

# EC633-RPS R680E

14th/13th/12th Gen Intel® Core™  
Modular-Designed Embedded System

## KEY FEATURES



### DDR5

DDR5 SODIMM up to 64GB



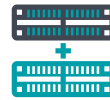
### Wide-Temperature

Operating temperature: -20 to 70°C



### Support OOB

DFI OOB module (M.2 3042 A key)



### Multiple Expansion

5 M.2 slots (1 M.2 2230 E key, 2 M.2 2280 M key, 1 M.2 3042/3052 B key, 1 M.2 3042 A key)  
1 mini-PCIe slot (full size)



### Rich I/O

2 2.5GbE, 4 GbE, 5 USB3.2 Gen2, 1 USB type-C, 1 VGA, 1 HDMI, 1 DP++, 9 com port

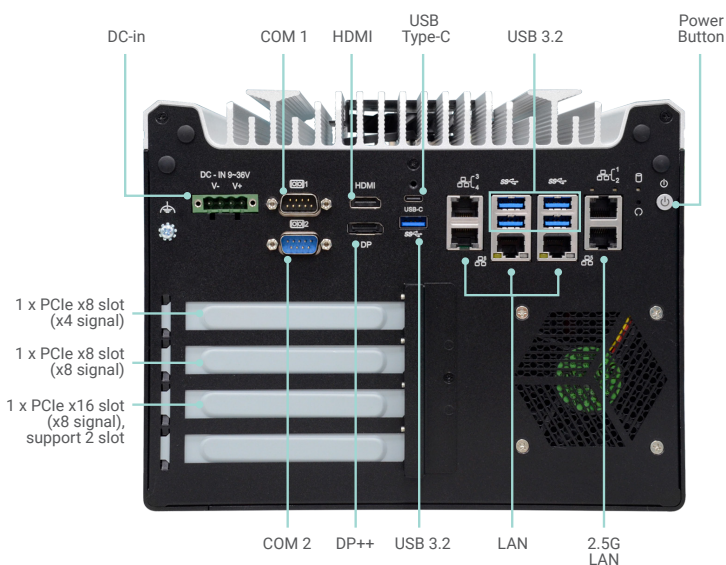


### Support 5G Communication

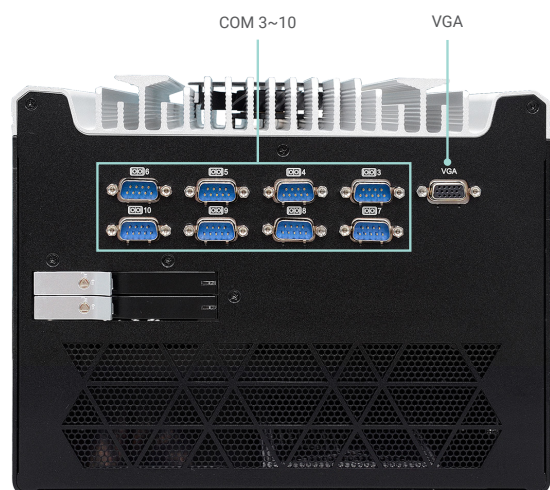
Support 5G communication



## PANEL



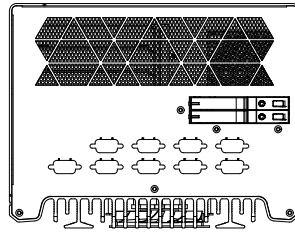
Front View



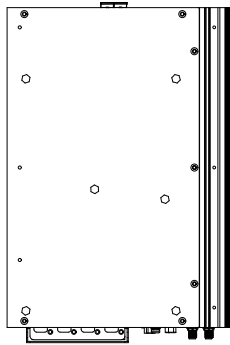
Rear View

- 1 x PCIe x8 slot (x4 signal)
- 1 x PCIe x8 slot (x8 signal)
- 1 x PCIe x16 slot (x8 signal), support 2 slot

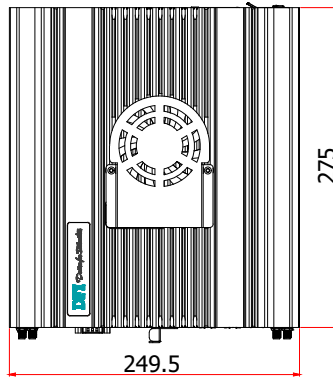
## DIMENSIONS



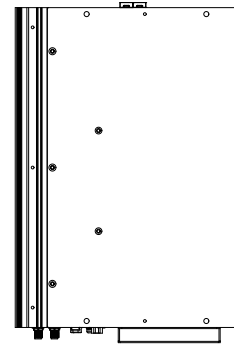
Rear View



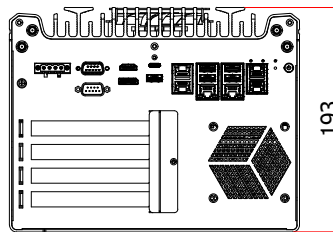
Left View



Top View

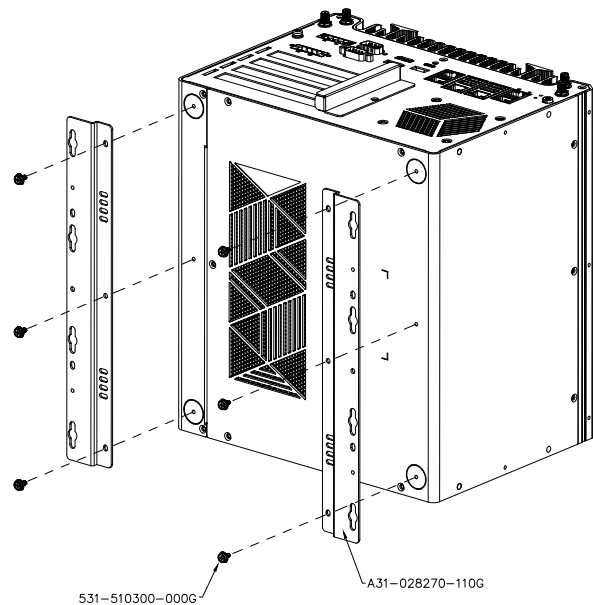
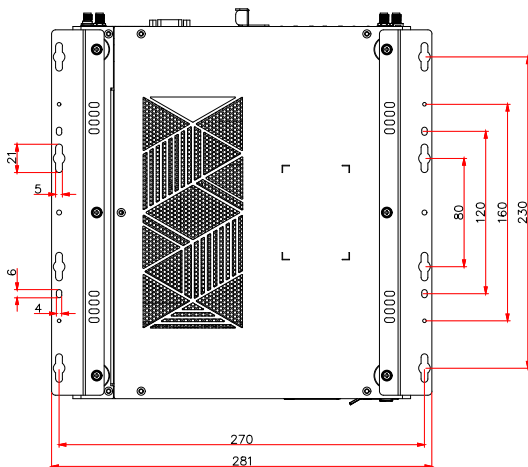


Right View



Front View

## WALL MOUNTING



## SPECIFICATION

SYSTEM	Processor	<p>14th Generation Intel® LGA 1700 Socket Processors, TDP support up to 65W</p> <p>Intel® Core™ i9-14900 (24 Cores, 36M Cache, up to 2.0 GHz); 65W            Intel® Core™ i9-14900T (24 Cores, 36M Cache, up to 1.1 GHz); 35W            Intel® Core™ i7-14700 (20 Cores, 33M Cache, up to 2.1 GHz); 65W            Intel® Core™ i7-14700T (20 Cores, 33M Cache, up to 1.3 GHz); 35W            Intel® Core™ i5-14500 (14 Cores, 24M Cache, up to 2.6 GHz); 65W            Intel® Core™ i5-14500T (14 Cores, 24M Cache, up to 1.7 GHz); 35W            Intel® Core™ i5-14400 (10 Cores, 20M Cache, up to 2.5 GHz); 65W            Intel® Core™ i5-14400T (10 Cores, 20M Cache, up to 1.5 GHz); 35W            Intel® Core™ i3-14100 (4 Cores, 12M Cache, up to 3.5 GHz); 60W            Intel® Core™ i3-14100T (4 Cores, 12M Cache, up to 2.7 GHz); 35W</p> <p>13th Generation Intel® LGA 1700 Socket Processors, TDP support up to 65W</p> <p>Intel® Core™ i9-13900E (24 Cores, 36M Cache, up to 5.2 GHz); 65W            Intel® Core™ i9-13900TE (24 Cores, 36M Cache, up to 5.0 GHz); 35W            Intel® Core™ i7-13700E (16 Cores, 30M Cache, up to 5.1 GHz); 65W            Intel® Core™ i7-13700TE (16 Cores, 30M Cache, up to 4.8 GHz); 35W            Intel® Core™ i7-13700T (16 Cores, 30M Cache, up to 4.9 GHz); 35W            Intel® Core™ i5-13500E (14 Cores, 24M Cache, up to 4.6 GHz); 65W            Intel® Core™ i5-13500TE (14 Cores, 24M Cache, up to 4.5 GHz); 35W            Intel® Core™ i5-13500T (14 Cores, 24M Cache, up to 4.6 GHz); 35W            Intel® Core™ i5-13400E (10 Cores, 20M Cache, up to 4.6 GHz); 65W            Intel® Core™ i3-13100E (4 Cores, 12M Cache, up to 3.3 GHz); 60W            Intel® Core™ i3-13100TE (4 Cores, 12M Cache, up to 4.1 GHz); 35W            Intel® Core™ i3-13100T (4 Cores, 12M Cache, up to 4.2 GHz); 35W</p> <p>12th Generation Intel® LGA 1700 Socket Processors, TDP support up to 65W</p> <p>Intel® Core™ i9-12900E (16 Cores, 30M Cache, up to 5.0 GHz); 65W            Intel® Core™ i9-12900TE (16 Cores, 30M Cache, up to 4.8 GHz); 35W            Intel® Core™ i7-12700E (12 Cores, 25M Cache, up to 4.8 GHz); 65W            Intel® Core™ i7-12700TE (12 Cores, 25M Cache, up to 4.6 GHz); 35W            Intel® Core™ i5-12500E (6 Cores, 18M Cache, up to 4.5 GHz); 65W            Intel® Core™ i5-12500TE (6 Cores, 18M Cache, up to 4.3 GHz); 35W            Intel® Core™ i3-12100E (4 Cores, 12M Cache, up to 4.2 GHz); 60W            Intel® Core™ i3-12100TE (4 Cores, 12M Cache, up to 4.0 GHz); 35W            Intel® Pentium® G7400E (2 Cores, 6M Cache, 3.6 GHz); 46W            Intel® Pentium® G7400TE (2 Cores, 6M Cache, 3.0 GHz); 35W            Intel® Celeron® G6900E (2 Cores, 4M Cache, 3.0 GHz); 46W            Intel® Celeron® G6900TE (2 Cores, 4M Cache, 2.4 GHz); 35W</p>
	Chipset	Intel® R680E Chipset
	Memory	2x 262-pin SODIMM up to 64GB Dual Channel DDR5 4800MHz
	BIOS	AMI SPI 256Mbit
	GRAPHICS	Controller
	Feature	OpenGL 4.5, DirectX 12, OpenCL 2.1 <b>HW Decode:</b> AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9 <b>HW Encode:</b> MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9
	Display	1 x VGA 1 x HDMI 1 x DP++ <b>VGA:</b> resolution up to 1920x1200 @ 60Hz <b>HDMI:</b> resolution up to 4096x2160 @ 30Hz <b>DP++:</b> resolution up to 4096x2304 @ 60Hz
STORAGE	Internal	2 x M.2 2280 M key support RAID 0/1
EXPANSION	Interface	1 M.2 2280 M key (SATA/PCIe x4) 1 M.2 2280 M key (PCIe x4) 1 M.2 3042/3052 B key (SATA/PCIex1/USB3, w/ Nano SIM slot) 1 M.2 2230 E key (PCIe x1/ USB2.0) 1 M.2 3042 A key(for support DFI OOB module) 1 miniPCIe full size (PCIe x1/ USB2.0, w/ Nano SIM slot) 1 PCIe x8 (PCIe x16 slot) 1 PCIe x8 (PCIe x8 slot) 1 PCIe x4 (PCIe x8 slot)
ETHERNET	Controller	2 x Intel® I226IT (10/100/1000/2500Mbps) 1 x Intel® I219LM (10/100/1000Mbps) 3 x Intel® I210IT (10/100/1000Mbps)
LED	Indicators	1 x Status LED 1 x HDD LED
FRONT I/O	Ethernet	2 x 2.5 GbE (RJ-45) 4 x GbE (RJ-45), optional 2 x GbE & 2 x PoE
	Serial	2 x RS232/422/485 (DB-9, selectable by BIOS, COM1 can select serial port or DIO by jumper setting)
	USB	5 x USB 3.2 (Gen2x1) 1 x USB Type-C (Alt. mode)

## SPECIFICATION

FRONT I/O	Display	1 x HDMI 1 x DP++
	DIO	8 bit (DB-9, share with COM1)
	Buttons	1 x Power button 1 x Reset button
	Antenna	4 x Antenna hole
REAR I/O	Serial	8 x RS232 (DB-9)
	Display	1 x VGA
OTHERS	SIM	2 x Nano SIM slot (internal)
WATCHDOG TIMER	Output & Interval	System reset, programmable via software from 1 to 255 seconds
SECURITY	TPM	TPM 2.0
POWER	Type	Wide range 9~36V
	Connector	4-pole terminal block
OS SUPPORT	Microsoft	Windows 10 IoT Enterprise 2021 LTSC Windows 11
	Linux	Linux (available upon request)
MECHANISM	Construction	Metal + Aluminum
	Mounting	Wall Mount
	Dimensions (W x H x D)	249.5 x 193 x 275mm
	Weight	4.5 kg
ENVIRONMENT	Operating Temperature	<b>TDP 35W CPU:</b> -20 to 70°C (wide temperature M.2 SSD storage & airstream 0.7m/sec) <b>TDP 65W CPU:</b> -20 to 50°C (wide temperature M.2 SSD storage & airstream 0.7m/sec)
	Storage Temperature	-20 to 85°C
	Relative Humidity	5 to 95% RH (non-condensing)
STANDARDS AND CERTIFICATIONS	Shock	Half sine wave 3G, 11ms, 3 shock per axis
	Vibration	IEC68-2-64
	Certification	CE, FCC Class A

## ORDERING INFORMATION

Model Name	Part Number	CPU	PCH	HDMI	DP++	VGA	USB-C	USB 3.2 (Gen2x1)	USB 2.0	COM	LAN	PoE	GPU card power	SIM Slot (internal)	TPM
EC633-RPSA06C6-R	750-EC63300-000G	N/A	R680E	1	1	1	1	5	0	10	6	0	0	2	TPM 2.0
EC633-RPSA06C6E-R	750-EC63300-100G										4	2	0		
EC633-RPSA06C6-R	750-EC63300-200G										6	0	1		

## PACKING LIST

• 1 EC633-RPS system unit
• 1 M.2 & miniPCIe slot screws set
• 1 Terminal block 4 pole for DC input
• 1 Cable with 4 wire stripped and tinned to mini-DIMM