

249.00 EUR

incl. 19% VAT, plus [shipping](#)

- 2x Gigabit LAN !
- 12VDC power input !
- 2x m.2, 1x miniPCle !
- 5 phase power design !



- Up to Intel® Coffee Lake-R 9th i9 35W & 8th i7 95W (6 cores) LGA processor
- Intel® H310/Q370 Chipset
- Intel® vPro technology support (Q370)
- 2 x DDR4 SO-DIMM up to 32GB
- 5 phase power design
- Support triple display for HDMI, DisplayPort and LVDS/eDP
- 1 x M.2 M 2280, 1 x M.2 E 2230, 1 x mPCIe Full size, 1 x PCIe X16
- 2 x Intel® Gigabit Ethernet
- DC-in 12V (Optional: 12~24V SKU)

#### 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                                                                                                                 |
| GRAPHICS   | 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                                                                                                                                       |
|            | VGA               | -                                                                                                                                                                   |
|            | DVI               | -                                                                                                                                                                   |
|            | HDMI              | Up to 4K (4096 x 2160) @30 Hz                                                                                                                                       |
|            | DISPLAYPORT       | Up to 4K (4096 x 2304) @60 Hz                                                                                                                                       |
| REAR I/O   | 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)                                                                                                                       |
|            | 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       | -                                                                                                                                                                   |
| REAR I/O   | 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                       |