EC543-ADS Q670E

14th/13th/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 DP++

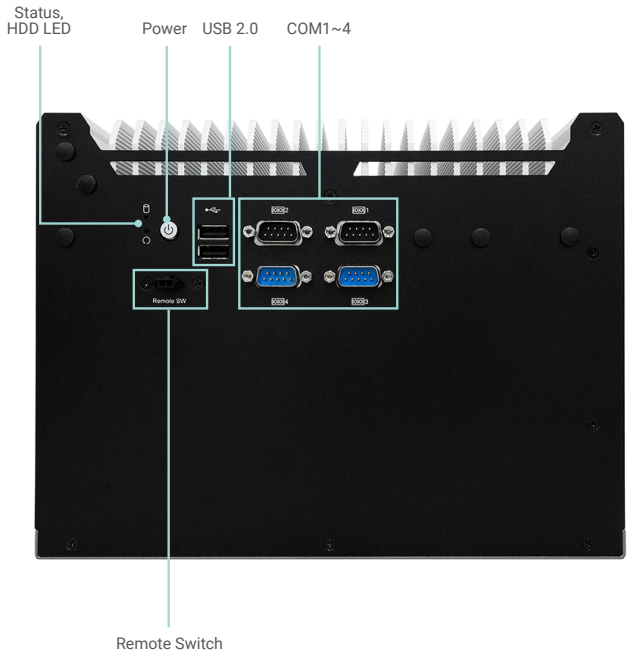
Support 5G Communication
Support 5G communication

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

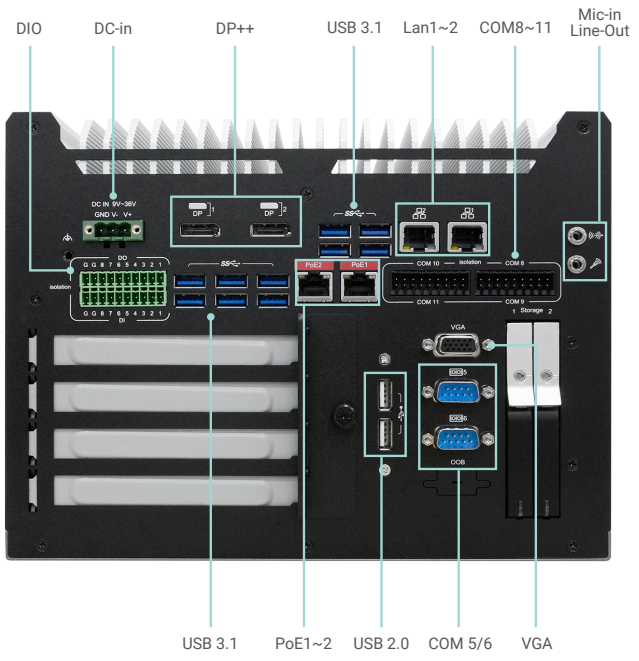
Wide-Temperature
Operating Temperature: -20 to 60°C

IoT Solutions Alliance

PANEL

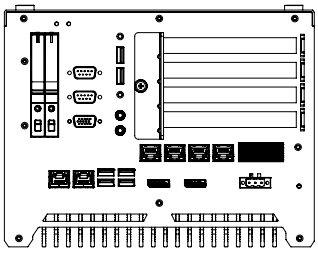


Front View

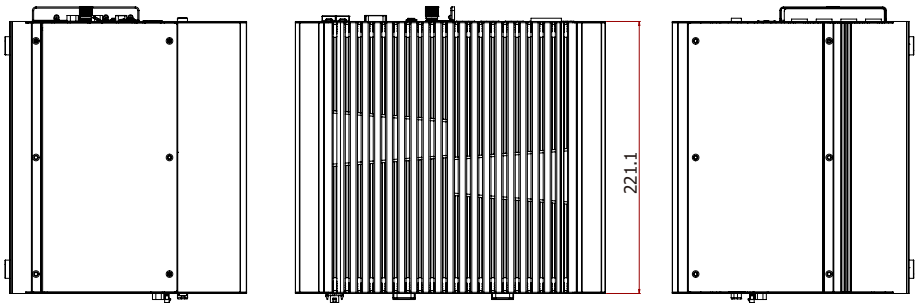


Rear View

DIMENSIONS

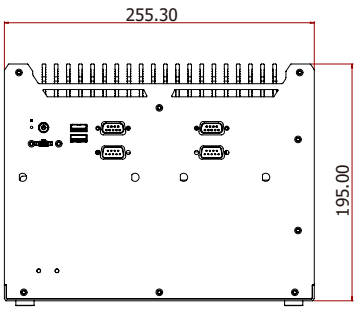


Rear View



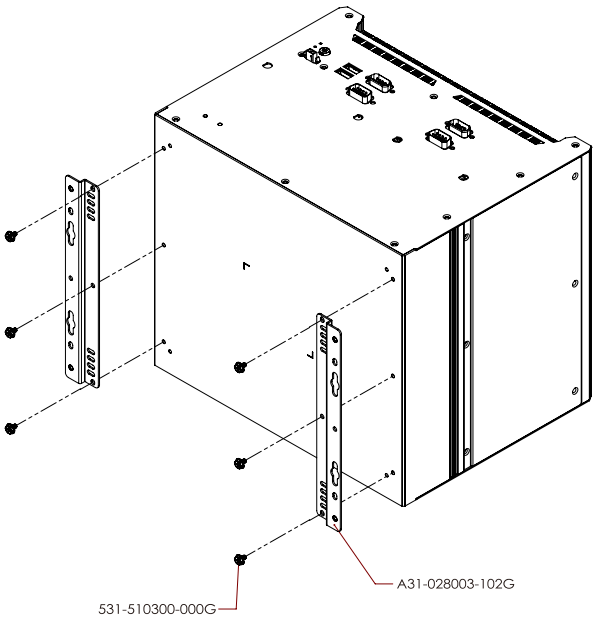
Left View

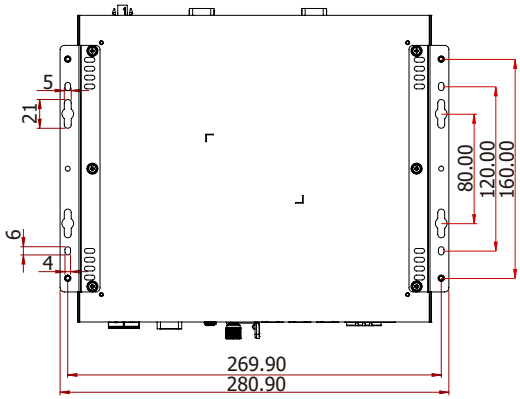
Right View



Front View

WALL MOUNTING





SPECIFICATION

SYSTEM	**Processor**	14th Generation Intel® Core™ Processors, LGA 1700 13th Generation Intel® Core™ Processors, LGA 1700 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 DP++ **VGA:** resolution up to 1920x1200 @ 60Hz **DP++:** resolution up to 4096x2304 @ 60Hz				
	Triple Displays	VGA + 2 DP++				
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**	**EC543-ADS62GA6E-Q**	**EC543-ADS62GA6-Q**	**EC543-ADSAGE4E-Q**	**EC543-ADSAGE4-Q**
		2 x GbE (RJ-45)	2 x GbE (RJ-45) 4 x PoE	6 x GbE (RJ-45)	2 x GbE (RJ-45) 2 x PoE	4 x GbE (RJ-45)
	Serial	**EC543-ADS6881-Q**	**EC543-ADS62GA6E-Q**	**EC543-ADS62GA6-Q**	**EC543-ADSAGE4E-Q**	**EC543-ADSAGE4-Q**
		2 x RS232	2 x RS232	2 x RS232	2 x RS232 4 x RS232/422/485 (w/ 2KV isolation)	2 x RS232 4 x RS232/422/485 (w/ 2KV isolation)
	USB	**EC543-ADS6881-Q**	**EC543-ADS62GA6E-Q**	**EC543-ADS62GA6-Q**	**EC543-ADSAGE4E-Q**	**EC543-ADSAGE4-Q**
		4 x USB 3.1 (Gen2) 2 x USB 2.0	4 x USB 3.1 (Gen2) 2 x USB 3.1 (Gen1) 2 x USB 2.0	4 x USB 3.1 (Gen2) 2 x USB 3.1 (Gen1) 2 x USB 2.0	4 x USB 3.1 (Gen2) 6 x USB 3.1 (Gen1) 2 x USB 2.0	4 x USB 3.1 (Gen2) 6 x USB 3.1 (Gen1) 2 x USB 2.0
	DIO	**EC543-ADS6881-Q**	**EC543-ADS62GA6E-Q**	**EC543-ADS62GA6-Q**	**EC543-ADSAGE4E-Q**	**EC543-ADSAGE4-Q**
		8 bits DIO	32 bits DIO (w/ 2KV isolation)	32 bits DIO (w/ 2KV isolation)	16 bits DIO (w/ 2KV isolation)	16 bits DIO (w/ 2KV isolation)
	Display	1 x VGA 2 x DP++				
	Audio	1 x Line-out 1 x Mic-in				
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 block 2-pin power extension switch connector				
OS SUPPORT	**Microsoft**	Windows 10 IoT Enterprise 64 Bit Windows 11 IoT Enterprise LTSC				
	Linux	Linux (available upon request)				

SPECIFICATION

ENVIRONMENT	**Operating Temperature**	-20 to 60°C (SSD or mSATA)
	Storage Temperature	-20 to 85°C
	Relative Humidity	5 to 95% RH (non-condensing)
MECHANICAL	**Construction**	Metal + Aluminum
	Mounting	Wall mount
	Dimensions (W x H x D)	255.3 x 195 x 221.1mm
	Weight	5.4 kg
STANDARDS AND CERTIFICATIONS	**Shock**	Half sine wave 3G, 11ms, 3 shock per axis
	Vibration	IEC68-2-64
	Certifications	CE, FCC Class A, RoHS, UKCA, BIS, KC

SYSTEM MODELS

Model Name	P/N	CPU	PCH	Expansion Slot	Video output	Audio	COM	USB 3.1	USB 2.0	LAN	PoE	DIO	TPM
EC543-ADS6881-Q	750-EC5431-000G	i5-12500TE	Q670E	1 PCIe x16 1 PCIe x4 1 PCIe x1 1 PCI	2 DP++ 1 VGA	1 Line-out 1 Mic-in	6	4	4	2	0	8 bits	Yes (TPM 2.0)
EC543-ADS62GA6E-Q	750-EC5431-100G						6	6		2	4	32 bits	
EC543-ADS62GA6-Q	750-EC5431-200G						6	6		6	0	32 bits	
EC543-ADSAGE4E-Q	750-EC5431-300G						10	10		2	2	16 bits	
EC543-ADSAGE4-Q	750-EC5431-400G						10	10		4	0	16 bits	
EC543-ADSAGE4-Q	750-EC5431-500G	n/a					10	10		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

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