

# EC543-CS

Q370



8th/9th Gen Intel® Core™  
Modular-Designed Embedded System

## KEY FEATURES



### DDR4

DDR4 SODIMM up to 64GB



### PoE

Support 4 PoE (EC543-CS6G86E-Q)



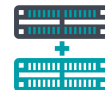
### Three Independent Displays

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

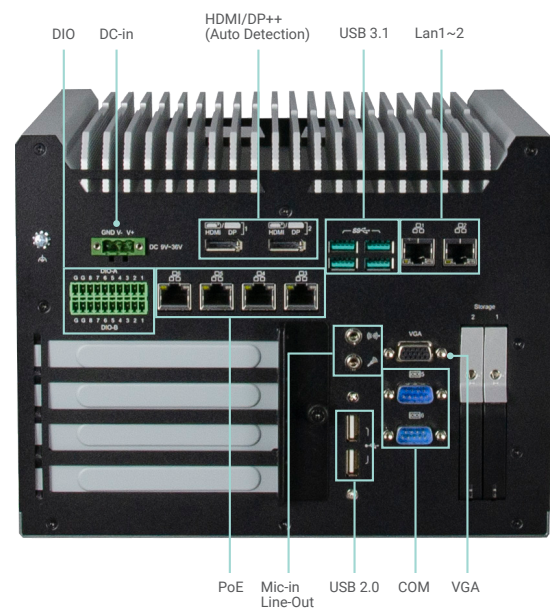
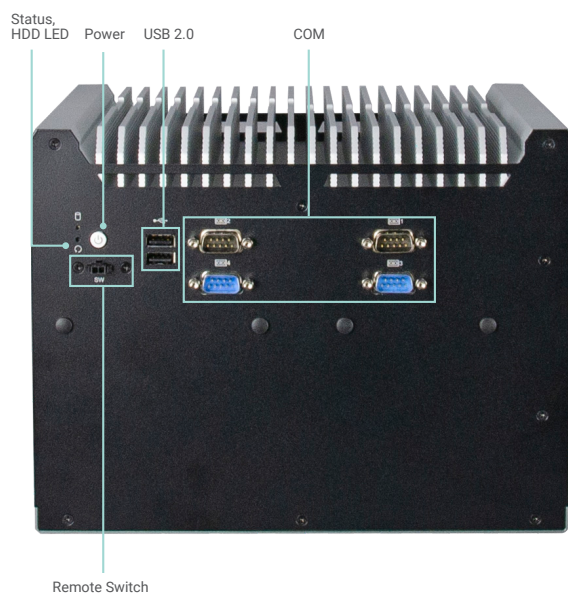


### Wide-Temperature

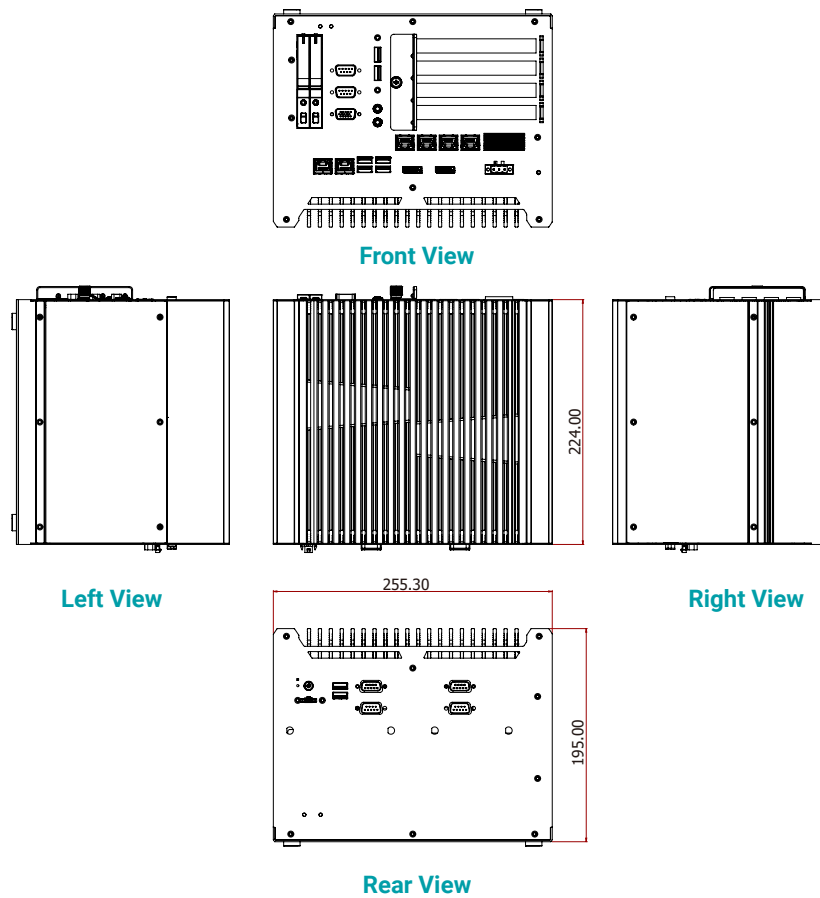
Operating Temperature: -20 to 70°C



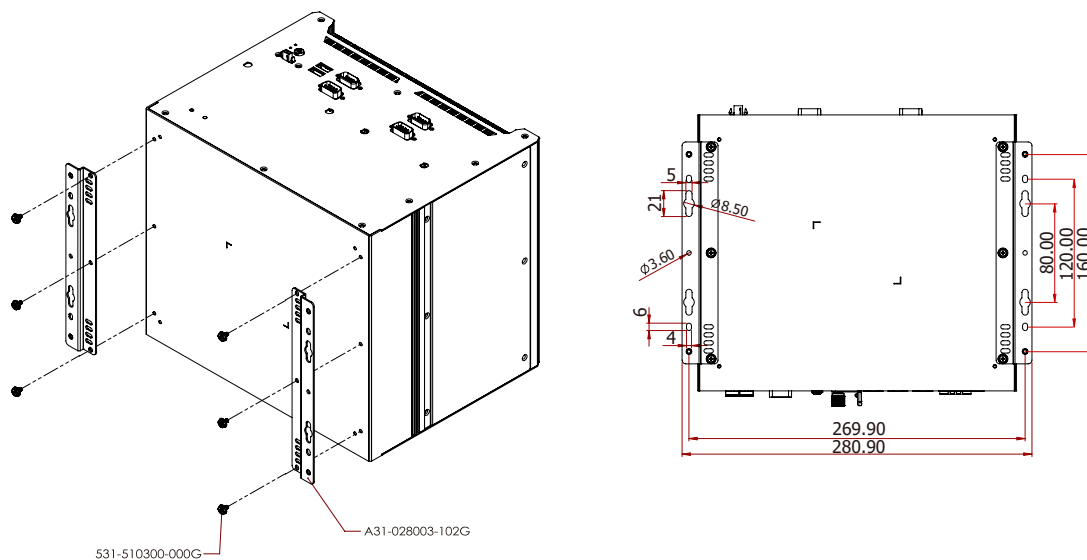
## PANEL



## DIMENSIONS



## WALL MOUNTING



## SPECIFICATION

|                |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                              |
|----------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| SYSTEM         | Processor         | 8th/9th Generation Intel® Core™ Processors, LGA 1151<br>Intel® Core™ i7-9700TE , Octa Cores, 12M Cache, up to 3.8 GHz, 35W<br>Intel® Core™ i5-9500TE , Hexa Cores, 9M Cache, up to 3.6 GHz, 35W<br>Intel® Core™ i3-9100TE, Quad Cores, 6M Cache, up to 3.2 GHz, 35W<br>Intel® Core™ i7-8700T Processor, Hexa Core, 12M Cache, 2.4GHz (4GHz), 35W<br>Intel® Core™ i5-8500T Processor, Hexa Core, 9M Cache, 2.1GHz (3.5GHz), 35W<br>Intel® Core™ i3-8100T Processor, Quad Core, 6M Cache, 3.1GHz, 35W<br>Intel® Pentium® Processor G5400T, Dual Core, 4M Cache, 3.1GHz, 35W<br>Intel® Celeron® Processor G4900T, Dual Core, 2M Cache, 3.1GHz, 35W |                                                                                                                              |
|                | Chipset           | Intel® Q370 Chipset                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                              |
|                | Memory            | Two 260-pin DDR4 2400/2666MHz SODIMM up to 64GB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                              |
|                | BIOS              | AMI SPI 128Mbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                              |
|                | Controller        | Intel® HD Graphics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                              |
| GRAPHICS       | Feature           | OpenGL up to 5.0, DirectX 11, OpenCL 2.1<br>HW Decode: HEVC/H.265, H.264, M/JPEG, MPEG2, VC1/WMV9, VP8 (8-bit), VP9 (10-bit)<br>HW Encode: HEVC/H.265, M/JPEG, MPEG2, VP8                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                              |
|                | Display           | 1 x VGA<br>2 x HDMI/DP++ (auto detection)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | VGA: resolution up to 1920x1200 @ 60Hz<br>HDMI: resolution up to 4096x2160 @ 30Hz<br>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<br>support RAID 0/1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                              |
| EXPANSION      | Interface         | 1 x M.2 2230 E key (PCIe/USB 2.0)<br>1 x M.2 2280 M key (PCIe x4 NVMe/SATA)<br>1 x M.2 3042/3052 B key (PCIe/USB 3.0)<br>1 x PCI slot<br>3 x PCIe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                              |
| AUDIO          | Audio Codec       | ALC888                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                              |
| ETHERNET       | Controller        | 1 x Intel® I210AT PCIe (10/100/1000Mbps)<br>1 x Intel® I219LM with iAMT11.0 PCIe (10/100/1000Mbps) (only Core i7/i5 supports iAMT)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                              |
|                | Interface         | RJ-45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                              |
| LED            | Indicators        | 1 x Status LED<br>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<br>1 x Reset button                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                              |
|                | Antenna           | 4 x Antenna hole (WiFi)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                              |
| REAR I/O       | Ethernet/PoE      | -EC543-CS6G86E-Q<br>2 x GbE (RJ-45)<br>4 x PoE<br>-EC543-CS6G86-Q<br>6 x GbE (RJ-45)<br>-EC543-CS6861-Q/EC543-CS98A1-Q<br>2 x GbE (RJ-45)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                              |
|                | COM               | -EC543-CS6861-Q/EC543-CS6G86E-Q/EC543-CS6G86-Q<br>2 x RS232<br>-EC543-CS98A1-Q<br>3 x RS232/422/485<br>2 x RS232                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                              |
|                | USB               | -EC543-CS6861-Q/EC543-CS6G86E-Q/EC543-CS6G86-Q<br>4 x USB 3.1(Gen.2)<br>2 x USB2.0<br>-EC543-CS98A1-Q<br>4 x USB 3.1(Gen.2)<br>4 x USB 3.1(Gen.1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                              |
|                | DIO               | -EC543-CS6G86E-Q/EC543-CS6G86-Q<br>16 bits DIO<br>-EC543-CS6861-Q/EC543-CS98A1-Q<br>8 bits DIO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                              |
|                | Display           | 1 x VGA<br>2 x HDMI/DP++ (auto detection)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                              |
|                | Audio             | 1 x Line-out<br>1 x Mic-in                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                              |
|                |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                              |
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|                |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                              |
|                |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                              |
| 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<br>2-pin power extension switch connector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                              |
| OS SUPPORT     | OS Support        | Windows 10 IoT Enterprise 64 Bit<br>Linux (available upon request)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                              |

## SPECIFICATION

|                              |                        |                                           |
|------------------------------|------------------------|-------------------------------------------|
| ENVIRONMENT                  | Operating Temperature  | -20 to 70°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 224mm                       |
|                              | 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                           |

## PACKING LIST

|                                                    |
|----------------------------------------------------|
| 1 EC543-CS 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 |

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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