

EC510-ADS/EC511-ADS

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

Q670E



KEY FEATURES



DDR4

DDR4 SODIMM up to 64GB



PoE

Support up to 4 PoE (EC51x-ADS62GA6E-Q)



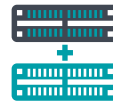
Three Independent Displays

1 VGA + 2 DP++



Support 5G Communication

Support 5G communication



Multiple Expansion

3 M.2 and 1 PCIe or 1 PCI



Wide-Temperature

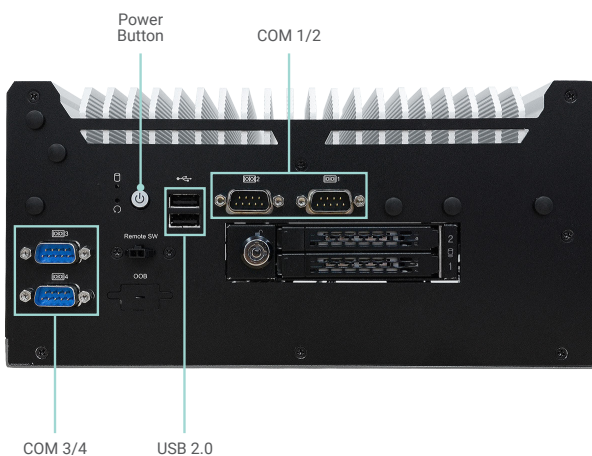
Operating Temperature: -20 to 60°C



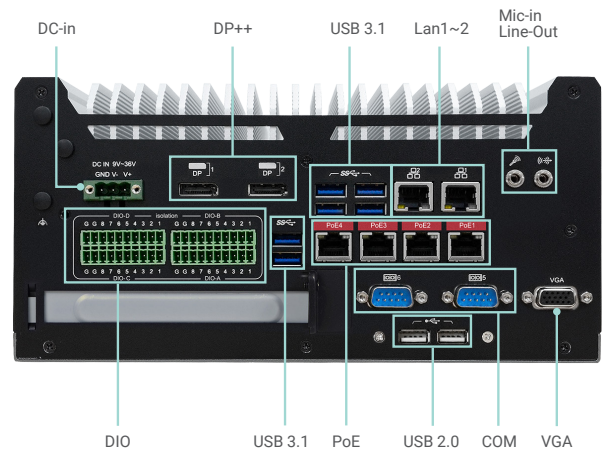
IoT Solutions
Alliance



PANEL

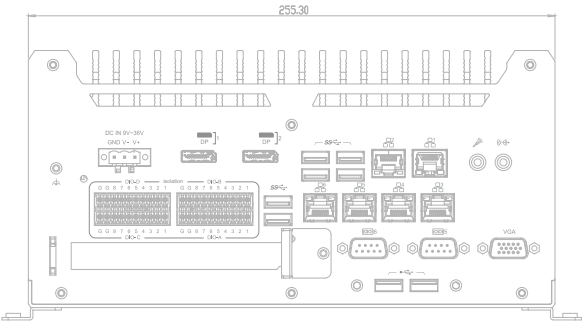


Front View

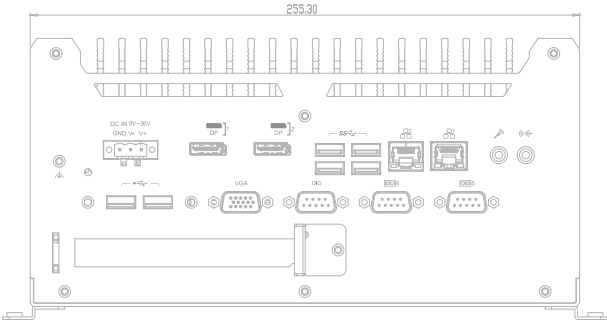


Rear View
EC51x-ADS62GA6E-Q

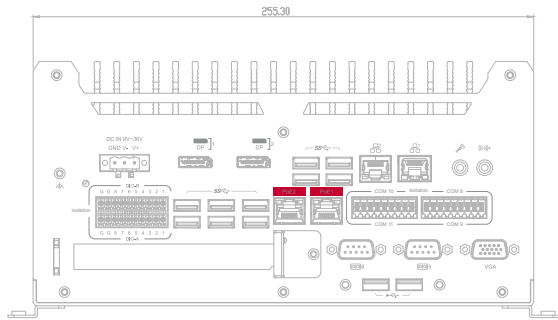
PANEL



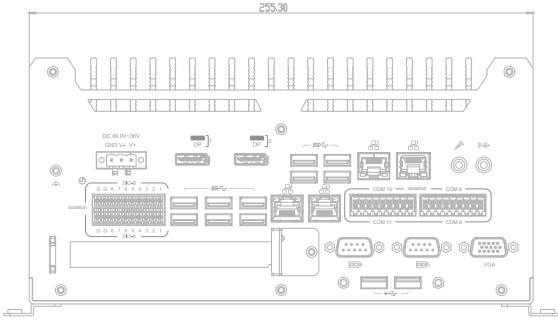
Rear View
EC51x-ADS62GA6-Q



Rear View
EC51x-ADS6881-Q

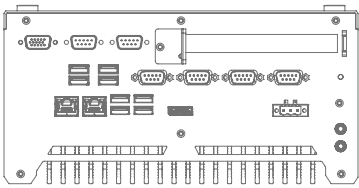


Rear View
EC51x-ADSAGE4E-Q

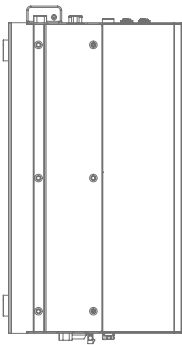


Rear View
EC51x-ADSAGE4-Q

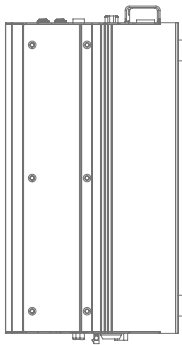
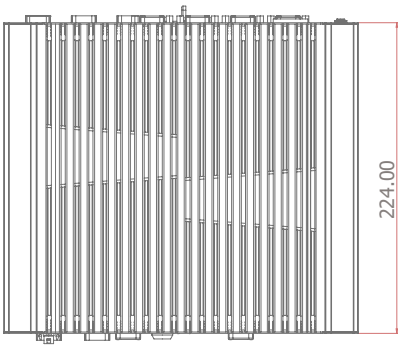
DIMENSIONS



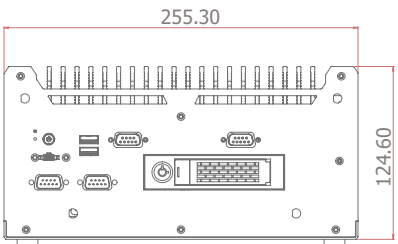
Front View



Left View

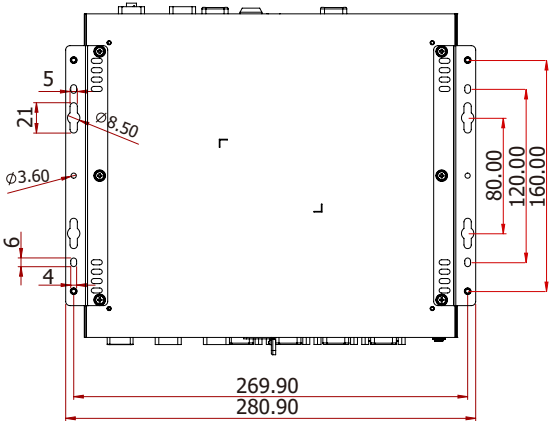
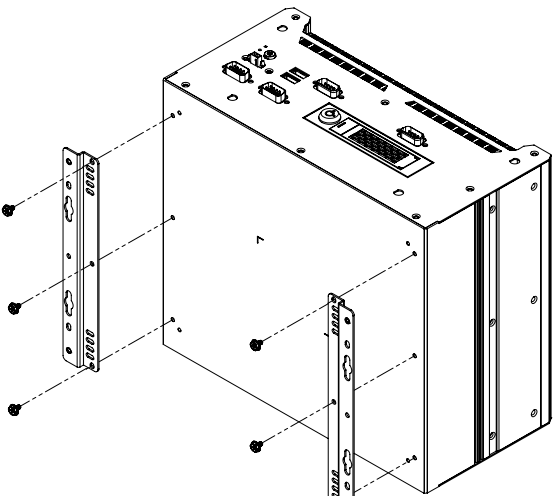


Right View



Rear 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 2400/2666MHz 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		1 VGA + 2 DP++				
STORAGE		Interface	2 x 2.5" SATA 3.0 drive bay (Support RAID 0/1)			
EXPANSION	Interface	[EC510-ADS Series] 1 x M.2 2230 E key (PCIe/USB 2.0) 1 x M.2 2280 M key (PCIe x4 NVMe) 1 x M.2 3042/3052 B key (PCIe/USB 3.0) 1 x PCI slot	[EC511-ADS Series] 1 x M.2 2230 E key (PCIe/USB 2.0) 1 x M.2 2280 M key (PCIe x4 NVMe) 1 x M.2 3042/3052 B key (PCIe/USB 3.0) 1 x PCIe x16 slot			
AUDIO	Audio Codec	ALC888				
ETHERNET	Controller	2 x Intel® i225-IT				
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 (WiFi)				
REAR I/O	Ethernet/PoE	EC51x-ADS62GA6E-Q	EC51x-ADS62GA6-Q	EC51x-ADSAGE4E-Q	EC51x-ADSAGE4-Q	EC51x-ADS6881-Q
		2 x GbE (RJ-45) 4 x PoE (RJ-45)	6 x GbE (RJ-45)	2 x GbE (RJ-45) 2 x PoE (RJ-45)	4 x GbE (RJ-45)	2 x GbE (RJ-45)
	Serial	EC51x-ADS62GA6E-Q	EC51x-ADS62GA6-Q	EC51x-ADSAGE4E-Q	EC51x-ADSAGE4-Q	EC51x-ADS6881-Q
		2 x RS232	2 x RS232	4 x RS232/422/485 (w/ isolation 2KV) 2 x RS232	4 x RS232/422/485 (w/ isolation 2KV) 2 x RS232	2 x RS232
	USB	EC51x-ADS62GA6E-Q	EC51x-ADS62GA6-Q	EC51x-ADSAGE4E-Q	EC51x-ADSAGE4-Q	EC51x-ADS6881-Q
		6 x USB 3.1 (Gen2) 2 x USB 2.0	6 x USB 3.1 (Gen2) 2 x USB 2.0	10 x USB 3.1 (Gen2) 2 x USB 2.0	10 x USB 3.1 (Gen2) 2 x USB 2.0	4 x USB 3.1 (Gen2) 2 x USB 2.0
	DIO	EC51x-ADS62GA6E-Q	EC51x-ADS62GA6-Q	EC51x-ADSAGE4E-Q	EC51x-ADSAGE4-Q	EC51x-ADS6881-Q
		32 bits DIO (w/ isolation 2KV)	32 bits DIO (w/ isolation 2KV)	16 bits DIO (w/ isolation 2KV)	16 bits DIO (w/ isolation 2KV)	8 bits DIO
	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				

SPECIFICATION

POWER	Type	Wide range 9~36V
	Connector	3-pole terminal block 2-pin power remote switch connector
OS SUPPORT	OS Support	Windows 10 IoT Enterprise 64 Bit Windows 11 IoT Enterprise LTSC Linux (available upon request)
ENVIRONMENT	Operating Temperature	-20 to 60°C (2.5" SSD or M.2 SSD)
	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 124.6 x 224mm
	Weight	5.1 kg
STANDARDS AND CERTIFICATIONS	Shock	Half sine wave 3G, 11ms, 3 shock per axis
	Vibration	IEC 60068-2-64
	Certifications	CE, FCC Class A, UKCA, RoHS, BIS

SYSTEM MODELS: EC510-ADS

Model Name	P/N	CPU	PCH	Expansion slot	Video output	Audio	COM	USB 3.1	USB 2.0	LAN	POE	DIO	TPM
EC510-ADS6881-Q	750-EC5103-000G	i5-12500TE	Q670E	PCI	2 DP++ 1 VGA	1 line-out 1 Mic-in	6	4	4	2	0	8bit	Yes (TPM 2.0)
EC510-ADS62GA6E-Q	750-EC5103-100G						6	6		2	4	32bit	
EC510-ADS62GA6-Q	750-EC5103-200G						6	6		6	0	32bit	
EC510-ADSAGE4E-Q	750-EC5103-300G						6	10		2	2	16bit	
EC510-ADSAGE4-Q	750-EC5103-400G						10	10		4	0	16bit	
EC510-ADSAGE4E-Q	750-EC5103-500G	N/A					10	10		2	2	16bit	

SYSTEM MODELS: EC511-ADS

Model Name	P/N	CPU	PCH	Expansion slot	Video output	Audio	COM	USB 3.1	USB 2.0	LAN	POE	DIO	TPM
EC511-ADS6881-Q	750-EC5115-000G	i5-12500TE	Q670E	PCIe	2 DP++ 1 VGA	1 line-out 1 Mic-in	6	4	4	2	0	8bit	Yes (TPM 2.0)
EC511-ADS62GA6E-Q	750-EC5115-100G						6	6		2	4	32bit	
EC511-ADS62GA6-Q	750-EC5115-200G						6	6		6	0	32bit	
EC511-ADSAGE4E-Q	750-EC5115-300G						10	10		2	2	16bit	
EC511-ADSAGE4-Q	750-EC5115-400G						10	10		4	0	16bit	
EC511-ADSAGE4E-Q	750-EC5115-500G	N/A					10	10		2	2	16bit	