# Single Board Computer

***Full-size***

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**WSB-H810**

***Full-size PICMG 1.0 CPU Card supports LGA 1150 Intel® Core™ i7/i5/i3, Pentium® and Celeron® CPU with Intel® H81, DDR3, VGA, iDP, Dual Intel® GbE, PCIe Mini, USB 3.1 Gen 1 (5Gb/s), SATA 6Gb/s, mSATA, RS-232, HD Audio and RoHS***

1 x SATA 3Gb/s

**Stiffener**

**bars**

Dual-channel DDR3 1600/1333 MHz

**LGA 1150**

2 x SATA 6Gb/s

2 x USB 3.1 Gen 1 USB 2.0 Type A

### Intel ®

**H81**

LPT 4 x RS-232

Front KB/MS panel

USB 2.0

LAN

**Enhanced stability**

Strengthen the mechanism Prevent PCB bending

## PCIe Mini & mSATA connector

Support PCIe Mini & mSATA

◄ mSATA

VGA

iDP

TPM

DIO

PCIe Mini

# *Specifications*

DDR3

***USB***

1600

USB 3.1 SATA 6Gb/s Expansion

PCIe Mini

mSATA

iDP

CPU

4 x USB 2.0

Top-side PCIe Mini connector supports PCIe signal for half-size or full-size PCIe device. Solder-side PCIe Mini connector supports SATA 3Gb/s signal for full-size mSATA.

◄ PCIe Mini

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

WSB-H810-2019-V10

Intel® H81

Memory

Twp 240-pin 1600/1333 MHz dual-channel DDR3 & DDR3L SDRAM unbuffered DIMMs support up to 16 GB

BIOS UEFI

Graphics Engine

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

Display Output

Dual independent display

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® I217-LM Ethernet controller

LAN2: Intel® I211-AT Ethernet controller Audio

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

External I/O Interface 2 x USB 2.0

Internal I/O Interface

1 x KB/MS (1x6 pin) 2 x SATA 6Gb/s

1 x LPT (2x13 pin) 2 x USB 3.1 Gen 1 (5Gb/s) (2x10 pin) 1 x RS-422/485 (1x4 pin, P=2.0) 4 x RS-232 (2x5 pin, P=2.54)

1 x USB 2.0 (180° Type-A) 4 x USB 2.0 (2x4 pin, P=2.54)

1 x SATA 3Gb/s (AHCI supported, no RAID) Front Panel

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

LAN LED

1. x LAN LED (1x2 pin) Digital I/O

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

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)

Expansion

1 x Full-size PCIe Mini card slot (support mSATA) PCI and ISA signal via golden finger

Watchdog Timer

Software programmable supports 1~255 sec. system reset 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@3.4A, 12V@0.36A, Vcore\_12V@7.48A, 3.3V@1.42A, 5VSB@0.13A

(Intel® Core™ i7-4770K 3.90 GHz CPU with 8 GB (two 4 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 122 mm Weight: GW: 1000g / NW: 260g CE/FCC compliant

# *Features*

* Full-size PICMG 1.0 with LGA 1150 Intel® CPU
* Two 1600/1333 MHz DDR3 SDRAM DIMM slots support up to 16 GB of memory
* Dual Intel® Gigabit Ethernet LAN controller
* SATA 6Gb/s and USB 3.1 Gen 1 (5Gb/s) supported
* IEI One Key Recovery solution for rapid OS backup and recovery
* TPM v1.2 hardware security function supported by TPM module
* Stiffener bars
* IEI jumper-less function

# *Packing List*

1 x QIG

2 x SATA cable

1 x WSB-H810 single board computer

***Ordering Information***

|  |  |
| --- | --- |
| Part No. | Description |
| WSB-H810-R10 | Full-size PICMG 1.0 CPU card supports LGA 1150 Intel® Core™ i7/i5/i3, Pentium® and Celeron® CPU with Intel® H81, DDR3, VGA, iDP, dual Intel® GbE, PCIe Mini, USB 3.1 Gen 1 (5Gb/s), SATA 6Gb/s, mSATA, RS-232, HD Audio and RoHS |
| 19800-000049-RS | LPT flat cable, 240mm, P=2.54 |
| 19800-000075-RS | PS/2 KB/MS cable with bracket, 220mm, P=2.0 |
| 19800-003100-100-RS | Dual port USB 2.0 cable with bracket, 300mm, P=2.54 |
| 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 |
| 32200-074800-RS | RS-422/485 cable, 200mm, P=2.0 |
| 32205-000702-100-RS | RS-232 cable, 230mm, P=2.54 |
| 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 1150, 1U chassis compatible, 65W |
| CF-1150SE-R11 | Special cooler kit for LGA 1150, high-performance compatible, 95W |
| CF-1150SF-R10 | Special cooler kit for LGA 1150, 1U chassis compatible, 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 |