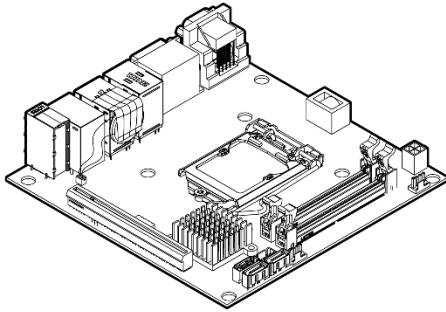


Kabylake-S Mini-ITX Motherboard
LGA1151 socket, Q170 PCH
12-24VDC
SMB-IQ1710-3LVA



Features

- Uses processors from the sixth and seventh generations of the Intel® Core™ processor family

By supporting processors from the sixth and seventh generations of the Intel® Core™ processor family, this product can supply the high performance of four-core CPUs.

- Supports three-screen output

Equipped with DVI-I, HDMI, and DisplayPort interfaces, this product supports three-screen output.

- A wide range of power supplies (10.8 - 26.4VDC) supported

As the product supports a wide range of power (10.8 - 26.4VDC), it can be used in a variety of power environments.

- Rich variety of interfaces for freely expandable peripherals

This product is equipped with expansion interfaces including DVI-I × 1, DisplayPort × 1, HDMI × 1, 1000BASE-T × 3, USB 3.0 × 4, USB 2.0 × 2, serial × 1, and a PCI Express (x16) slot.

Packing List

- Mother Board... 1
- I/O Panel... 1
- Product Guide... 1
- IPC Precaution List... 1
- Warranty Certificate... 1
- Serial Number Label... 1

Supported OS

- Windows 7 (only when equipped with a processor from the sixth generation of the Intel® Core™ processor family)
- Windows 10

This product is a high-performance Mini-ITX motherboard equipped with an Intel® Q170 PCH.

It can be equipped with processors from the sixth and seventh generations of the Intel® Core™ processor family.

It can be equipped with a maximum of 32GB worth of DDR4 SDRAM memory and is equipped with various interfaces such as DVI-I, HDMI, DisplayPort, LAN, USB 3.0, and RS-232C. Because it supports embedded CPUs, this product can be supplied in a stable manner. In addition, the use of Contec-customized BIOS allows support to be provided at the BIOS level.

* The contents in this document are subject to change without notice.

* Visit the CONTEC website to check the latest details.

* The information in the data sheets is as of April, 2021.

Specifications

Function Specifications

| Model | SMB-IQ1710-3LVA | |
|---------------------|---|---|
| Support CPU | < Seventh generation Intel® Core™ processor family > Intel® Core™ i7-7700 3.60 GHz Intel® Core™ i5-7500 3.40 GHz Intel® Core™ i3-7101E 3.90 GHz Intel® Celeron G3930E 2.90 GHz Intel® Core™ i7-7700T 2.90 GHz Intel® Core™ i5-7500T 2.70 GHz Intel® Core™ i3-7101TE 3.40 GHz Intel® Celeron G3930TE 2.70 GHz < Sixth generation Intel® Core™ processor family > Intel® Core™ i7-6700 3.40 GHz Intel® Core™ i5-6500 3.20 GHz Intel® Core™ i3-6100 3.70 GHz Intel® Celeron G3900 2.80 GHz Intel® Pentium G4400 3.3GHz Intel® Core™ i7-6700TE 2.40 GHz Intel® Core™ i5-6500TE 2.30 GHz Intel® Core™ i3-6100TE 2.70 GHz Intel® Celeron G3900TE 2.30GHz Intel® Pentium G4400TE 2.4GHz | |
| Chipset | Intel® Q170 PCH | |
| BIOS | BIOS (mfd. by AMI) | |
| Memory | 260 pin SO-DIMM x 2, 32GB(Max), PC4-17000 (DDR4-2133) (ECC not supported) | |
| Graphic | Intel® HD Graphics (built-in CPU) DVI-I x 1, Display Port x 1, HDMI x 1 | |
| System resolution | DVI-D | 800 x 600, 1,024 x 768, 1,152 x 864, 1,280 x 600, 1,280 x 720, 1,280 x 768, 1,280 x 800, 1,280 x 960, 1,280 x 1,024, 1,360 x 768, 1,366 x 768, 1,400 x 1,050, 1,440 x 900, 1,600 x 900, 1,600 x 1,200, 1,680 x 1,050, 1,920 x 1,080, 1,920 x 1,200 (16,770,000 colors) |
| | Analog RGB | 800 x 600, 1,024 x 768, 1,152 x 864, 1,280 x 600, 1,280 x 720, 1,280 x 768, 1,280 x 800, 1,280 x 960, 1,280 x 1,024, 1,360 x 768, 1,366 x 768, 1,400 x 1,050, 1,440 x 900, 1,600 x 900, 1,600 x 1,200, 1,680 x 1,050, 1,920 x 1,080, 1,920 x 1,200 (16,770,000 colors) |
| | HDMI | 800 x 600, 1,024 x 768, 1,152 x 864, 1,280 x 600, 1,280 x 720, 1,280 x 768, 1,280 x 800, 1,280 x 960, 1,280 x 1,024, 1,360 x 768, 1,366 x 768, 1,400 x 1,050, 1,440 x 900, 1,600 x 900, 1,600 x 1,200, 1,680 x 1,050, 1,792 x 1,344, 1,856 x 1,392, 1,920 x 1,080, 1,920 x 1,200, 1,920 x 1,440, 1,920 x 2,160, 2,048 x 1,152, 2,048 x 1,536, 2,560 x 1,440, 2,560 x 1,600, 2,560 x 1,920, 2,560 x 2,048, 3,840 x 2,160 (16,770,000 colors) |
| | Displayport | 800 x 600, 1,024 x 768, 1,152 x 864, 1,280 x 600, 1,280 x 720, 1,280 x 768, 1,280 x 800, 1,280 x 960, 1,280 x 1,024, 1,360 x 768, 1,366 x 768, 1,400 x 1,050, 1,440 x 900, 1,600 x 900, 1,600 x 1,200, 1,680 x 1,050, 1,792 x 1,344, 1,856 x 1,392, 1,920 x 1,080, 1,920 x 1,200, 1,920 x 1,440, 1,920 x 2,160, 2,048 x 1,152, 2,048 x 1,536, 2,560 x 1,440, 2,560 x 1,600, 2,560 x 1,920, 2,560 x 2,048, 3,840 x 2,160 (16,770,000 colors) |
| Audio | HD Audio compliant LINE OUT x 1, LINE IN x 1, MIC IN x 1 (ø3.5 Stereo mini jack) Front audio x 1 (pin header connector x 1) | |
| SATA | Serial ATA 3.0 compliant support x 3 | |
| LAN | Intel I219LM Controller x 1, Intel I210AT Controller x 2 1000BASE-T/100BASE-TX/10BASE-T RJ-45 Controller x 3 (Wake On LAN support) | |
| USB | USB 3.0 compliant 4 port (TYPE-A connector x 4) USB 2.0 compliant 2 port (TYPE-A connector x 2) USB 2.0 compliant 2 port (2.0mm 10 pin header connector x 1) USB 2.0 compliant 2 port (2.54mm 10 pin header connector x 1) | |
| Serial | RS-232C/422/485 1 port (9pin D-SUB connector (male) x 1) RS-232C 1 port (pin header connector x 1) Baud rate : 50 - 115,200bps | |
| Extended slot *1 | PCI-Express x16 (Gen3) slot x 1 | |
| General-purpose I/O | Non-isolated type : I/O 8 channels, pin header connector x 1 | |
| Security (TPM) | TCG TPM2.0 | |
| Hardware monitoring | Monitoring CPU temperature, board temperature, power voltage | |
| Watchdog timer | Software programmable, 255 level (1sec - 255sec) Time up allows reset or shutdown. | |
| RTC/CMOS | Lithium backup battery life: 7 years or more. The real-time clock is accurate within±3 minutes (at 25°C) per month | |
| Power Management | Power management setup via BIOS, Power On by Ring / Wake On LAN, Supports ACPI Power management | |
| Power supply | Rated input voltage | 12 - 24VDC *2 |
| | Range of input voltage | 10.8 - 26.4VDC |
| | Power consumption | 12V 14A, 24V 6.7A |

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| Model | SMB-IQ1710-3LVA |
|--|---|
| External device power supply capacity *3 | Serial ATA slot : +5V : 3A (1,000mA per slot x 3) USB3.0 I/F : +5V : 3.6A (900mA per slot x 4) USB2.0 I/F : +5V : 3.0A (500mA per slot x 6) PCIe slot : +12V 2.1A +3.3V 3.0A +3.3VSB 0.37A |
| Physical dimensions (mm) | 170(W) x 170 (H) (No protrusions) |
| Weight | About 450g |
| Support OS | Windows 7 *4 Windows 10 |

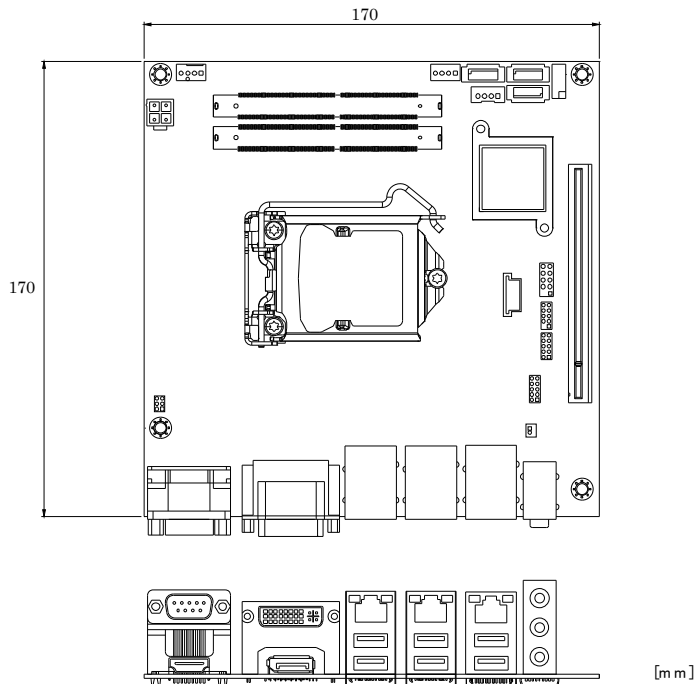
- *1 : The total capacity for power supply to the expansion board must fall within 25W.
- *2 : Use a power cable that is 3m or less in length.
- *3 : Ensure that the total capacity for a +5V external device power supply is as shown below.
 - 1) When using a 25W expansion board: 1.8A or less
 - 2) When using a 10W expansion board: 4.6A or less
 - 3) When not using an expansion board: 6.6A or less
- *4 : Only when equipped with a processor from the sixth generation of the Intel® Core™ processor family

Environment Requirements

| Model | Description |
|-------------------------|---|
| Operating temperature | 0 - 60°C *5 |
| Storage temperature | -10 - 60°C |
| Operating humidity | 10 - 90%RH (No condensation) |
| Floating dust particles | Not to be excessive |
| Corrosive gas | None |
| Standard | VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive) |

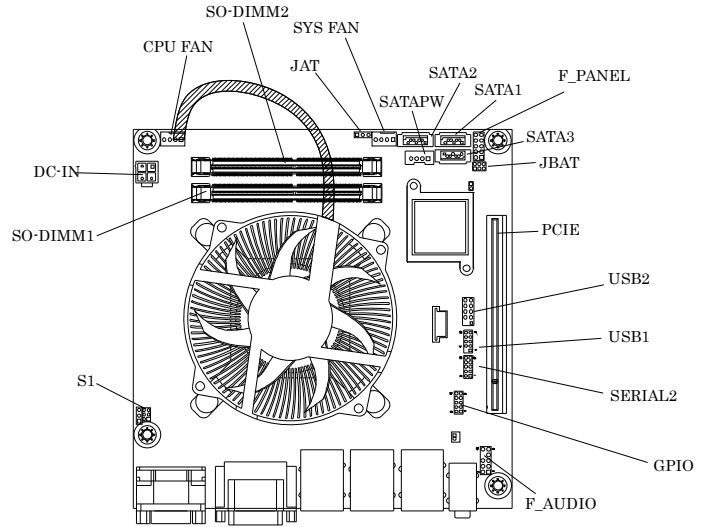
*5 : When CPU FAN ECC-00725-01-GP(Cooler Master) is used.

Physical Dimension

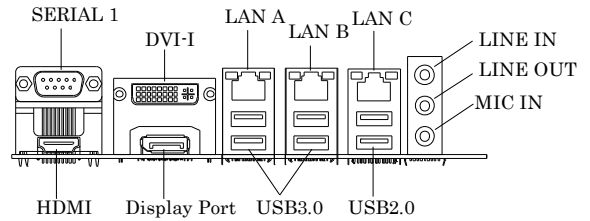


Nomenclature of Product Components

Overall View



Front View



Component Function

| Name | Function |
|---------------------|---|
| DC-IN | DC power input connector |
| LINE IN | Line in (φ3.5 PHONE JACK) |
| LINE OUT | Line out (φ3.5 PHONE JACK) |
| MIC IN | MIC in (φ3.5 PHONE JACK) |
| F_AUDIO | Line out, MIC in Pin header |
| SATA1/ SATA2/ SATA3 | 2.5inch HDD/SSD slot |
| SATAPW | Power connector for 2.5inch HDD / SSD slot |
| SO-DIMM1/SO-DIMM2 | SO-DIMM slot |
| LAN A/ LAN B/LAN C | Ethernet 1000BASE-TX/100BASE-T/10BASE-T RJ-45 connector |
| USB3.0 | USB 3.0 port connector x 4 |
| USB2.0 | USB 2.0 port connector x 3 |
| USB1 | USB 2.0 port connector x 2 (2.0mm pin header) |
| USB2 | USB 2.0 port connector x 2 (2.54mm pin header) |
| SERIAL 1 | Serial port 1 connector (9pin D-SUB, male) |
| SERIAL 2 | Serial port 2 connector (pin header) |
| DVI-I | Display (25pin female) |
| Display Port | Display (20pin female) |
| HDMI | Display (19pin female) |
| F_PANEL | F_PANEL pin header |
| CPU FAN | CPU FAN connector |
| SYS FAN | SYS FAN connector |
| GPIO | GPIO pin header |
| JBAT | ROM clear connector |
| JAT | Pin header for AT / ATX setting |
| PCIE | PCIE x 16 slot |
| S1 | PCIE slot lane number setting |