

# EC600-RPS

H610E  
R680E



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



## KEY FEATURES



### DDR5

DDR5 SODIMM up to 64GB



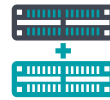
### Wide-Temperature

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/DP combo, 10 com port

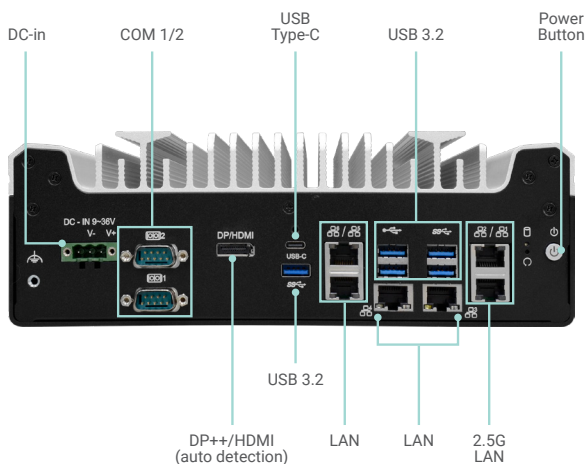


### Support 5G Communication

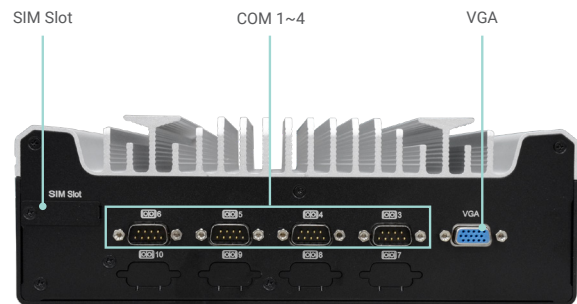
Support 5G communication



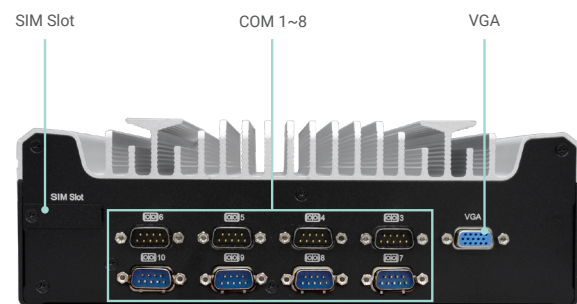
## PANEL



Front View

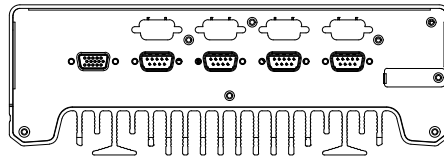


Rear View (H610E)

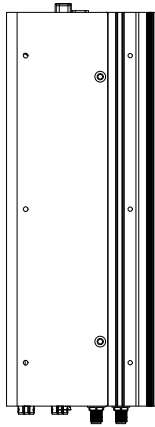


Rear View (R680E)

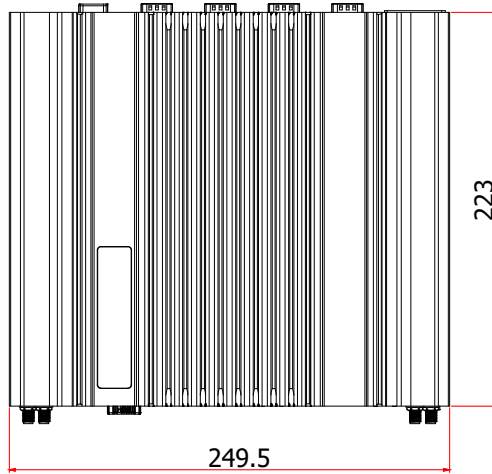
## DIMENSIONS



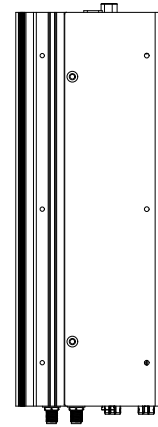
Rear View



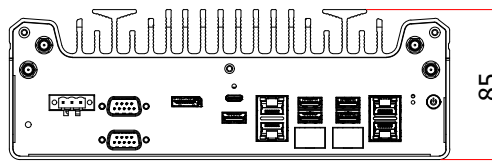
Left View



Top View

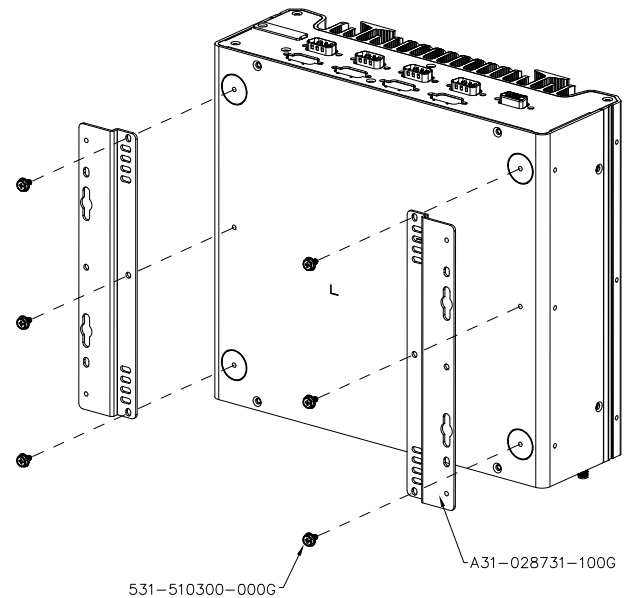
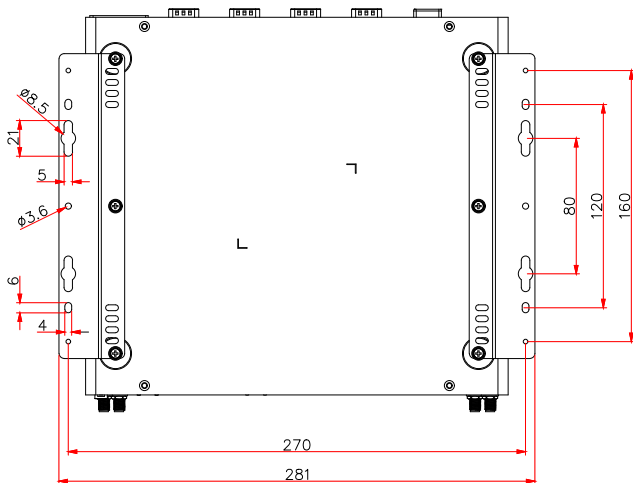


Right View



Front View

## WALL MOUNTING



531-510300-000G

A31-028731-100G

## SPECIFICATION

SYSTEM	Processor	<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</p> <p>Intel® Core™ i9-13900TE (24 Cores, 36M Cache, up to 5.0 GHz); 35W</p> <p>Intel® Core™ i7-13700E (16 Cores, 30M Cache, up to 5.1 GHz); 65W</p> <p>Intel® Core™ i7-13700TE (16 Cores, 30M Cache, up to 4.8 GHz); 35W</p> <p>Intel® Core™ i7-13700T (16 Cores, 30M Cache, up to 4.9 GHz); 35W</p> <p>Intel® Core™ i5-13500E (14 Cores, 24M Cache, up to 4.6 GHz); 65W</p> <p>Intel® Core™ i5-13500TE (14 Cores, 24M Cache, up to 4.5 GHz); 35W</p> <p>Intel® Core™ i5-13500T (14 Cores, 24M Cache, up to 4.6 GHz); 35W</p> <p>Intel® Core™ i5-13400E (10 Cores, 20M Cache, up to 4.6 GHz); 65W</p> <p>Intel® Core™ i3-13100E (4 Cores, 12M Cache, up to 3.3 GHz); 60W</p> <p>Intel® Core™ i3-13100TE (4 Cores, 12M Cache, up to 4.1 GHz); 35W</p> <p>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</p> <p>Intel® Core™ i9-12900TE (16 Cores, 30M Cache, up to 4.8 GHz); 35W</p> <p>Intel® Core™ i7-12700E (12 Cores, 25M Cache, up to 4.8 GHz); 65W</p> <p>Intel® Core™ i7-12700TE (12 Cores, 25M Cache, up to 4.6 GHz); 35W</p> <p>Intel® Core™ i5-12500E (6 Cores, 18M Cache, up to 4.5 GHz); 65W</p> <p>Intel® Core™ i5-12500TE (6 Cores, 18M Cache, up to 4.3 GHz); 35W</p> <p>Intel® Core™ i3-12100E (4 Cores, 12M Cache, up to 4.2 GHz); 60W</p> <p>Intel® Core™ i3-12100TE (4 Cores, 12M Cache, up to 4.0 GHz); 35W</p> <p>Intel® Pentium® G7400E (2 Cores, 6M Cache, 3.6 GHz); 46W</p> <p>Intel® Pentium® G7400TE (2 Cores, 6M Cache, 3.0 GHz); 35W</p> <p>Intel® Celeron® G6900E (2 Cores, 4M Cache, 3.0 GHz); 46W</p> <p>Intel® Celeron® G6900TE (2 Cores, 4M Cache, 2.4 GHz); 35W</p>	
	Chipset	Intel® H610E/R680E Chipset	
	Memory	2x 262-pin SODIMM up to 64GB Dual Channel DDR5 4800MHz	
	BIOS	AMI SPI 256Mbit	
	GRAPHICS	Controller	Intel® HD Gen 9 Graphics
Feature		<p>OpenGL 4.5, DirectX 12, OpenCL 2.1</p> <p>HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9</p> <p>HW Encode: MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9</p>	
Display		1 x VGA 1 x HDMI/DP++ (auto detection)	VGA: resolution up to 1920x1200 @ 60Hz HDMI: resolution up to 4096x2160 @ 30Hz DP++: resolution up to 4096x2304 @ 60Hz
STORAGE	Internal	2 x M.2 2280 M key support RAID 0/1 (R680E)	
EXPANSION	Interface	<p>1 M.2 2280 M key (SATA/PCIe x4)</p> <p>1 M.2 2280 M key (PCIe x4)</p> <p>1 M.2 3042/3052 B key (SATA/PClex1/USB3)</p> <p>1 M.2 2230 E key (PCIe x1/ USB2.0)</p> <p>1 M.2 3042 A key(for support DFI OOB module)</p> <p>1 miniPCIe full size (PCIe x1/ USB2.0)</p>	
ETHERNET	Controller	<p>2 x Intel® I226IT (10/100/1000/2500Mbps)</p> <p>1 x Intel® I219LM (10/100/1000Mbps)</p> <p>3 x Intel® I210IT (10/100/1000Mbps)</p>	
LED	Indicators	<p>1 x Status LED</p> <p>1 x HDD LED</p>	
FRONT I/O	Ethernet	<p>2 x 2.5 GbE (RJ-45)</p> <p>4 x GbE (RJ-45)</p>	
	Serial	2 x RS232/422/485 (DB-9, selectable by BIOS, COM1 cab select serial port or DIO by jumper setting)	
	USB	<p>5 x USB3.2 (Gen2x1)</p> <p>1 x USB Type-C (Alt. mode)</p>	
	Display	1 x HDMI/DP++ (auto detection)	
	DIO	8 bit (DB-9, share with COM1)	
	Buttons	<p>1 x Power button</p> <p>1 x Reset button</p>	
	Antenna	4 x Antenna hole	
REAR I/O	Serial	<p>H610E: 4 x RS232 (DB-9)</p> <p>R680E: 8 x RS232 (DB-9)</p>	
	Display	1 x VGA	
	SIM	1 x Nano SIM slot (external)	
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	3-pole terminal nlock	
OS SUPPORT	Microsoft	<p>Windows 10 IoT Enterprise 2021 LTSC</p> <p>Windows 11</p>	
	Linux	Linux (available upon request)	

## SPECIFICATION

<b>MECHANISM</b>	<b>Construction</b>	Metal + Aluminum
	<b>Mounting</b>	Wall Mount
	<b>Dimensions (W x H x D)</b>	249.5 x 85 x 223mm
	<b>Weight</b>	4.5 kg
<b>ENVIRONMENT</b>	<b>Operating Temperature</b>	TDP 35W CPU: -20 to 70°C (wide temperature M.2 SSD storage & airstream 0.7m/sec) TDP 65W CPU: -20 to 50°C (wide temperature M.2 SSD storage & airstream 0.7m/sec)
	<b>Storage Temperature</b>	-20 to 85°C
	<b>Relative Humidity</b>	5 to 95% RH (non-condensing)
<b>STANDARDS AND CERTIFICATIONS</b>	<b>Shock</b>	Half sine wave 3G, 11ms, 3 shock per axis
	<b>Vibration</b>	IEC68-2-64
	<b>Certification</b>	CE, FCC Class A

## SYSTEM MODELS

Model Name	Part Number	PCH	HDMI/DP (Auto-detection)	VGA	USB-C	USB3.2 (Gen2x1)	COM	LAN	PoE	SIM Slot
EC600-RPS:EC600-RPS606C6-H	750-EC60000-000G	H610E	1	1	1	5	6	6	0	1
EC600-RPS:EC600-RPSA06C6-R	750-EC60000-100G	R680E	1	1	1	5	10	6	0	1
EC600-RPS:EC600-RPS606C6E-H	750-EC60000-200G	H610E	1	1	1	5	6	4	2	1
EC600-RPS:EC600-RPSA06C6E-R	750-EC60000-300G	R680E	1	1	1	5	10	4	2	1

## ORDERING INFORMATION

Model Name	Part Number	Description
EC600-RPS:EC600-RPS606C6-H	750-EC60000-000G	Fanless, RPS263, H610E, 6 COM, 5 USB, 1 Type-C, 1 VGA, 1 HDMI/DP, 6 LAN, DC9~36V, TPM2.0, F/G SYSTEM RoHS
EC600-RPS:EC600-RPSA06C6-R	750-EC60000-100G	Fanless, RPS263, R680E, 10 COM, 5 USB, 1 Type-C, 1 VGA, 1 HDMI/DP, 6LAN, DC9~36V, TPM2.0, F/G SYSTEM RoHS
EC600-RPS:EC600-RPS606C6E-H	750-EC60000-200G	Fanless, RPS263, H610E, 6 COM, 5 USB, 1 Type-C, 1 VGA, 1 HDMI/DP, 2PoE, 4 LAN, DC9~36V, TPM2.0, F/G SYSTEM RoHS
EC600-RPS:EC600-RPSA06C6E-R	750-EC60000-300G	Fanless, RPS263, R680E, 10 COM, 5 USB, 1 Type-C, 1 VGA, 1 HDMI/DP, 2PoE, 4LAN, DC9~36V, TPM2.0, F/G SYSTEM RoHS

## PACKING LIST

1 EC600-RPS system unit
1 M.2 & miniPCIe slot screws set
1 Terminal block 3 pole for DC input
1 Cable with 2 wire stripped and tinned to DC jack