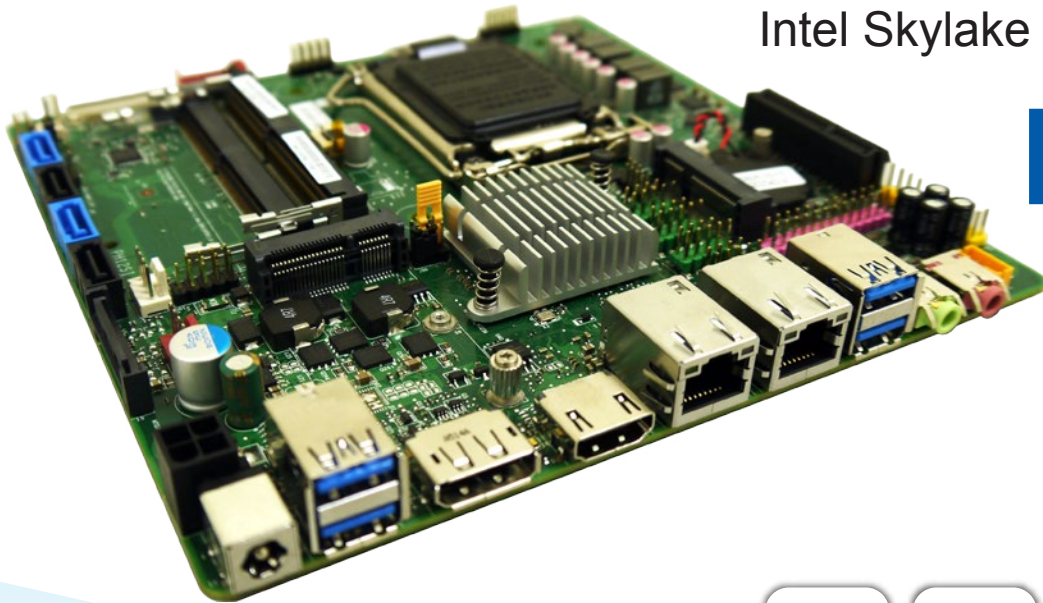


Thin Mini-ITX Form Factor  
Intel Skylake Q170 / H110 chipset

# PH12SI



## Features

Support Intel Skylake / Kabylake processors

Dual channel DDR4 260-pin SO-DIMM  
(up to 32GB)

Intel® vPro business-grade technology  
support (with Q170 chipset)

Dual high speed Gigabit Ethernet  
connection

Two PCI Express MiniCard connector for  
expansion

Features 3/4 SATA3 (6Gbps)

Dual display connectivity by DP & HDMI

Embedded LVDS / eDP connectivity

Onboard 2/4 serial ports



[www.mitac.com](http://www.mitac.com)

## Sales Contact

 Email: [Sales\\_client@mic.com.tw](mailto:Sales_client@mic.com.tw)

 Tel: +886-3-396-2888 | Fax: +886-3-327-7591



| Item                              | Spec  | SKU-B | SKU-D | SKU-i |
|-----------------------------------|---|-------|-------|-------|
| Form Factor                       | Low-profile Mini-ITX (20 millimeters [0.79 inches] x 170.18 millimeters [6.7 inches] x 170.18 millimeters [6.7 inches]) | v     | v     | v     |
| Processor                         | CPU Type: Intel Skylake / Kabylake Processor  | v     | v     | v     |
|                                   | CPU Core: Dual Core / Quad Core   |       |       |       |
|                                   | Socket: Socket LGA1151  |       |       |       |
| Chipset                           | TDP: Support up to 65W CPU types  | v     | v     | v     |
|                                   | Chipset Series: Intel® Q170 Chipset   |       |       |       |
| Memory                            | Chipset Series: Intel® H110 Chipset   | 2     | 2     | 2     |
|                                   | Memory Type: DDR4 SODIMM @1.2V, 2133/2400 MHz (Unbuffered Non-ECC)  |       |       |       |
|                                   | Memory Channel: Dual Channel  |       |       |       |
|                                   | Memory Capacity: Support total up to 32GB   |       |       |       |
| Audio Controller                  | ECC Support: No   | v     | v     | v     |
|                                   | Memory Socket: 260-pin So-DIMM socket   |       |       |       |
| Expansion Capability              | Codec: HD audio codec, Realtek ALC662   | v     | v     | v     |
|                                   | PCIe 3.0 x 4 slot   |       |       |       |
|                                   | PCI Express Full-/Half-Mini Card slot (PCIe / USB / SATA)   |       |       |       |
| External I/O                      | PCI Express Half-Mini Card slot (PCIe / USB)  | 1     | 1     | 1     |
|                                   | HD-out  |       |       |       |
|                                   | DP-out  |       |       |       |
|                                   | USB 3.0   |       |       |       |
|                                   | RJ-45   |       |       |       |
|                                   | Line-out  |       |       |       |
|                                   | Mic-in  |       |       |       |
|                                   | DC-in   |       |       |       |
| Internal I/O                      | 40p Embedded LVDS (default) or eDP (optional) connector   | 1     | 1     | 1     |
|                                   | front audio Header (Mic / HP)   |       |       |       |
|                                   | standard header for DMIC  |       |       |       |
|                                   | audio header to support system stereo speaker   |       |       |       |
|                                   | USB 2.0 2 x 5 header  |       |       |       |
|                                   | Serial port header  |       |       |       |
|                                   | Parallel port header  |       |       |       |
|                                   | MiAPI configurable header   |       |       |       |
|                                   | SATA 3.0 6 Gb/s (Q170 support RAID 0, 1)  |       |       |       |
|                                   | CPU fan header  |       |       |       |
| Legacy I/O                        | Nuvoton NCT6104D  | v     | v     | v     |
| Security                          | Intel® vPro™ Technology support   | v     | v     | v     |
|                                   | TPM security by Nuvoton NPCT650AAAYX (optional)   |       |       |       |
| LAN Support                       | Intel® I219 Gigabit (10/100/1000 Mb/s) LAN  | v     | v     | v     |
|                                   | Intel® I210 Gigabit (10/100/1000 Mb/s) LAN  |       |       |       |
| BIOS                              | Support for Advanced Configuration and Power Interface (ACPI) setting   | v     | v     | v     |
| Instantly Available PC Technology | Suspend to RAM support  | v     | v     | v     |
|                                   | Wake on PCI Express, LAN, front panel, serial, and USB ports  |       |       |       |
| Hardware Monitor Subsystem        | Hardware monitoring through the Nuvoton6104D legacy I/O controller, including Remote thermal sensor                     | v     | v     | v     |
|                                   | Speed control for 4-pin system fan header and 4-pin CPU fan header  |       |       |       |
| Power Requirement                 | DC-in 19V (5.1 mm/ID, 7.4 mm/OD) / ATX 2pin 19V   | v     | v     | v     |
|                                   | DC-in 12V (2.5 mm/ID, 5.5 mm/OD) / ATX 4pin 12V   |       |       |       |
| Environment                       | Operating Temperature: 0°C to +60°C   | v     | v     | v     |
|                                   | Storage Temperature: -20°C to +70°C   |       |       |       |
| Safety                            | CE  | v     | v     | v     |
|                                   | FCC   |       |       |       |
| OS support                        | Skylake: win7, win8.1, win10, linux support by request  | v     | v     | v     |
|                                   | Kabylake: win10, linux support by request   |       |       |       |

## Packing List

- PH12SI Mainboard
- 50CM SATA Cable
- 45CM SATA Power Cable
- 2\*IO Shield (Half and Full height)
- Driver CD
- Quick Guide