

# EC543-ADS

Q670E



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



## KEY FEATURES



### DDR4

DDR4 SODIMM up to 64GB



### PoE

Support 4 PoE (EC543-ADS62GA6E-Q)



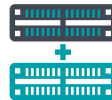
### Three Independent Displays

1 VGA + 2 HDMI/DP++ (auto detection)



### Support 5G Communication

Support 5G communication



### Multiple Expansion

3 PCIe, 1 PCI and 3 M.2 slots support NVMe



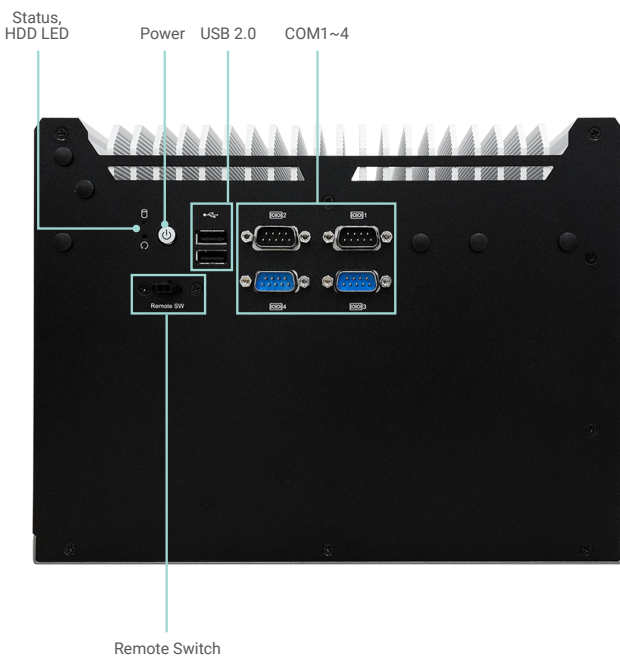
### Wide-Temperature

Operating Temperature: -20 to 60°C

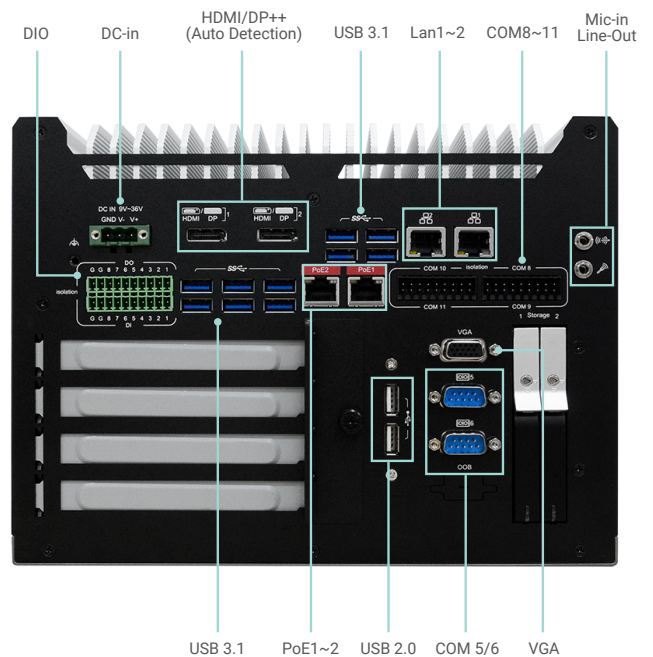


IoT Solutions Alliance

## PANEL

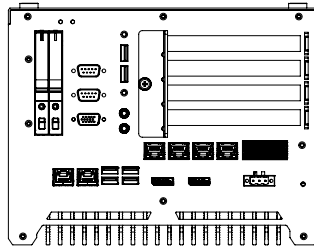


Front View

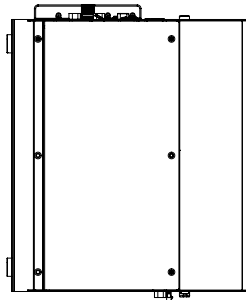


Rear View

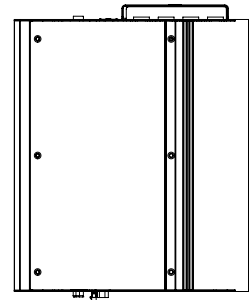
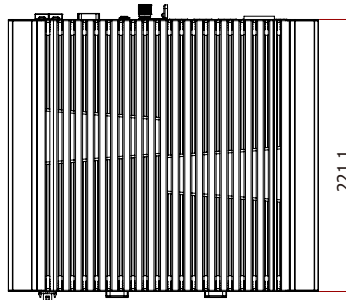
## DIMENSIONS



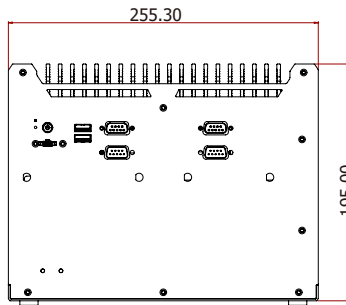
Rear View



Left View

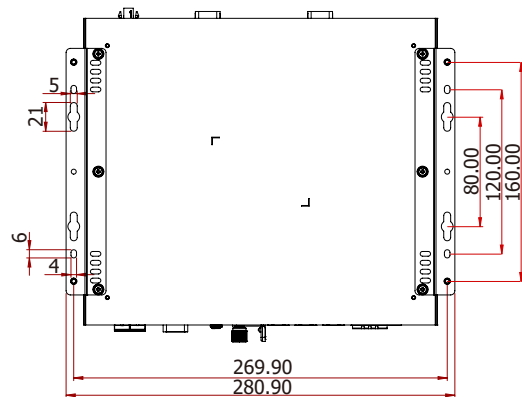
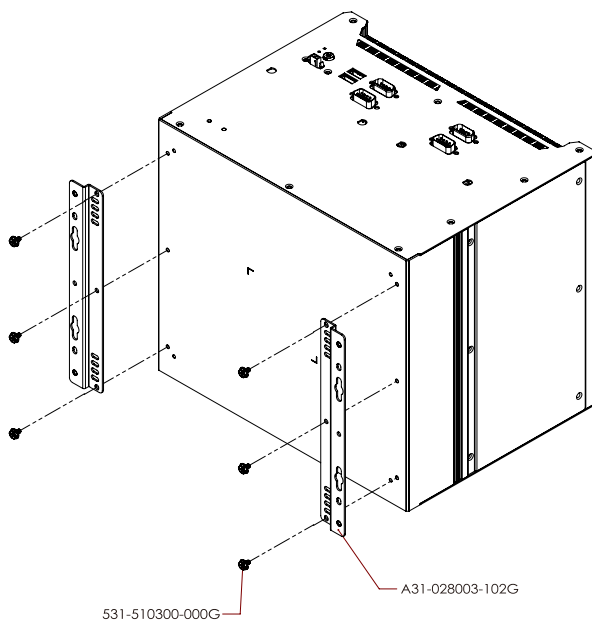


Right View



Front View

## WALL MOUNTING



## SPECIFICATION

SYSTEM	Processor	12th Generation Intel® Core™ Processors, LGA 1700 Intel® Core™ i9-12900TE (16 Cores, 30M Cache, up to 4.8GHz); 35W Intel® Core™ i7-12700TE (12 Cores, 25M Cache, up to 4.6GHz); 35W Intel® Core™ i5-12500TE (6 Cores, 18M Cache, up to 4.3GHz); 35W Intel® Core™ i3-12100TE (4 Cores, 12M Cache, to 4GHz); 35W Intel® Pentium® G7400TE (2 Cores, 6M Cache, 3GHz); 35W Intel® Celeron® G6900TE (2 Cores, 4M Cache, 2.4GHz); 35W	
	Chipset	Intel® Q670E Chipset	
	Memory	Two 260-pin DDR4 3200MHz SODIMM up to 64GB	
	BIOS	AMI SPI 128Mbit	
GRAPHICS	Controller	Intel® HD Graphics	
	Feature	OpenGL up to 5.0, DirectX 11, OpenCL 2.1 HW Decode: HEVC/H.265, H.264, M/JPEG, MPEG2, VC1/WMV9, VP8 (8-bit), VP9 (10-bit) HW Encode: HEVC/H.265, M/JPEG, MPEG2, VP8	
	Display	1 x VGA 2 x HDMI/DP++ (auto detection)	VGA: resolution up to 1920x1200 @ 60Hz HDMI: resolution up to 4096x2160 @ 30Hz DP++: resolution up to 4096x2304 @ 60Hz
	Triple Displays	VGA + 2 x HDMI/DP++ (auto detection)	
STORAGE	Interface	2 x 2.5" SATA 3.0 Drive Bay	support RAID 0/1
EXPANSION	Interface	1 x M.2 2230 E key (PCIe/USB 2.0) 1 x M.2 2280 M key (PCIe x4 NVMe/SATA) 1 x M.2 3042/3052 B key (PCIe/USB 3.0) 1 x PCI slot 1 x PCIe x16 @Gen3, x16 slot 1 x PCIe x4 @Gen3, x8 slot 1 x PCIe x1 @Gen3, x4 slot	
AUDIO	Audio Codec	ALC888	
ETHERNET	Controller	2 x Intel® i225-IT	
	Interface	RJ-45	
LED	Indicators	1 x Status LED 1 x HDD LED	
FRONT I/O	Serial	4 x RS-232/422/485 (DB-9)	
	USB	2 x USB 2.0 (type A)	
	Buttons	1 x Power button 1 x Reset button	
	Antenna	6 x Antenna hole	
REAR I/O	Ethernet/PoE	-EC543-ADS6881-Q 2 x GbE (RJ-45) -EC543-ADS62GA6E-Q 2 x GbE (RJ-45) 4 x PoE -EC543-ADS62GA6-Q 6 x GbE (RJ-45) -EC543-ADSAGE4E-Q 2 x GbE (RJ-45) 2 x PoE -EC543-ADSAGE4-Q 4 x GbE (RJ-45)	
	Serial	-EC543-ADS6881-Q/EC543-ADS62GA6E-Q/EC543-ADS62GA6-Q 2 x RS232 -EC543-ADSAGE4E-Q/EC543-ADSAGE4-Q 2 x RS232 4 x RS232/422/485 (w/ 2KV isolation)	
	USB	-EC543-ADS6881-Q 4 x USB 3.1 (Gen2) 2 x USB 2.0 -EC543-ADS62GA6E-Q/EC543-ADS62GA6-Q 4 x USB 3.1 (Gen2) 2 x USB 3.1 (Gen1) 2 x USB 2.0 -EC543-ADSAGE4E-Q/EC543-ADSAGE4-Q 4 x USB 3.1 (Gen2) 6 x USB 3.1 (Gen1) 2 x USB 2.0	
	DIO	-EC543-ADS6881-Q 8 bits DIO -EC543-ADS62GA6E-Q/EC543-ADS62GA6-Q 32 bits DIO (w/ 2KV isolation) -EC543-ADSAGE4E-Q/EC543-ADSAGE4-Q 16 bits DIO (w/ 2KV isolation)	
	Display	1 x VGA 2 x HDMI/DP++ (auto detection)	
	Audio	1 x Line-out 1 x Mic-in	

## SPECIFICATION

<b>WATCHDOG TIMER</b>	<b>Output &amp; Interval</b>	System reset, programmable via software from 1 to 255 seconds
<b>SECURITY</b>	<b>TPM</b>	TPM 2.0
<b>POWER</b>	<b>Type</b>	Wide range 9~36V
	<b>Connector</b>	3-pole terminal block 2-pin power extension switch connector
<b>OS SUPPORT</b>	<b>Microsoft</b>	Windows 10 IoT Enterprise 64 Bit
	<b>Linux</b>	Linux (available upon request)
<b>ENVIRONMENT</b>	<b>Operating Temperature</b>	-20 to 60°C (SSD or mSATA)
	<b>Storage Temperature</b>	-20 to 85°C
	<b>Relative Humidity</b>	5 to 95% RH (non-condensing)
<b>MECHANICAL</b>	<b>Construction</b>	Metal + Aluminum
	<b>Mounting</b>	Wall mount
	<b>Dimensions (W x H x D)</b>	255.3 x 195 x 221.1mm
	<b>Weight</b>	5.4 kg
<b>STANDARDS AND CERTIFICATIONS</b>	<b>Shock</b>	Half sine wave 3G, 11ms, 3 shock per axis
	<b>Vibration</b>	IEC68-2-64
	<b>Certifications</b>	CE, FCC Class A, UKCA, BIS

## SYSTEM MODELS

P/N	Model Name	CPU	PCH	Expansion Slot	Video output	Audio	COM	USB 3.1	USB 2.0	LAN	PoE	DIO	TPM
750-EC5431-000G	EC543-ADS6881-Q	i5-12500TE	Q670E	1 PCIe x16 1 PCIe x4 1 PCIe x1 1 PCI	2 HDMI/DP 1 VGA	1 Line-out 1 Mic-in	6	4	4	2	0	8 bits	Yes (TPM2.0)
750-EC5431-100G	EC543-ADS62GA6E-Q						6	6	4	2	4	32 bits	
750-EC5431-200G	EC543-ADS62GA6-Q						6	6	4	6	0	32 bits	
750-EC5431-300G	EC543-ADSAGE4E-Q						10	10	4	2	2	16 bits	
750-EC5431-400G	EC543-ADSAGE4-Q						10	10	4	4	0	16 bits	

## PACKING LIST

• 1 EC543-ADS system unit
• 1 M.2 slot screws
• 1 terminal block 3-pole for DC input
• 1 cable with 2 wire stripped and tinned to DC jack