

VC500-CMS-MXM



10th Gen Intel® Processors
In-vehicle System

KEY FEATURES



High Performance CPU

10th Gen Intel® Xeon/Core™/Pentium/Celeron Processors



802.11af PoE Ports

4 x RJ45 or M12 X-coded type PoE ports at 15.4W



AI Accelerated

Support up to 150W MXM GPU module



Multiple Expansion

1 miniPCIe and 4 M.2 slots

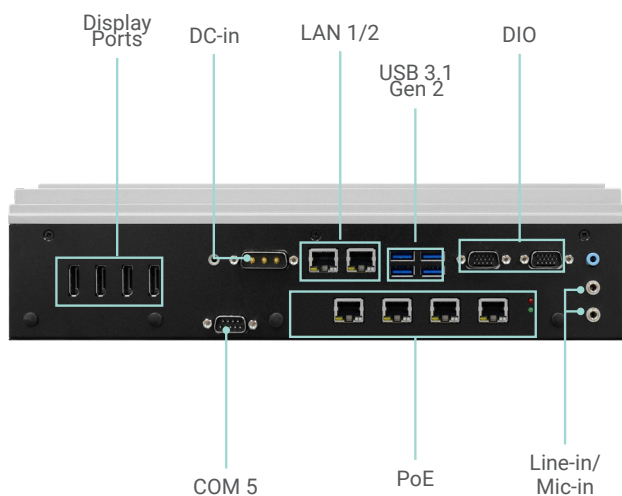


Support 5G Communication

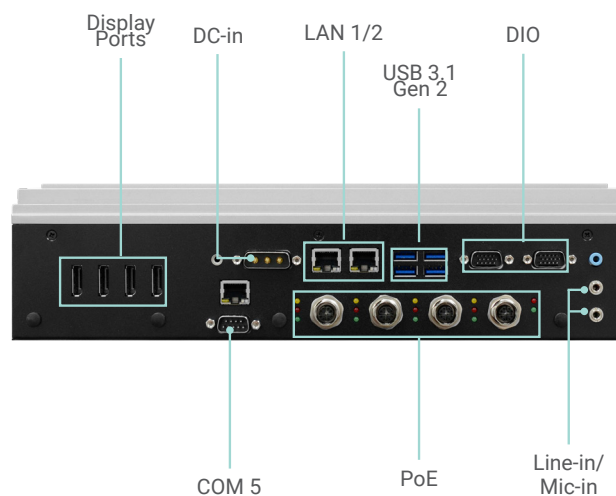
Support M.2 B key 3042/3052 5G-NR module



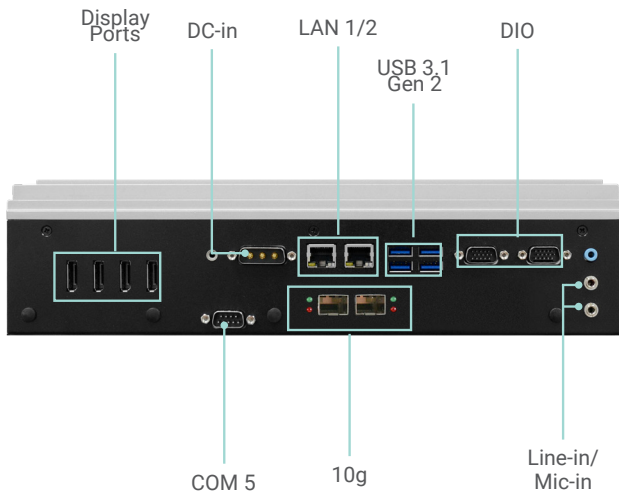
PANEL



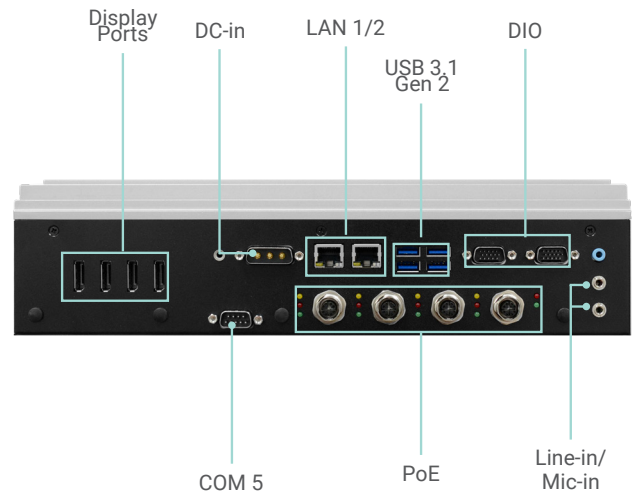
Front View



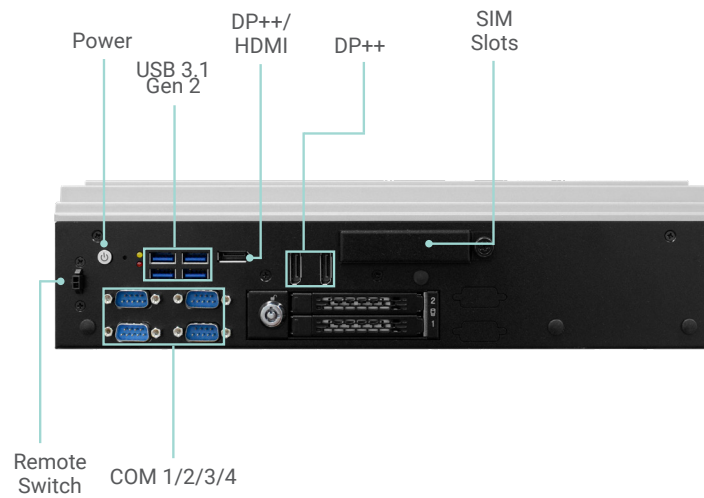
Front View



Front View

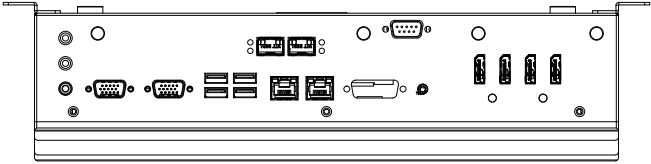


Front View

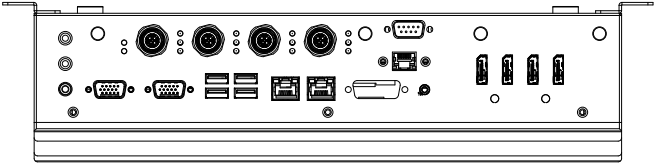


Rear View

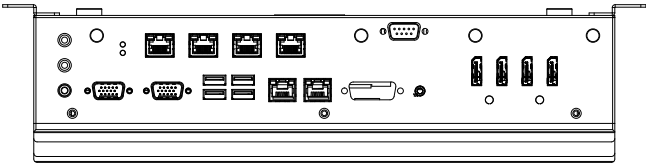
DIMENSIONS



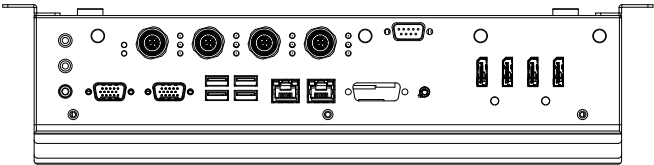
Front View



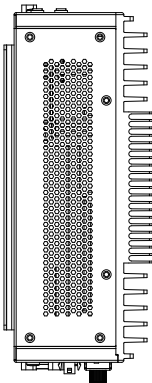
Front View



Front View



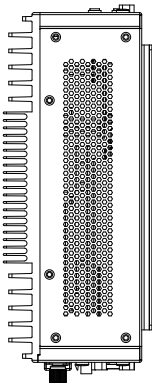
Front View



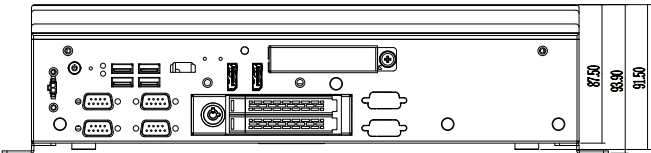
Right View



Top View



Left View



Rear View

SPECIFICATION

SYSTEM	Processor	10th Gen Intel® Xeon/Core™/Pentium/Celeron Processors, LGA 1200 Socket Q470E/ W480E: - Intel® Xeon-1270TE (8 Cores, 16M Cache, up to 2.0/4.4 GHz); 35W - Intel® Core™ i9-10900TE (10 Cores, 20M Cache, up to 1.8/4.5 GHz); 35W - Intel® Core™ i7-10700TE (8 Cores, 16M Cache, up to 2.0/4.4 GHz); 35W - Intel® Core™ i7-10700T (8 Cores, 16M Cache, up to 2.9/4.5 GHz); 35W - Intel® Core™ i5-10500TE (6 Cores, 12M Cache, up to 2.3/3.7 GHz); 35W - Intel® Core™ i3-10100TE (4 Cores, 6M Cache, to 2.3/3.6 GHz); 35W H420E: - Intel® Core™ i3-10100TE (4 Cores, 6M Cache, to 2.3/3.6 GHz); 35W - Intel® Pentium® G6400TE (2 Cores, 4M Cache, 3.2 GHz); 35W - Intel® Celeron® G5900TE (2 Cores, 2M Cache, 3.0 GHz); 35W
	Chipset	Q470E/ W480E/H420E
	Memory	Dual SO-DIMM slots (horizontal type) with anti-vibration bracket Dual Channel DDR4 2933/2666/2400/2133 SDRAM, up to 64GB ECC support for Xeon-1270TE processor only
	BIOS	AMI SPI 256Mbit
GRAPHICS	Controller	Intel® processor integrated or Independent MXM module by BIOS selection
	Compatible MXM	Type A or B MXM modules: RTX A2000, RTX3000
	Display	4 x Display Ports with lock holes from MXM 1 x DP++/HDMI combo port and 2 x DP++ ports from CPU
STORAGE	External	2 x swappable 2.5" SATA drive bays with lock on rear panel Supports RAID 0/1
	Internal	1 x M.2 2280 M Key slot, supports 2242, 2260 & 2280 devices PCIe x4 & SATA signal, support boot up function
	Interface	SATA
AUDIO	Audio Codec	ALC 888
	Interface	1 x Mic-in and 1 x Line-in
ETHERNET	Controller	1 x Intel® i219AT 1 x Intel® i210IT
LED	Indicators	1 x Storage Activity (Red) 1 x Power (Green) 2 x Programmable general purpose
FRONT I/O	Ethernet	2 x RJ45 GbE ports
	PoE	Q470E/W480E Only: 4 x RJ45 PoE ports (Optional M12 X-coded connectors) Support 802.11af, max 15.4W (PSE side)
	Serial	1 x DB-9 RS232 ports (COM 5)
	USB	4 x USB 3.1 Gen2
	DIO	Q470E/W480E Only: 2 x Isolated DIO port by 2 x DB-15 female connectors Supports 8bit DI & 8 bit DO with 2KV isolation
	Audio	1 x Mic-in and 1x Line-in with 3.5mm audio jacks
	Antenna	2 x antenna holes
	DC in	W3 3 pin connector
	OOB	Optional RJ45 port for OOB management
	Serial	4 x DB-9 RS232/422/485 ports by BIOS selection (COM 1/2/3/4)
REAR I/O	USB	4 x USB 3.1 Gen2
	Display	4 x Display Ports with lock holes from MXM 1 x DP++/HDMI combo port and 2 x DP++ ports from CPU
	Antenna	2 x antenna holes
	SIM slot	3 x accessible SIM slots with cover bracket
	CAN bus	2 x DB-9 ports for CAN bus (optional)
	Remote Switch	2-pin remote switch
	Power Button	1 x Power button
SIDE I/O	Antenna	2 x antenna holes on right side 2 x antenna holes on left side
	Serial	1 x 2x5 pin block header for RS232
INTERNAL I/O	Mini PCIe slot	1 x mini PCIe slot with SIM holer on faceplate Supports WiFi/BT/LTE or CAN bus module

SPECIFICATION

INTERNAL I/O	M.2 Slot	Total 3 x M.2 slots 1 x 2230 E-key slot (PCIe x1 & USB2.0) Q470E/ W480E: 1 x 3042/3052 B-Key (USB3.0 & PCIe x1) with dual SIM slots on faceplate 1 x 2242/2280 M-Key-slot (PCIe gen3 x4 & SATA) supporting Intel® Optane memory (Both of the M10 and H10) and NVMe H420E: 1 x 3042/3052 B-key (USB3.0 only) with dual SIM slots on faceplate 1 x 2242/2280 M-Key-slot (SATA only)
	FAN	Passive cooling by default Optional Fan cooling upon request
HARDWARE MONITOR	Gravity Sensor	Support 3-axis femto accelerometer User-selectable $\pm 2g/\pm 4g/\pm 8g/\pm 16g$ scale Supports 6D/4D orientation detection, Free-fall detection, Motion detection and leap-to-wake and return-to-sleep
SECURITY	TPM	Q470E/ W480E only: Supports dTPM2.0 by default (disabled by BIOS setting) Optional fTPM2.0 supported
POWER	Type	3pin 3W3 connector
	Supply	Wide Range 9~48VDC with power management (on/off delay) and ignition
OS SUPPORT	Microsoft	Windows 10 IoT Enterprise RS5
	Linux	Ubuntu Linux 20.04
MECHANISM	Construction	Metal + Aluminum
	Mounting	Wall mount
	Dimensions (W x H x D)	TBD
	Weight	TBD
	Color	Black and Silver
ENVIRONMENT	Operating Temperature	TBD
	Storage Temperature	-40°C to 85°C
	Relative Humidity	10% to 95% (non-condensing)
STANDARDS AND CERTIFICATIONS	Shock	MIL-STD-810G Method 516.6, Procedure 1, OP:10G 11ms, Non-OP: 40G 11ms (Test by SSD, HDD is not support)
	Vibration	MIL-STD-810G Method 514.6C-3, Category 4 Composite wheeled vehicle Table 514.6C-VI
	Certification	E-Mark