**a.p.q**

阿普奇边缘计算,助力工业更智慧

## Features：

- Intel® 10/11th Generation Core/Pentium/Celeron Desktop CPU
- Fully molded, standard 19-inch 4U rack-mount chassis
- Supports standard ATX motherboards and standard 4U power supplies
- up to 7 full-height card expansion slots
- User-friendly design, front fan tool-free maintenance
- Tool-free PCIe bracket with enhanced shock resistance
- Optional up to 8×3.5" shockproof drive bays
- Optional 2×5.25" drive cages
- Front USB, power switch & status indicators for easy maintenance
- Supports chassis intrusion alarm, lockable front door

Remote Management

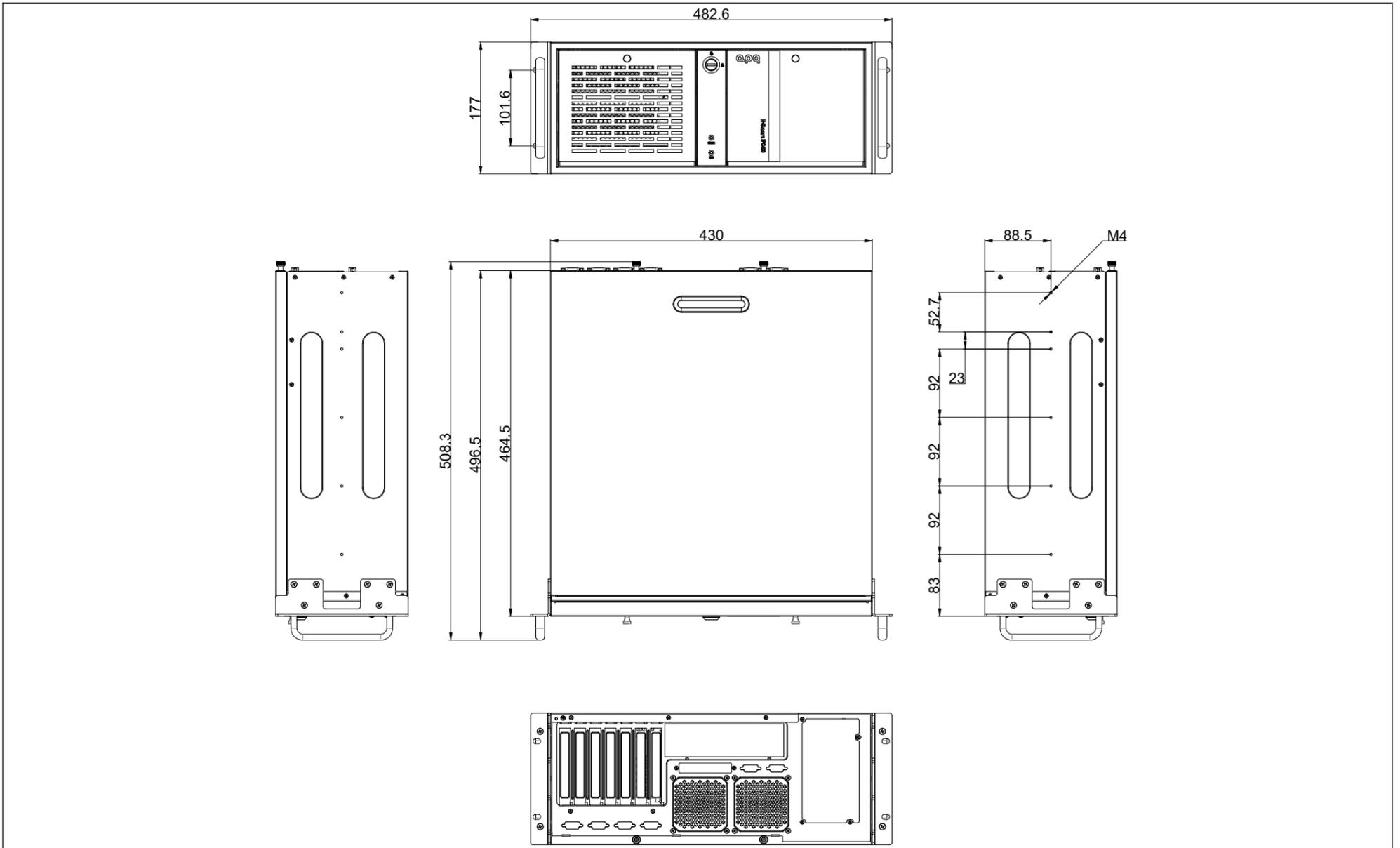Condition Monitoring

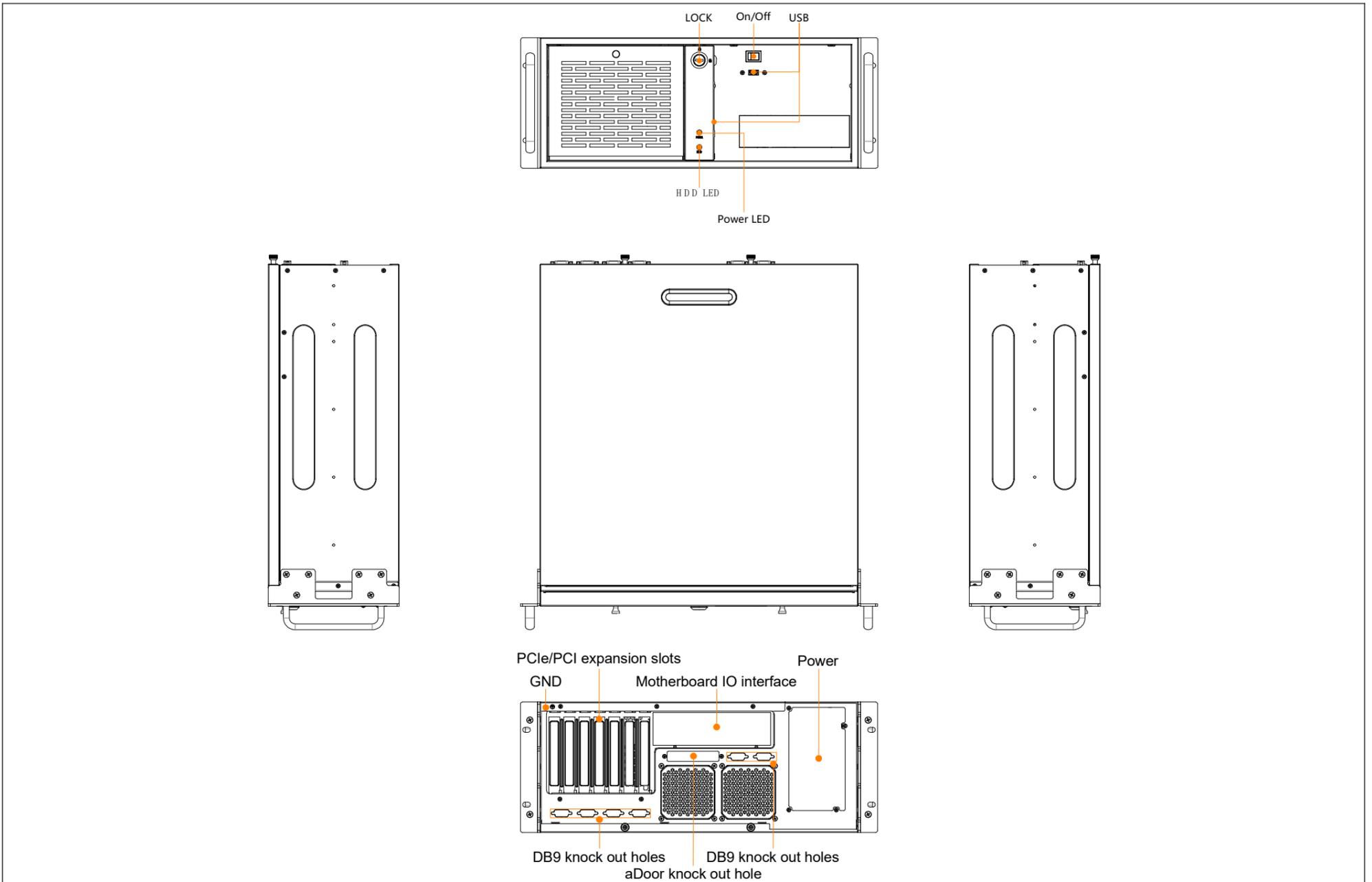Remote Operation And Maintenance

Safety Control

## Product Specification

| Model | | IPC400-H470 |
|---|---|---|
| **Processor System** | CPU | Support Intel® 10/11th Generation Core / Pentium/ Celeron Desktop CPU |
| | TDP | 125W |
| | Socket | LGA1200 |
| | Chipset | H470 |
| | BIOS | AMI 256 Mbit SPI |
| **Memory** | Socket | 2 * Non-ECC U-DIMM Slot, Dual Channel DDR4 up to 2933MHz |
| | Capacity | 64GB, Single Max. 32GB |
| **Graphics** | Controller | Intel® HD Graphics |
| **Ethernet** | Controller | 1 * Intel i225-V LAN Chip (10/100/1000/2500 Mbps, RJ45)<br>1 * Intel i219-LM GBE LAN Chip (10/100/1000 Mbps, RJ45) |
| **Storage** | SATA | 3 * SATA3.0 7P Connector |
| | M.2 | 1 * M.2 Key-M Slot (PCIe 3.0 x4 + SATA 3.0, NVMe/ SATA SSD Auto Detect, 2242/2260/2280) |
| **Expansion Slots** | PCIe | 1 * PCIe x16 slot (Gen 3, x16 signal)<br>1 * PCIe x4 slot (Gen 3, x1 signal)<br>1 * PCIe x4 slot (Gen 3, x1 signal) |
| | PCI | 4 * PCI slot |
| | Mini PCIe | 1 * Mini PCIe (PCIe 3.0x1+USB 2.0, with 1 * SIM Card slot) |
| **Front I/O** | Ethernet | 2 * RJ45 |
| | USB | 4 * USB 5Gbps (Type-A, 5Gbps, 2 ports for a total of 3A)<br>2 * USB2.0 (Type-A, 2 ports for a total of 2A) |
| | PS/2 | 1 * PS/2 (Keyboard & Mouse) |
| | Display | 1 * DVI-D: max resolution up to 1920*1200 @ 60Hz<br>1 * HDMI1.4: max resolution up to 3840*2160 @ 30Hz |
| | Audio | 3 * 3.5mm Jack (Line-out + Line-in + MIC) |
| | Serial | 2 * RS232/422/485 (COM1/2, DB9/M, Full Lanes, BIOS Switch) |
| **Rear I/O** | USB | 2 * USB2.0 (Type-A) |
| | Button | 1 * Power Button |
| | LED | 1 * Power status LED<br>1 * Hard drive status LED |
| **Internal I/O** | USB | 2 * USB 5Gbps (F_USB3, wafer)<br>1 * USB2.0 (USB2_1, Vertical type connector)<br>2 * USB2.0 (F_USB2_1, header) |
| | COM | 4 * RS232 (COM3/4/5/6, Header, Full Lanes) |
| | Display | 1 * VGA: max resolution up to 1920*1200 @ 60Hz (wafer)<br>1 * eDP: max resolution up to 1920*1200 @ 60Hz (Header) |
| | Audio | 1 * Front Audio (Line-Out + MIC, Header)<br>1 * Speaker (3W (per channel) into a 4Ω Loads, wafer) |
| | GPIO | 1 * 16 bits DIO (8DI and 8DO, wafer) |
| | SATA | 3 * SATA 7P Connector |
| | LPT | 1 * LPT (Header) |
| | FAN | 2 * SYS FAN (Header)<br>1 * CPU FAN (Header) |
| **Power Supply** | Type | ATX |
| | Power Input Voltage | AC power supply, voltage and frequency shall be based on the ATX power supply provided |
| | RTC Battery | CR2032 Coin Cell |
| **OS Support** | Windows | Windows 10/11 |
| | Linux | Linux |
| **Watchdog** | Output | System Reset |
| | Interval | Programmable 1 ~ 255 sec |
| **Mechanical** | Enclosure Material | SGCC |
| | Dimensions | 482.6mm(L) * 464.5mm(W) * 177mm(H) |
| | Mounting | Shelf mounted installation |
| **Environment** | Heat Dissipation System | PWM fan cooling |
| | Operating Temperature | 0 ~ 50℃ |
| | Storage Temperature | -20 ~ 70℃ |
| | Relative Humidity | 10 to 95% RH (non-condensing) |

## Product Size

482.6

177
101.6

430

508.3
496.5
464.5

88.5    M4

52.7
92    23
92
92
83

## Product I/O

LOCK    On/Off    USB

HDD LED

Power LED

PCIe/PCI expansion slots          Power
GND          Motherboard IO interface

DB9 knock out holes    DB9 knock out holes
aDoor knock out hole

## Motherboard Interface

DDR4 U-DIMM

ATX Power — eDP — USB 5Gbps — SMBus — FAN — SATA — M.2 Key-M

LPT

F_PANEL

Mini-PCIe

USB 2.0

USB 2.0 Vertical

FAN

FAN

CPU

CPU Power

VGA

SPK

F_Audio

COM

GPIO

PCI — PCIe x4 (x1 signal) — PCI — PCI — PCI

PCIe x16

PCIe x4 (x2 signal)

PS/2 — DVI — i225 — i219

USB 2.0 — COM — HDMI — USB 5Gbps — Audio