATA

iDP

KB/MS

USB 3.1 Gen 1 DIO

LAN1

Combo RJ-45

LAN2/IPMI VGA

**Slot for iRIS-2400 module**



TPM 2.0 Support



# *Specifications*

PCIE-Q870-i2-2019-V10

CPU

LGA 1150 Intel® 4th generation Core™ i7/i5/i3, Pentium® or Celeron® processor supported Chipset

Intel® Q87

Memory

Four 240-pin 1600/1333 MHz dual-channel unbuffered DDR3 & DDR3L SDRAM DIMMs support up to 32 GB

BIOS

UEFI BIOS

Graphics Engine

Intel® HD Graphics Gen 7.5 supports DX11.1, OpenCL 1.2 and OpenGL 3.2 Full MPEG2, VC1, AVC Decode

Display Output

1 x VGA (up to 1920x1200@60 Hz)

1. x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 3840x2160@60 Hz) Ethernet

LAN1: Intel® I217LM with Intel® AMT 9.0 support

LAN2: Intel® I210-AT PCIe controller with NCSI support External I/O Interface

1. x USB 3.1 Gen 1 (5Gb/s)

Internal I/O Interface

1 x KB/MS (1x6 pin) 2 x USB 3.1 Gen 1 (5Gb/s) (2x10 pin)

1 x LPT (2x13 pin) 4 x RS-232 (2x5pin, P=2.54)

1 x mSATA 4 x USB 2.0 (2x4 pin, P=2.54)

1 x RS-422/485 (1x4 pin, P=2.0) 4 x USB 2.0 (Golden finger) 6 x SATA 6Gb/s (RAID 0/1/5/10 supported)

Front Panel

1. x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button) LAN LED
2. x LAN LED (1x2 pin)

Audio

Supports 7.1-channel HD Audio by IEI AC-KIT-892HD-R10 kit TPM

1 x TPM (2x10 pin)

SMBus

1 x SMBus (1x4 pin) I²C

1 x I²C (1x4 pin)

Infrared Interface

1 x Infrared Interface (1x5 pin) iRIS Remote Management Module 1 x iRIS-2400 slot

Expansion

PCIe signal and PCI signal via golden finger

1 x Full-size PCIe Mini card slot (supports mSATA) Watchdog Timer

Software programmable, supports 1~255 sec. system reset

Digital I/O

8-bit digital I/O (2x5 pin) Fan Connector

1 x CPU smart fan (1x4 pin)

1 x System smart fan (1x3 pin)

Power Supply: 5V/12V, AT/ATX support Power Consumption

5V@3.55A, 12V@0.37A, Vcore\_12V@7.61A, 3.3V@1.55A, 5VSB@0.13A (Intel® Core™

i7-4770K 3.90 GHz CPU with 16 GB (4x4 GB) 1333 MHz DDR3 memory)

Operating Temperature: -20°C ~ 60°C Storage Temperature: -30°C ~ 70°C

Operating Humidity: 5% ~ 95%, non-condensing

Dimensions: 338 mm x 126 mm Weight: GW: 1200g / NW: 420g CE/FCC compliant

# *Features*

* PICMG 1.3 full-size graphics grade solution
* LGA 1150 Intel® 4th generation Core™ i7/i5/i3, Pentium® or Celeron® processor supported
* Four 240-pin 1600/1333 MHz dual-channel DDR3 DIMMs support up to 32 GB memory
* Supports dual independent display by VGA & iDP interfaces
* Supports PCIe Mini devices and mSATA via PCIe Mini socket
* Supports RAID function via SATA 6Gb/s
* Supports IPMI 2.0 via iRIS-2400 module

# *Packing List*

|  |
| --- |
| 1 x PCIE-Q870-i2 single board computer |
| 1 x Dual RS-232 cable |
| 1 x USB 2.0 cable |
| 2 x SATA cable |
| 1 x QIG |

***Ordering Information***

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| --- | --- |
| Part No. | Description |
| PCIE-Q870-i2-R10 | Full-size PICMG 1.3 CPU card supports LGA 1150 Intel® Core™ i7/i5/i3, Pentium® and Celeron® CPU with Intel® Q87, DDR3, VGA, iDP, dual Intel® PCIe GbE, SATA 6Gb/s, mSATA, RS-232, PCIe Mini, Audio, iRIS-2400 and RoHS |
| iRIS-2400-R10 | IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO- DIMM socket interface |
| 19800-000049-RS | LPT flat cable, 240mm, P=2.54 |
| 19800-000075-RS | PS/2 KB/MS cable with bracket, 220mm, P=2.0 |
| 19800-010500-200-RS | USB 3.1 Gen 1 (5Gb/s) cable with bracket, 450mm |
| 32102-000100-200-RS | SATA power cable, MOLEX 5264-4P to SATA15P |
| 32205-003800-300-RS | RS-422/485 cable, 200mm, P=2.0 |
| AC-KIT-892HD-R10 | 7.1-channel HD Audio kit with Realtek ALC892 supports dual audio streams |
| CF-1150SB-R11 | Special cooler kit for LGA 1150, high-performance compatible, 65W |
| CF-1150SC-R20 | Special cooler kit for LGA 115X, 1U chassis compatible, 65W, copper |
| CF-1150SE-R11 | Special cooler kit for LGA 115X, high-performance compatible, 95W, copper |
| CF-1150SF-R10 | Special cooler kit for LGA 115X Intel® CPU, 107x70x35, 54W |
| DP-DP-R10 | DisplayPort to DisplayPort converter board (for IEI iDP connector) |
| DP-DVI-R10 | DisplayPort to DVI-D converter board (for IEI iDP connector) |
| DP-HDMI-R10 | DisplayPort to HDMI converter board (for IEI iDP connector) |
| DP-LVDS-R10 | DisplayPort to LVDS converter board (for IEI iDP connector) |
| DP-VGA-R10 | DisplayPort to VGA converter board (for IEI iDP connector) |
| TPM-IN01-R20 | 20-pin Infineon TPM module, software management tool, firmware v3.17 |