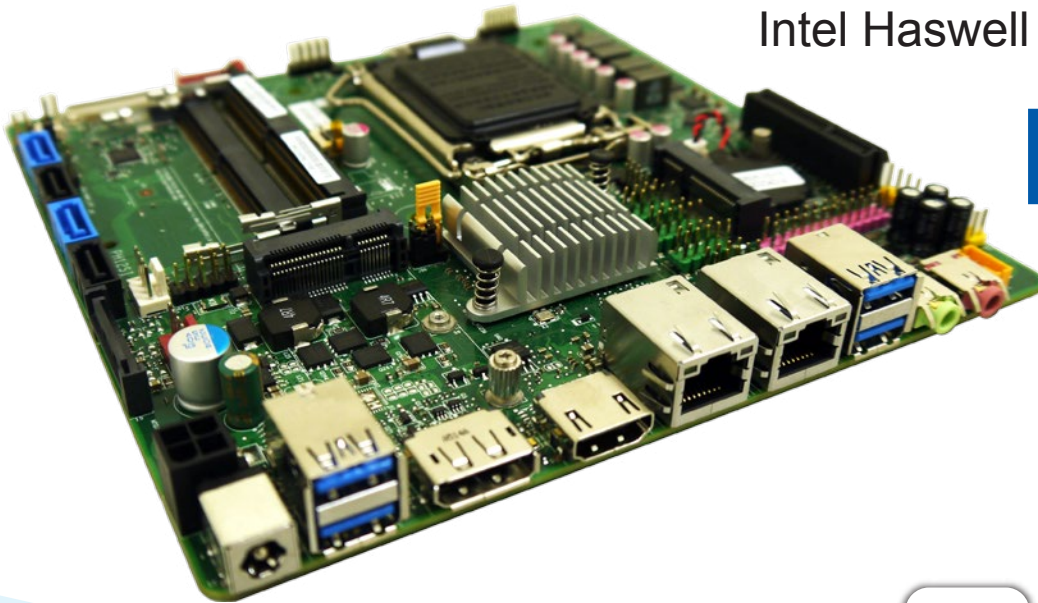


ThinMini-ITX Form Factor
Intel Haswell Q170 / H110 chipset

PH12SI



Thin Mini-ITX



Dual GLAN



MiniCard support



DP/HD-out

Support 6th generation (Skylake) Intel® Core™ i7, i5, i3 processors

Dual channel DDR4 260-pin SO-DIMM

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 & HD-out

Embedded LVDS / eDP connectivity

Onboard 2 / 4 serial ports





Item	Spec	
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])	
Processor	CPU Type : Intel Skylake-S Desktop platform	
	CPU Core : Dual Core/Quad Core	
	Socket : Socket LGA1151	
	TDP : Support up to 65W CPU types	
Chipset	Chipset Series : Intel® Q170 Chipset (Sku-D/I)	
	Chipset Series : Intel® H110 Chipset (Sku-B)	
Memory	Memory Type : DDR4 @ 1.2V, 2133MHz (Unbuffered Non-ECC)	
	Memory Channel : Dual Channel	
	Memory Capacity : Support total up to 16 GB	
	ECC Support : No	
Display	Memory Socket : 260-pin So-DIMM socket	2
	DP & HD-out connector	
Audio	40P Embedded LVDS/eDP connector	
	Codec : HD audio codec, Realtek ALC662	
	1 x front audio Header (Mic/HP)	
	1 x standard header for DMIC	
Expansion Capability	1 x audio header to support system stereo speaker	
	PCIe 3.0 x 4 slot	1
	PCI Express Full-/Half-Mini Card slot	1
Peripheral Interfaces	PCI Express Half-Mini Card slot	1
	USB 2.0 2 x 5 header	3 (Sku-D/I) 2 (Sku-B)
	Serial port header	4
	SATA 3.0 Gb/s	4 (Sku-D/I) 3 (Sku-B)
Legacy I/O	Nuvoton NCT6104D	
Security	Intel® vPro™ Technology support	
	TPM security by Nuvoton NPCT650AAAYX (optional)	
LAN Support	Intel® I219 Gigabit (10/100/1000 Mb/s) LAN	
	Intel® I210 Gigabit (10/100/1000 Mb/s) LAN	
BIOS	Support for Advanced Configuration and Power Interface (ACPI) setting	
Instantly Available PC Technology	Suspend to RAM support	
	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	
	Speed control for 4-pin system fan header and 4-pin CPU fan header	
Power Requirement	DC-in 19V (2.5mm/ ID, 5.5mm/ OD) / ATX 4pin 19V (Sku-D/B)	
	DC-in 12V/19V (2.5mm/ ID, 5.5mm/ OD) / ATX 4pin 12V (Sku-I)	
Environment	Operating Temperature : 0°C to +50°C	
	Storage Temperature : -20°C to +70°C	
Safety	CE	
	FCC	

Packing List

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