



FPC-5211-2M4

Intel® 14th / 13th / 12th Gen Core™ Fanless Edge AI Computer supporting Nvidia® RTX-A2000 w/2x10G POEs



Features

- Fanless design (Embedded heat pipes cooling solution)
- 14th/13th/12thGen Core™ i9/i7/i5/i3 Processor (Raptor Lake-Refresh / Raptor Lake-S/Alder Lake-S)
- Up to 60W GPU MXM module expansion
- 802.3af (15.4W)/802.3at(25.5W) Gigabit PoE ports
- 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
- Front-accessible I/O support
- 1 x M.2 B-Key for storage or 5G / LTE +1 x M.2 E-Key for WiFi / BT

System

CPU	Intel® 14 th /13 th /12 th Gen Core™ i9/i7/i5/i3 processor in LGA1700 socket (Max 35W 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® WG1219LM GbE controller w/ iAMT 16.0 3 x Intel® I226 2.5GbE controllers 2 x Intel® I226 2.5GbE controllers for PoE 2 x Marvell® 10GbE 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 RS232, Switch via BIOS) 2 x RS-232 via DB-9 connectors
USB Port	8 x USB 3.2/ 2.0 ports
LAN (POE)	4 x RJ-45 conn. for GbE 4 x M12 X-coded conn. by 2 x Intel® I226(2.5GbE) + 2 x Marvell® 10GbE, max 60W supports 802.3at POE+ (For -2M4) 4 x RJ45 conn.by 2 x Intel® I226(2.5GbE) + 2 x Marvell® 10GbE, max 60W supports 802.3at POE* (For -2P4)
Display	2 x DP 1.4a from MXM module or Intel Graphics (Default Intel Graphics switch via BIOS) 1 x HDMI 2.0b female connector 1 x DVI-I female conn. for digital / analog video output * Support 4 independent displays
DIO Port	1 x DB15 conn.for 8 x digital input (Dry/ Wet contact) with 2KV isolation. 1 x DB15 conn.for 8 x digital output with 2KV isolation.
Audio	Mic-in/Line-out
CAN Bus	2x DB9 connector for isolated CANbus 2.0B(CN1/ CN2)
Expansion Bus	1 x MXM3.1 TYPE A/B GPU Slot (PCIe Gen5 x16) MXM A2000 support 2 x mPCIe Slots interconnected with SIM card sockets for optional WiFi/BT/3G/LTE/ GPS (PCIex1+USB2.0, Full Size) 1 x M.2 B key (2242/3052/2280) w/ (PCIex2+USB3.0+SATA) interconnected with SIM for 5G / LTE expansion or for storage (either one) 1 x M.2 E key (2230) with PCIex1+USB2.0+CNVi) for Wireless

Environmental

Operating Temp.	-20 ~ 50°C (-4 ~ 122°F), ambient w/ air flow -20 ~ 60°C (-4 ~ 140°F), ambient w/ air flow (w / External SMART FAN kit) *A2000 GPU 100% loading without throttling
Storage Temp.	-40 ~ 85°C (-40 ~ 185°F)
Operating Humidity	10 ~ 95% @ 60°C (non-condensing)
Vibration	5~500Hz 3G rms X,Y,Z axis w/SSD, according to IEC 60068-2-64
Shock	50 Grms, Half-sine 11 m sec. duration w/ SSD, according IEC60068-2-27

Qualification

Certification	CE, FCC Class A, E mark
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. 180W

Storage

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

Construction	Aluminum alloy
Mounting	Wall-mount
Weight	5.83 Kg (12.85lb)
Dimensions	285x230x 90mm (9.84" x11.50" x 3.54"), Fanless (W x D x H) 285x230x110mm (9.84" x11.50" x 4.33"), w/ FAN

OS Support

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

Ordering Information

FPC-5211-2M4	Edge AI GPU Computer Bare BOM, w/2x 10GbE POEs, M12 type
FPC-5211-2P4	Edge AI GPU Computer Bare BOM, w/2x 10GbE POEs, RJ45 type (BTO)

