FPC-9000-V1

In-Vehicle Box PC with Intel® Xeon® E3/6th&7th Generation Core™ i7/i5/i3 Processors

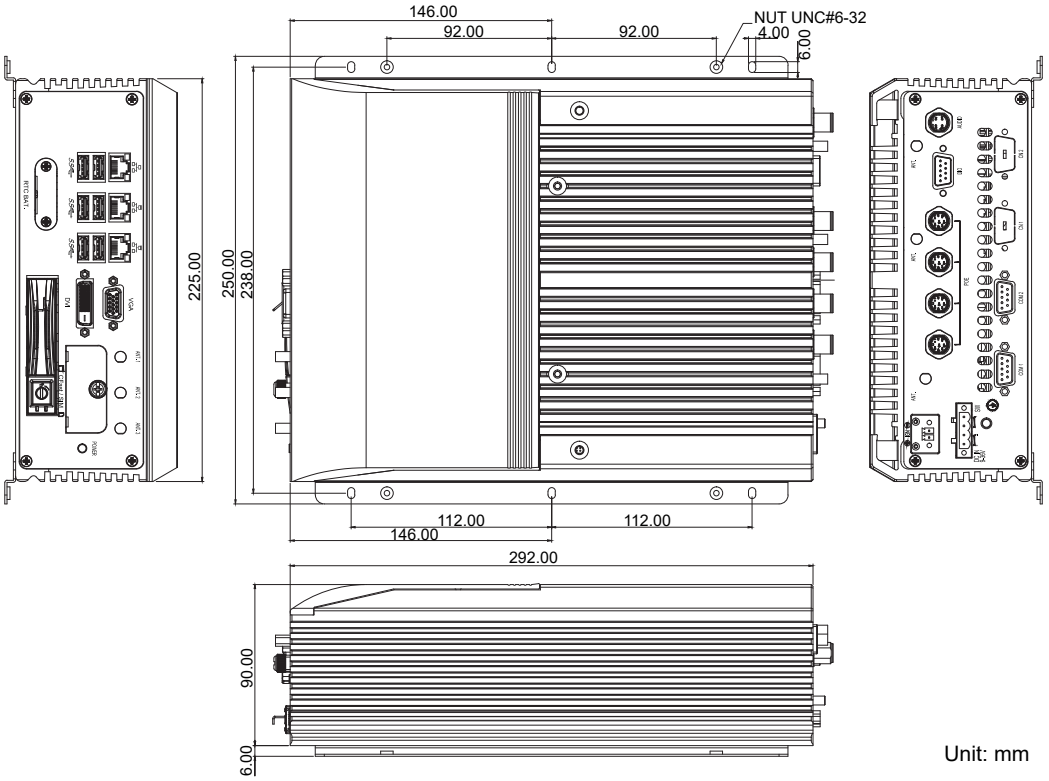
Features

- Fanless Design
- Wide Range DC Power Input (9~36V)
- Wide temperature range from -40°C to +70°C
- 2 x RS-232/422/485 and 8-bit isolated DIO
- 4 x 802.3af Gigabit PoE ports by M12 connectors
- RTC Battery service windows Support
- 3 x mPCIe slots for Optional WiFi/BT/3G/4G/GPS Modules
- 1 x M.2 (NGFF) B-Key(2242) socket for optional LTE Module
- 3 x SIM card sockets
- 2 x reserved DB9 connectors(CN1/2) for optional Serial Ports or CAN BUS

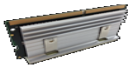
System	
CPU	Intel® Xeon® E3/6th &7th generation Core™i7/i5/i3 processor in LGA1151 socket
Memory	2 x 260-pin DDR4 SO-DIMM sockets, supporting 2400 MHz SDRAM up to 32GB
Chipset	Intel® C236
Graphics	Integrated Intel® HD Graphics
ATA	3 x Serial ATA port with 600MB/s HDD transfer rate
LAN Chipset	1 x Intel® WGI219LM GbE controller w/ iAMT 11.0 (except i3)
	2 x Intel® WGI211AT GbE controllers
	4 x Intel® WGI211AT GbE controllers for PoE
Watchdog Timer	1~255 levels reset
I/O	
Serial Port	2 x DB-9 male connectors (2 x RS-232/422/485), rear side
USB Port	6 x USB 3.0 ports, front side
LAN	3 x RJ-45 ports for GbE, front side
	4 x M12-male 8P connector, IP67 for PoE, A-coded, rear side (with total 30W power budget)
Video Port	1 x DB-15 female connector for Analog RGB, Max. resolution : 1920 x 1080 @ 60Hz
	1 x DVI-D female connector for digital video output, Max. resolution : 1920 x 1080 @ 60Hz
Antenna	6 x SMA-female connectors' holes for external antennas
Audio	1 x M12-male 4P connector, D-code
DIO	8-bit digital I/O, 4-in/4-out w/ 1 x DB-9 male connector, 2KV isolated protection, rear side
Expansion Bus	2 x mini-PCI Express Slots interconnected with SIM card sockets for optional WiFi/BT/3G/LTE/GPS (PCIex1+USB2.0, Full Size)
	1 x mini-PCI Express slot for optional WiFi/BT/GPS (PCIex1+USB2.0, Half Size)
	1 x M.2 (NGFF) B-Key(2242) socket interconnected with SIM card socket for optional LTE module
Environmental	
Operating Temp.	-40 ~ 60°C, ambient w/ air flow, w/ 35W TDP Core™ i CPU -40 ~ 70°C, ambient w/ air flow, w/ Xeon™ E3-1268L-V5 (CPU throttling may be happened while it run full loaded)
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, E13 Mark
Power Requirement	
Power Input	DC 9~36V input (w/ 4-pin DC input terminal block,combining remote power on/off switch)
Ignition Switch	2-pin terminal block : IGN, GND
Power Consumption	Max. 120W (w/o I/O card)
Storage	
Type	1 x CFast socket, can be outside accessible
	1 x external 2.5" SATA3 6Gb/s Drive Bay
	1 x internal 2.5" SATA3 6Gb/s Drive Bay
Mechanical	
Construction	Aluminum alloy
Mounting	Support Wall-mount
Weight	6.4kg(14.1lb)
Dimensions	225(W) x 292 (D) x 90 (H) mm
OS Support	
Windows 10 IOT (For 6th/7th Gen Intel CPU) Windows 7 / Windows 8.1 (For 6th Gen Intel CPU) Linux (Kernal 4.x)	
Ordering Information	
FPC-9000-V1	Barebone Fanless In-Vehicle BOX PC for Xeon®E3/6th &7th Gen. Core™/i7/i5/i3 35W CPU, w/o expansion(CPU-RAM-SSD-OS by CTOS*)

Embedd Computing

Dimensions



Unit: mm

Optional Configuration (CTOS* Kit)		
Xeon™ E3-1268L-V5	Intel® 6th Gen Xeon™ E3-1268L processor, L2/8M, 2.4G	
Core™ i7-7700T	Intel® 7th Gen. Core i7-7700T processor, L2/8M, 2.9G	
Core™ i5-7500T	Intel® 7th Gen. Core i5-7500T processor, L2/6M, 2.7G	
Core™ i3-7101TE	Intel® 7th Gen. Core i3-7101TE processor, L2/3M, 3.4G	
WMK-7000	Wall-mount kit for FPC-7XXX Series	
MK-4I-4G	Industrial-grade DDR4-2400 4GB SDRAM	
MK-4I-8G	Industrial-grade DDR4-2400 8GB SDRAM	
MK-4I-16G	Industrial-grade DDR4-2400 16GB SDRAM	
64/128/256GB SSD	2.5” WT 64/128/256GB SATAIII SSD	
LTE-3550	M.2 LTE Module with 1 x 25cm internal wiring, APAC, EMEA	
WiFi-AT4550	Atheros,QCNFA324 WiFi module w/ 2 x 30cm internal wiring Kit	
GPS-mPCIe Kit	LOCOSYS GPS Kit w/ IPEX-SMA cable and antenna Kit	
CAN-ID1550	Isolated CANbus 2.0B module w/ 2 x 30cm internal cable to DB9 connector	
ANT-D11	1 x Wi-Fi Dual-band 2.4G/5G antenna Kit	
ANT-H11	1 x 2dBi HSUPA Antenna Kit	
ANT-G11	1 x 3000mm 27dB SMA Remote GPS Antenna	

**CTOS means Configure-to-Order Service.*

Last update: 14/5/2020