

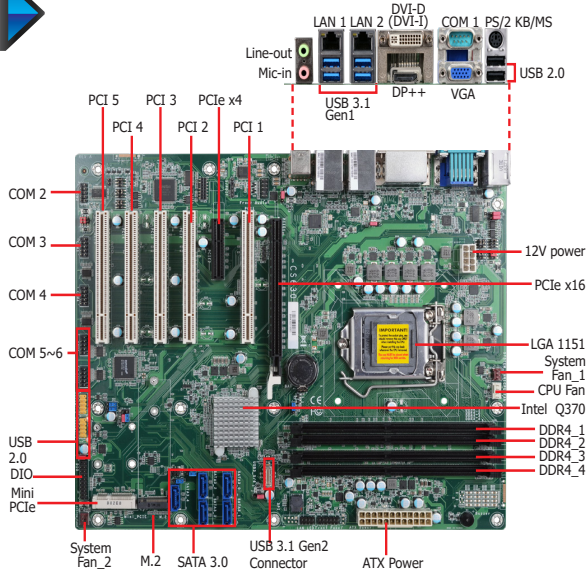


**9th/8th Gen Intel® Core™ Processor  
ATX**



**CS630-Q370**

Desktop



**Features**

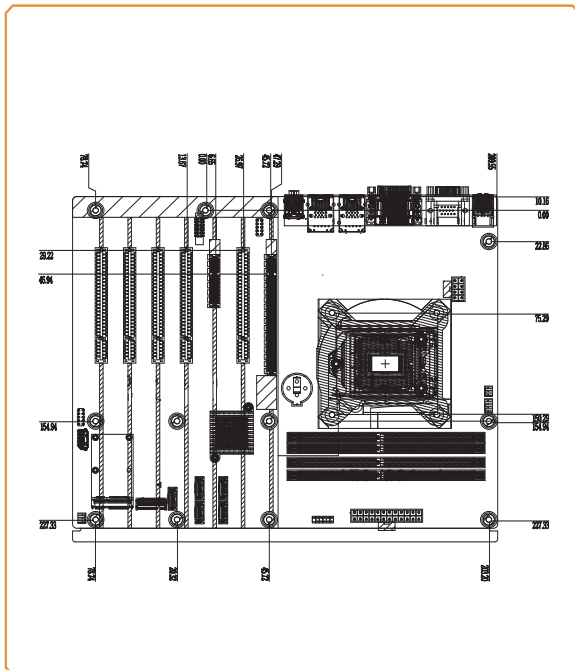
- 4 DDR4 DIMM up to 128GB
- Three display ports: VGA, DVI-D, DP++ Supports three independent displays
- DVI-D: resolution up to 1920x1200 @ 60Hz  
DP++ resolution up to 4096x2160 @ 60Hz
- Multiple expansion:  
1 PCIe x16 (Gen 3), 1 PCIe x4 (Gen 3), 5 PCI, 1 x mPCIe 1 M.2 M key (support Optane Memory)
- Rich I/O: 2 Intel GbE, 6 COM, 4 USB 3.1 Gen1, 2 USB 3.1 Gen2, 6 USB 2.0



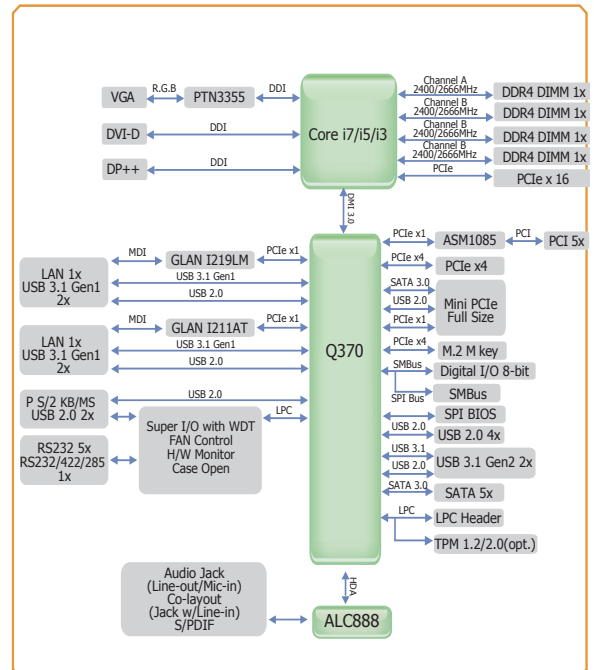
**Ordering Information**

Model Name	P/N	Memory	GbE	RS-232/422/485	RS-232	USB 3.1 Gen 1	USB 3.1 Gen 2	USB 2.0	Power	Thermal	Temp.
<b>CS630-Q370CRM</b>	770-6301-100G	4 DDR4 DIMM	2	2	4	4	2	6	24-pin ATX	Active	0 to 60°C

**Mechanical Drawing**



**Block Diagram**





**Specifications**

<b>SYSTEM</b>	<b>Processor</b>	8th Generation Intel® Core™ /Pentium®/Celeron® LGA 1151 Socket Processors: Intel® Core™ i7-8700K (6 Cores, 12M Cache, up to 4.7 GHz); 95W Intel® Core™ i7-8700 (6 Cores, 12M Cache, up to 4.6 GHz); 65W Intel® Core™ i7-8700T (6 Cores, 12M Cache, up to 4.0 GHz); 35W Intel® Core™ i5-8500 (6 Cores, 9M Cache, up to 4.1 GHz); 65W Intel® Core™ i5-8500T (6 Cores, 9M Cache, up to 3.5 GHz); 35W Intel® Core™ i3-8100 (4 Cores, 6M Cache, 3.6 GHz); 65W Intel® Core™ i3-8100T (4 Cores, 6M Cache, to 3.1 GHz); 35W Intel® Pentium® G5400 (2 Cores, 4M Cache, 3.7 GHz); 58W Intel® Pentium® G5400T (2 Cores, 4M Cache, 3.1 GHz); 35W Intel® Celeron® G4900 (2 Cores, 2M Cache, 3.1 GHz); 54W Intel® Celeron® G4900T (2 Cores, 2M Cache, 2.9 GHz); 35W 9th Generation Intel® Core™ LGA 1151 Socket Processors: Intel® Core™ i7-9700TE (8 Cores, 12M Cache, up to 3.8 GHz); 35W Intel® Core™ i5-9500E (6 Cores, 9M Cache, up to 4.2 GHz); 65W Intel® Core™ i5-9500TE (6 Cores, 9M Cache, up to 3.6 GHz); 35W Intel® Core™ i3-9100E (4 Cores, 6M Cache, 3.7 GHz); 65W Intel® Core™ i3-9100TE (4 Cores, 6M Cache, to 3.2 GHz); 35W		
	<b>Chipset</b>	Intel® Q370 Chipset		
	<b>Memory</b>	Four 288-pin DIMM up to 128GB	Dual Channel DDR4 2400/2666MHz	
	<b>BIOS</b>	AMI SPI 128Mbit		
	<b>GRAPHICS</b>	<b>Controller</b>	Intel® HD Gen 9 Graphics	
	<b>Feature</b>	OpenGL 5.0, DirectX 12, OpenCL 2.1 HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9 HW Encode: MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9		
	<b>Display</b>	1 x VGA 1 x DVI-I (DVI-D signal) 1 x DP++	VGA: resolution up to 1920x1200 @ 60Hz DVI-D: resolution up to 1920x1200 @ 60Hz DP++: resolution up to 4096x2160 @ 24Hz	
	<b>Triple Displays</b>	VGA + DVI-I (DVI-D signal) + DP++		
<b>EXPANSION</b>	<b>Interface</b>	1 x PCIe x16 (Gen 3) 5 x PCI 1 x M.2 2260/2280 M key (PCIe Gen3 x 4 NVMe)	1 x PCIe x4 (Gen 3) 1 x mPCIe (support mSATA)	
<b>AUDIO</b>	<b>Audio Codec</b>	Realtek ALC888		
<b>ETHERNET</b>	<b>Controller</b>	1 x Intel® I211AT PCIe (10/100/1000Mbps) 1 x Intel® I219LM Lan Phy with iAMT (10/100/1000Mbps) (only Core i7/i5 supports iAMT)		
<b>REAR I/O</b>	<b>Ethernet</b>	2 x GbE (RJ-45)		
	<b>USB</b>	4 x USB 3.1 (Gen1)	2 x USB 2.0	
	<b>Serial</b>	1 RS-232/422/485 (RS-232 w/power) (DB-9)		
	<b>PS/2</b>	1 x PS/2 (mini-DIN-6)		
	<b>Display</b>	1 x VGA 1 x DP++	1 x DVI-I (DVI-D signal)	
	<b>Audio</b>	1 x Line-out, 1 x Mic-in, 1 x Line-in (opt., MOQ required)		
<b>INTERNAL I/O</b>	<b>Serial</b>	1 x RS-232/422/485 (RS-232 w/ power) (2.54mm pitch) 4 x RS-232 (2.54mm pitch)		
	<b>USB</b>	2 x USB 3.1 Gen2 (2.00mm pitch) 4 x USB 2.0 (2.54mm pitch)		
	<b>Audio</b>	1 x S/PDIF		
	<b>SATA</b>	5 x SATA 3.0 (up to 6Gb/s)	RAID 0/1/5/10	
	<b>DIO</b>	1 x 8-bit DIO		
	<b>LPC</b>	1 x LPC		
	<b>SMBus</b>	1 x SMBus		
<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>	Infineon TPM2.0/1.2 (opt., MOQ required)		
<b>POWER</b>	<b>Type</b>	ATX		
	<b>Connector</b>	8-pin ATX 12V power	24-pin ATX power	
	<b>Consumption</b>	TBD		
	<b>RTC Battery</b>	CR2032 Coin Cell		
<b>OS SUPPORT</b>		Windows 10 IoT Enterprise 64-bit	Linux	
<b>ENVIRONMENT</b>	<b>Temperature</b>	Operating: 0 to 60°C Storage: -30 to 60°C with RTC Battery; -40 to 85°C without RTC Battery		
	<b>Humidity</b>	Operating: 5 to 90% RH Storage: 5 to 90% RH		
	<b>MTBF</b>	534,806 hrs @ 25°C; 301,144 hrs @ 45°C; 187,432 hrs @ 60°C Calculation model: Telcordia Issue 4 Environment: GB, GC – Ground Benign, Controlled		
<b>MECHANICAL</b>	<b>Dimensions</b>	ATX Form Factor	305mm (12") x 244mm (9.6")	
	<b>Height</b>	PCB: TBD	Top Side: TBD Bottom Side: TBD	
<b>CERTIFICATIONS</b>		CE, FCC, RoHS, KCC		

**Packing List**

• 1 CS630-Q370 motherboard	
• 1 COM port cables (W/Bracket, Length: 300mm, 2 x COM ports)	A81-015026-023G
• 1 Serial ATA data cable (Length: 500mm)	332-553001-005G
• 1 I/O shield	A49-KD6000-000G

**Optional Items**

• USB 2.0 port cable (Length: 350mm)	A81-001066-016G
• USB 3.1 Gen2 port cable (Length: TBD)	A81-001075-017G
• D-SUB cable (W/Bracket, Length: 300mm, 2 x COM ports)	A81-015026-023G
• Serial ATA data cable (W/Lock, Length: 500mm)	332-553001-005G
• Thermal solution (For 35W, Height: 37.3mm)	A71-101107-000G
• Thermal solution (For 65W, Height: 72.8mm)	552-200049-000G
• Thermal solution (For 95W, Height: 69.3mm)	761-103001-000G
• DP to HDMI dongle	612-D2H13M-000G

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