



# FPC-8109-G1

Robust Box PC with Intel® 10<sup>th</sup> Gen Core™ i9/i7/i5/i3 and up to 5x PCIe/PCI Expansion slots  
Supporting NVIDIA® 150W GPU



## Features

- Supports NVIDIA® GTX-16 series up to 150W GPU
- Wide range DC power input (9~36V)
- Two independent displays support ( HDMI x1 + VGA x 1 and DVI-D x 1)
- Power on/off delay control / configurable ignition power control
- TPM2.0 support
- 1x mPCIe for optional WiFi/3G/4G/GPS or I/O expansion supported
- Up to 5x expansion slot support
- 1x M.2 E Key (2230) for WiFi/ BT
- Front-accessible I/O support
- Intel® Wi-Fi 6 AX200 support
- RAID 0,1 support (W480E only)

Industrial Automation

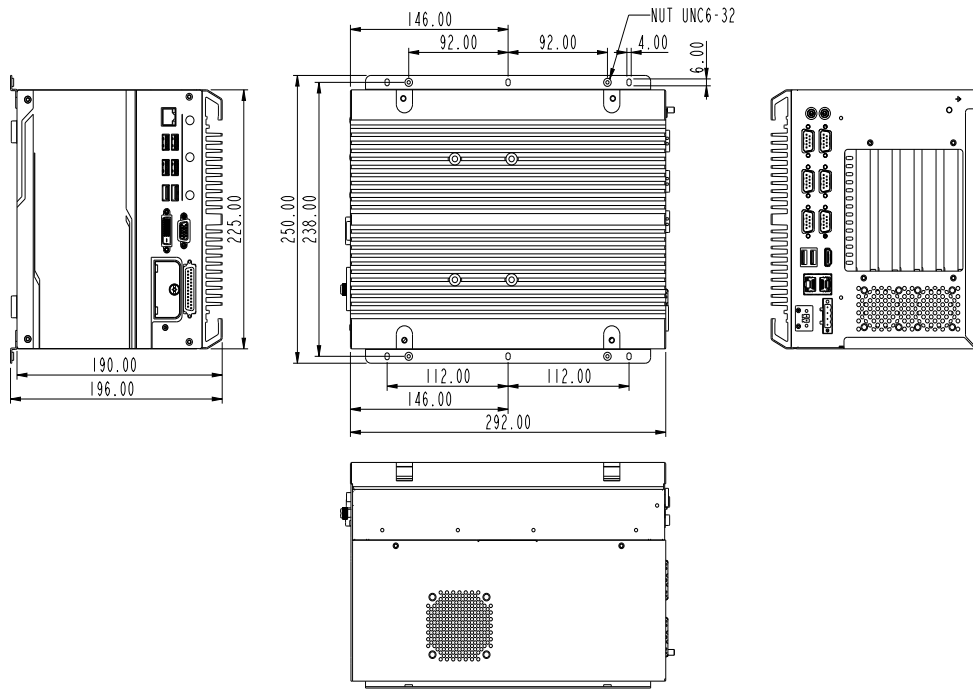
System	
CPU	Intel® 10 <sup>th</sup> generation Core™ i9/i7/i5/i3 processor in LGA1200 socket
Memory	2 x 260-pin DDR4 SO-DIMM sockets, supporting 2933 MHz SDRAM up to 64GB
Chipset	Intel® H420E (W480E Optional)
Graphics	Integrated Intel® HD Graphics
ATA	2 x Serial ATA ports with 600MB/s HDD transfer rate
LAN Chipset	1x Intel® WGI225LM 2.5GigE LAN 1 x Intel® WGI211AT GbE controller 1 x Intel® WGI219LM GbE controller (w/o iAMT, H420E) (w/ iAMT, W480E)
Watchdog Timer	1~255 levels reset
I/O	
Serial Port	2 x RS-232/422/485 configurable via DB-9 connectors 4 x RS-232 ports via DB-9 connectors
USB Port	6 x USB 3.2 Gen1 / 2.0 ports 2 x USB 2.0 ports Internal USB dongle (Optional)
LAN	3 x RJ-45 ports for GbE/2.5GbE
Video port	1 x HDMI 1 x DB-15 female connector for Analog RGB 1 x DVI-D female connector for digital video output * Support 2 independent displays * Support 3 independent displays (W480E, only)
Selectable Port	1 x DB25 connector for DIO (8 in/8 out) port or LPT port (either one, default is DIO)
Audio	Mic-in/Line-out
Expansion Bus	1 full-size Mini-card interconnected with SIM card for optional WiFi/3G/4G/GPS or I/O Expansion (PCIe x 1+USB2.0) 1 x M.2 E key ( 2230) with PCIe x1+USB2.0, for Wireless 4 x PCI 1 x PCIe x16 slot Support up to 150W GPU

Environmental	
Operating Temp.	-20 ~ 70°C (-4 ~ 158°F), ambient w/ air flow, (w/ 35W TDP CPU, fanless ) -20 ~ 55°C (-4 ~ 131°F), ambient w/ air flow (w/ 65W TDP CPU, fanless) -20~45°C (-4 ~ 112°F), w/ GTX-1660 GPU
Storage Temp.	-40 ~ 85°C (-40 ~ 185°F)
Operating Humidity	10 ~ 95% @ 70°C (non-condensing)
Vibration	3 Grms/5~500Hz/random operation w/ SSD
Shock	Operating 40G (11ms), Non-operating 60G with SSD
Qualification	
Certification	CE, FCC Class A
Power Requirement	
Power Input	DC 9~36V input Max. 16A/300W ( w/ 4-pin DC input terminal block, combining remote power on/off switch)
Ignition Switch	2-pin terminal block : IGN, GND
Power Consumption	MAX 65W (w/35W TDP CPU, w/o I/O card) MAX 95W (w/65W TDP CPU, w/o I/O card)
Storage	
Type	2 x 2.5" drive bays 1 x CFAST socket, can be outside accessible
Mechanical	
Construction	Aluminum alloy
Mounting	Wall-mount
Weight	7.35kg (16.20lb )
Dimensions (W x H x D)	225 x 292 x 190mm (8.86" x 11.50" x 5.51")
OS Support	
Windows 10 IOT Enterprise 64-bit Linux (Kernel: 4.9)	
Ordering Information	
FPC-8109-G1	Robust Box PC with Intel® 10 <sup>th</sup> Gen Core™ i9/i7/i5/i3 w/ expansion fan and PEG 8-pin power cable, Supporting NVIDIA® 150W GPU





All specifications are subject to change without notice.









**Dimensions**



**Optional Accessories**

WMK-7000	Wall-mount kit for FPC-7XXX Series	
PAC-120W6B-FSP-ES	120W AC/DC adapter kit w/ 2-pin/3-pin/4-pin block	
PAC-180W6C-FSP-ES	180W AC/DC adapter kit w/ 2-pin/3-pin/4-pin block	
PAC-280W6C-MW	280W AC/DC 24V adapter kit w/ 2-pin/3-pin/4-pin block	

**Optional Configuration (CTOS\* Kit)**

240GB SSD	Intel® 2.5" 240GB SATAIII SSD kit	
WIFI-IN2550	Intel AX200NGW M.2 Wi-Fi 6 module w/ 2 x 30cm internal wires	
ANT-H11	1 x 2dBi HSUPA antenna	
ANT-D11	1 x WiFi dual-band 2.4G/5G antenna	
Core™ i9-10900E	Intel® 10 <sup>th</sup> Gen. Core™ i9-10900E processor, L2/20M, 2.8G	
Core™ i9-10900TE	Intel® 10 <sup>th</sup> Gen. Core™ i9-10900TE processor, L2/20M, 1.8G	
Core™ i7-10700E	Intel® 10 <sup>th</sup> Gen. Core™ i7-10700E processor, L2/16M, 2.9G	
Core™ i7-10700TE	Intel® 10 <sup>th</sup> Gen. Core™ i7-10700TE processor, L2/16M, 2.0G	
Core™ i5-10500E	Intel® 10 <sup>th</sup> Gen. Core™ i5-10500E processor, L2/12M, 3.1G	
Core™ i5-10500TE	Intel® 10 <sup>th</sup> Gen. Core™ i5-10500TE processor, L2/12M, 2.3G	
Core™ i3-10100E	Intel® 10 <sup>th</sup> Gen. Core™ i3-10100E processor, L2/6M, 3.2G	
Core™ i3-10100TE	Intel® 10 <sup>th</sup> Gen. Core™ i3-10100TE processor, L2/6M, 2.3G	
MK-4C-4G/8G/16G/32G	DDR4-2400 4GB/8GB/16GB/32G(DDR4-2933) SDRAM DIMM kit	
MK-4I-4G/8G/16G/32G	WT, DDR4-2400 4GB/8GB/16GB/32G(DDR4-2933) SDRAM DIMM kit	

\*CTOS means Configure-to-Order Service.

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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