FPC-8100

Fanless Box PC with Intel® Core™ i9/i7/i5/i3 10th Generation processor

BRESSNER
A ONE STOP SYSTEMS COMPANY

Features

- Intel® Core™ i9/i7/i5/i3 10th Gen. CPU
- DDR4 SODIMM up to 64GB
- Intel® H420E chipset (optional W480E)
- 1x mPCIe for optional Wi-Fi/ 3G/ 4G/ GPS or I/O
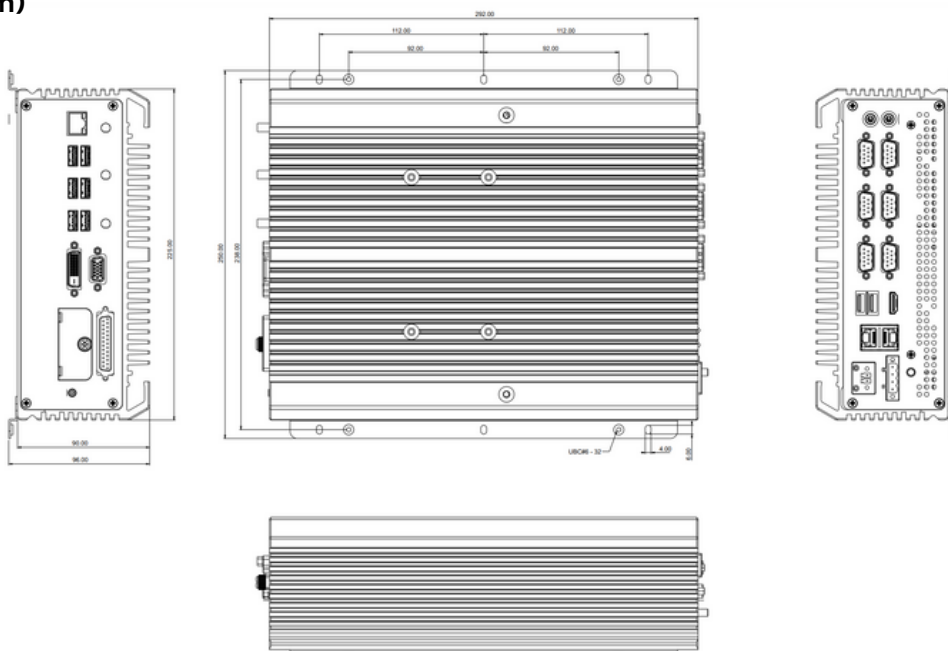- 1x M.2 E Key (2230) for Wi-Fi/ Bluetooth

FPC-8100: Comprehensive Connectivity Options for Industrial Applications

The FPC-8100 Box PC combines outstanding performance with comprehensive connectivity in a user-friendly design. Its rugged enclosure allows for operation in challenging conditions. Equipped with the 10th generation Intel® Core™ i3, i5, i7, or i9 processor, this embedded computer delivers high performance with minimal power consumption. Alongside unique image and video processing capabilities and efficient remote monitoring, the FPC-8100 meets the demands of critical applications that require the utmost reliability. Proven use cases in the industrial sector include Factory Automation, logistics, and vehicle applications.

Remote Management of PCs At the heart of the mainboard is an Intel® H420E chipset (optionally W480E), serving as the central control unit. The industrial-grade computer withstands temperature fluctuations from -20 to +70 °C, as well as accelerations and vibrations (up to 40G with a mechanical HDD and up to 60G with SSD). The computer can be powered by power supplies with a voltage range of 9-36V, providing flexibility for various deployment scenarios. The optional LAN chipset W480E supports Intel's® Active Management Technology (iAMT). Consequently, the computer can be installed in locations without direct access, with remote management via network connection. Three LAN ports are available as connection options, along with the optional inclusion of either a WLAN module or an HSUPA module for a 4G mobile network connection.

Diverse Ports for Varied Applications In each configuration, the FPC-8100 provides two independently functioning display ports (1x DVI-D, 1x VGA, 1x HDMI), making it well-suited for scenarios such as Digital Signage. It supports up to 64GB DDR4 RAM and can accommodate either two 2.5-inch HDDs or SSDs. The hard drives can operate either in RAID 0 mode for increased storage space or RAID 1 mode for enhanced data security. With six USB 3.2 Gen 1 ports, 2x USB 2.0, 2x RS-232/422/485, and 4x RS-232 ports, the FPC-8100 offers ample connectivity options for additional devices.

Drawing (mm)

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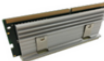| Specifications	FPC-8100
SYSTEM	
CPU	Intel® Core™ i9/i7/i5/i3 10th Gen. CPU
Chipset	Intel® H420E/ W480E (optional)
Graphics	Integrated Intel® HD Graphics
RAM	DDR4 2,933MHz SODIMM socket, up to 64GB
Storage	2x 2.5" SATA drive bays (600MB/s HDD transferrate) Supports RAID 0,1 (W480E optional) 1x Type II CFast slot
Watchdog	1~255 levels reset
Expansion	1x Full-size Mini-PCIe slot (SIM card for optional Wi-Fi/3G/4G/GPS or I/O expansion) 1x M.2 E Key 2230 1x PCIe x16 1x PCI
Operating System	Windows 10 IoT Enterprise 64-bit Linux (Kernel: 4.9)
INTERFACE	
Ethernet	3x RJ-45 Ports for Gigabit Ethernet 1x Intel® WGI225LM 2.5GigE LAN 1x Intel® WGI211AT GbE 1x Intel® WGI219LM GbE (w/o iAMT, H420E) (w/ iAMT, W480E)
USB	1x Internal USB dongle (optional) 6x USB 3.2 Gen1 / 2.0 2x USB 2.0
COM	4x RS232 2x RS232/422/485
Digital I/O	1x DB25 for DIO (8 in/8 out) port or 1 x LPT port
Video	1x HDMI 1.4b 1x DB-15 for analog RGB 1x DVI-D * Support 2 independent displays * Support 3 independent displays (W480E, only)
Audio	1x Mic-in and Line-out
Power	4-pin DC input
ENVIRONMENTAL	
Chassis	Aluminium alloy
Cooling	Fanless
Power Supply	9 ~ 36V DC Max. 65W (w/ 35W TDP CPU, w/o I/O card) Max. 95W (w/ 65W TDP CPU, w/o I/O card)
Remote Control & LED	2-pin terminal block: IGN & GND
Operating Temperature	-20 ~ 75°C with Air Flow (35W TDP CPU, fanless) -20 ~ 55°C with Air Flow (65W TDP CPU, fanless)
Storage Temperature	-40 ~ 85°C
Vibration / Shock Resistance	Vibration: 3 Grms / 5~500Hz / random operation w/ SSD Shock: Operating 40G (11ms), Non-operating 60G with SSD
Humidity	10 ~ 95% @ 70°C (non-condensing)
Dimensions	255 (W) x 292 (D) x 90 (H)mm
Weight	6.4kg
Mounting	Wallmount
Certifications	CE, FCC Class A

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Optional accessories

SKU	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	

Optional configuration (CTOS* kit)

SKU	Configuration	
240GB SSD	Intel® 2.5" 240GB SATAIII SSD kit	
WIFI-AT4550	Atheros QCNFA324 Wi-Fi module w/ 20&30cm internal wires	
ANT-H11	1x 2dBi HSUPA antenna	
ANT-D11	1 x WiFi dual-band 2.4G/5G antenna	
Core™ i9-10900E	Intel® 10th Gen. Core™ i9-10900E processor, L2/20M, 2.8G	
Core™ i9-10900TE	Intel® 10th Gen. Core™ i9-10900TE processor, L2/20M, 1.8G	
Core™ i7-10700E	Intel® 10th Gen. Core™ i7-10700E processor, L2/16M, 2.9G	
Core™ i7-10700TE	Intel® 10th Gen. Core™ i7-10700TE processor, L2/16M, 2.0G	
Core™ i5-10500E	Intel® 10th Gen. Core™ i5-10500E processor, L2/12M, 3.1G	
Core™ i5-10500TE	Intel® 10th Gen. Core™ i5-10500TE processor, L2/12M, 2.3G	
Core™ i3-10100E	Intel® 10th Gen. Core™ i3-10100E processor, L2/6M, 3.2G	
Core™ i3-10100TE	Intel® 10th Gen. Core™ i3-10100TE processor, L2/6M, 2.3G	
MK-4C-4G/8G/16G	DDR4-2400 4GB/8GB/16GB SDRAM DIMM kit	

* CTOS means Configure-to-Order Service