



- ## PH14FEI (PH14FEI) Specifications

MECHANICAL	FORM FACTOR	Mini-ITX: 6.7" x 6.7" (170 mm x 170 mm)
		9th & 8th Gen Intel Coffee Lake LGA1151 Socket Processor,
	PROCESSOR	Core i7/i5/i3 6-core TDP Max. 95W, Core i9 8-core TDP Max 35W
	CHIPSET	Intel® H310 / Intel® Q370 (Support RAID 0 / 1 & vPro)
	SYSTEM MEMORY	DDR4 2666MHz / 2 x 260-pin SO-DIMM / Max. 32GB (Non-ECC)
	GRAPHICS	Intel® HD Graphics
	ETHERNET	Intel® I219-LM Giga LAN + Intel® I210-AT Giga LAN
SYSTEM	I/O CHIPSET	Nuvoton NCT6116D
	AUDIO	Realtek® ALC662
	TPM	TPM Header
		*H310 only support M.2 SATA SSD / PCIe 3.0 X16 slot / M.2 2230 E key (PCIe, USB 2.0) / M.2 2242 / 2280 M key (PCIe, SATA) / Mini PCIe Full size (PCIe / USB / SATA)
	EXPANSION SLOT	
	BIOS	AMI BIOS / 256 Mbit SPI
	H/W MONITOR	Temperature Monitor / Voltage Monitor / Fan Monitor
	WATCHDOG TIMER	1~255 steps by software program
	SMART FAN CONTROL	CPU Fan / System Fan
	2nd DISPLAYPORT	Up to 4K (4096 x 2304) @60 Hz
GRAPHICS	VGA	-
	DVI	-
	HDMI	Up to 4K (4096 x 2160) @30 Hz
	DISPLAYPORT	Up to 4K (4096 x 2304) @60 Hz
	LVDS	Up to 1920 x 1200 @60 Hz
	eDP (Option)	Up to 4K (4096 x 2304) @60 Hz
	USB	4 x USB 3.0 (H310) / 4 x USB 3.1 Gen 2 (Q370)
REAR I/O	DISPLAY I/O	1 x HDMI 1.4 / 2 x DisplayPort 1.2
	AUDIO I/O	1 x Mic-in / 1 x Line-out
	LAN I/O	2 x RJ-45
	SERIAL PORT	-
	PS/2 PORT	-
	OTHERS	DC-in 12V(DIN 4-pin)

INTERNAL CONNECTORS	STORAGE	2 x SATAIII
	USB	5 x USB 2.0 (Q370) / 4 x USB 2.0 (H310)
	DISPLAY I/O	1 x LVDS (*Optional eDP SKU available) / 1 x Backlight Connector
	AUDIO I/O	1 x Stereo Speaker Header
	SERIAL PORT	4 x RS232 (Two supports RS232 / 422 / 485 select by BIOS)
	PARALLEL PORT	-
	GPIO	1 x MiAPI Header (Programmable. Support 10-bit GPIO)
	FAN	1 x 4-pin CPU Fan Header / 1 x 4-pin System Fan Header
	POWER	1 x AT / ATX Mode Select Jumper / 1 x 4-pin ATX Power Connector
	OTHERS	1 x CMOS Jumper / 1 x Front Audio Header (Mic-in & Line-out) / 1 x panel power select header / 1 x backlight power select header, / 1x buzzer header
POWER REQUIREMENT	POWER INPUT	*optional 12V-24V via DC to DC power board / DC-in 12V(DIN 4-pin)/ ATX 4-pin 12V
ENVIRONMENTAL	OPERATING TEMPERATURE	0 ~ 60°C (32 ~140°F)
	STORAGE TEMPERATURE	-40 ~ 85°C (-40 ~185°F)
	OPERATING HUMIDITY	10% ~ 95% R/H (Non-condensing)
OS	CERTIFICATION	CE / FCC Class B
	OS SUPPORT	Windows® 10 64-bit / Linux (support by request)
PACKING LIST	PACKAGE	1 x Motherboard / 1 x 50 cm SATA Cable / 2 x I/O Bracket (Half and Full Height) / 1 x Driver CD / 1 x Quick Installation Guide