



# FPC-5210-P6

Intel® 14<sup>th</sup> / 13<sup>th</sup> / 12<sup>th</sup> Gen. Core™ Embedded GPU Computer Supporting NVIDIA® RTX A4500 w/ 6x POEs



## Features

- SMART FAN support
- 14<sup>th</sup>/13<sup>th</sup>/12<sup>th</sup> Gen Core™ i9/i7/i5/i3 Processor (Raptor Lake-Refresh/ Raptor Lake-S/Alder Lake-S)
- Up to 120W GPU MXM module expansion
- 6 x 802.3af (15.4W) Gigabit PoE ports
- Wide range DC power input (9~36V)
- DP x2 + HDMI x 1 and DVI x 1 (support 4 independent displays)
- Power on/off delay control / configurable ignition power control
- Supports TPM 2.0 and Time-Sensitive Networking (TSN)
- Two-mPCIe for optional WiFi/3G/4G/GPS or I/O expansion supported
- 1 x M.2 B-Key for storage or 5G / LTE +1 x M.2 E-Key for WiFi / BT
- 1 x M.2 M-Key for NVMe SSD

## System

|                |  |
|----------------|--|
| CPU            | Intel® 14 <sup>th</sup> /13 <sup>th</sup> /12 <sup>th</sup> generation Core™ i9/i7/i5/i3 processor in LGA1700 socket (Max 65W CPU) |
| Memory         | 2 x 262-pin DDR5 SO-DIMM sockets, supporting 4800 MHz SDRAM up to 64GB (ECC/ Non-ECC)  |
| Chipset        | Intel® R680E   |
| Graphics       | Integrated Intel® HD Graphics 770  |
| ATA            | 2 x Serial ATA ports with 600MB/s HDD transfer rate  |
| LAN Chipset    | 1 x Intel® I219LM GbE controller w/ iAMT 16.0<br>3 x Intel® I226 2.5G GbE controllers<br>6 x Intel® I210 GbE controllers for PoE   |
| Watchdog Timer | 1~255 levels reset   |
| TPM            | Onboard TPM 2.0  |

## I/O

|               |  |
|---------------|--|
| Serial Port   | 2 x RS-232/422/485 configurable ports via DB-9 connectors (Default RS-232, Switch via BIOS)  |
| USB Port      | 8 x USB 3.2 Gen2(10Gbps) /2.0 ports  |
| LAN           | 4 x RJ-45 connectors for GbE<br>6 x RJ-45 connectors by Intel® I210(1GbE) max 60W supports 802.3af PoE<br>2 x DP 1.4a from MXM module or Intel Graphics (Default Intel Graphics switch via BIOS)   |
| Display       | 1 x HDMI 2.0b female connector<br>1 x DVI-I female connector for digital / analog video output<br>* Support 4 independent displays   |
| DIO Port      | 1 x DB15 connector for 8 x digital input (Dry/ Wet contact) with 2KV isolation<br>1 x DB15 connector for 8 x digital output with 2KV isolation   |
| Audio         | Mic-in/Line-out  |
| Expansion Bus | 1 x MXM3.1 TYPE A/B GPU Slot (PCIe Gen5 x16) MXM A4500 Support<br>2 x mini-PCI Express Slots interconnected with SIM card sockets for optional WiFi/BT/3G/LTE/ GPS (PCIex1+USB2.0, Full Size)<br>3 x SIM sockets (2 for mPCIe / 1 for M.2 B key)<br>1 x M.2 B key (2242/3052/2280) w/ (PCIex2+USB3.0+SATA) interconnected with SIM for 5G / LTE or for storage (either one)<br>1 x M.2 E key (2230) with PCIe1+USB2.0+CNVi) for Wireless |

## Environmental

|                    |   |
|--------------------|---|
| Operating Temp.    | -20 ~ 55°C (-4 ~ 131°F), ambient w/ air flow (w/ 65W TDP CPU, 115W GPU) |
| Storage Temp.      | -40 ~ 85°C (-40 ~ 185°F)  |
| Operating Humidity | 10 ~ 95% @ 55°C (non-condensing)  |
| Vibration          | 5~500Hz 2G rms X,Y,Z axis w/SSD, according to IEC 60068-2-64            |
| Shock              | 30 Grms, Half-sine 11 m sec. duration w/ SSD, according IEC60068-2-27   |

## Qualification

|               |                 |
|---------------|-----------------|
| Certification | CE, FCC Class A |
|---------------|-----------------|

## Power Requirement

|                   |  |
|-------------------|--|
| Power Input       | DC 9~36V input (w/ 4-pin DC input terminal block) (V+, V+, V-, V-) |
| Ignition Switch   | 2-pin terminal block: IGN, GND                                     |
| Power Consumption | Max. 280W  |

## Storage

|      |  |
|------|--|
| Type | 2 x 2.5" outside accessible drive bays<br>1 x M.2 B key (2242/2280) w/ (PCIex2+USB+SATA) for storage or LTE expansion (either one)<br>1 x M.2 2280 M key supports 2242, 2280 devices (PCIe x4 & SATA signal, support boot up function) |
|------|--|

## Mechanical

|                        |   |
|------------------------|---|
| Construction           | Metal                                     |
| Mounting               | Wall-mount                                |
| Weight                 | 4.68 Kg (10.32lb)                         |
| Dimensions (W x D x H) | 285 x 230 x 110mm (11.2" x 9.05" x 4.33") |

## OS Support

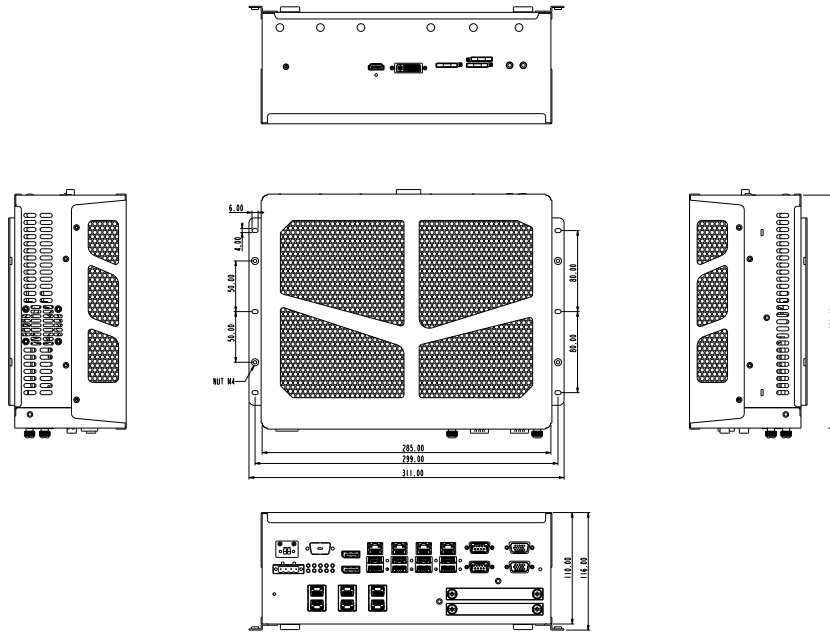
|                                  |
|----------------------------------|
| Windows 10 IOT Enterprise 64-bit |
| Linux (Ubuntu 20.04)             |

## Ordering Information

|             |   |
|-------------|---|
| FPC-5210-P6 | Embedded GPU Computer, Bare Bone, w/6x POEs |
|-------------|---|

All specifications are subject to change without notice.

## Dimensions



### Standard Accessories

CPF-92Q0-C1

CPU Cooling for LGA1700 CPU



### Optional Accessories

WMK-5210

Wall-mount kit for FPC-521x Series



PAC-360W7C-MW

360W AC/DC adapter kit w/ 4-pin terminal block



### Optional Configuration (CTOS\* Kit)

MXM-A4500-8G

MXM 3.1 Type B NVIDIA® Quadro® Embedded A4500-8GB-115W GDDR6 MXM GPU



MXM-A4500-16G

MXM 3.1 Type B NVIDIA® Quadro® Embedded A4500-16GB-115W GDDR6 MXM GPU

FAN-5210-GPU-A4500

GPU cooling for MXM-4500-GPU

MM-5C-8G/16G/32G

DDR5-4800 8GB/16GB/32G SDRAM DIMM module



WIFI-IN2550

Intel AX200NGW M.2 Wi-Fi 6 module w/2x30cm internal wires



ANT-H11

1 x 2dBi HSUPA antenna



ANT-D11

1 x WiFi dual-band 2.4G/5G antenna

Core™ i9-14900T

Intel® 14<sup>th</sup> Gen. Core™ i9-14900T processor, L3/36M, 1.1G

Core™ i7-14700T

Intel® 14<sup>th</sup> Gen. Core™ i7-14700T processor, L3/33M, 1.3G

Core™ i5-14500T

Intel® 14<sup>th</sup> Gen. Core™ i5-14500T processor, L3/24M, 1.7G

Core™ i3-14100T

Intel® 14<sup>th</sup> Gen. Core™ i3-14100T processor, L3/12M, 2.7G

Core™ i9-14900

Intel® 14<sup>th</sup> Gen. Core™ i9-14900 processor, L3/36M, 2.0G

Core™ i7-14700

Intel® 14<sup>th</sup> Gen. Core™ i7-14700 processor, L3/33M, 2.1G

Core™ i5-14500

Intel® 14<sup>th</sup> Gen. Core™ i5-14500 processor, L3/24M, 2.5G

Core™ i3-14100

Intel® 14<sup>th</sup> Gen. Core™ i3-14100 processor, L3/12M, 3.5G



\*CTOS means Configure-to-Order Service.