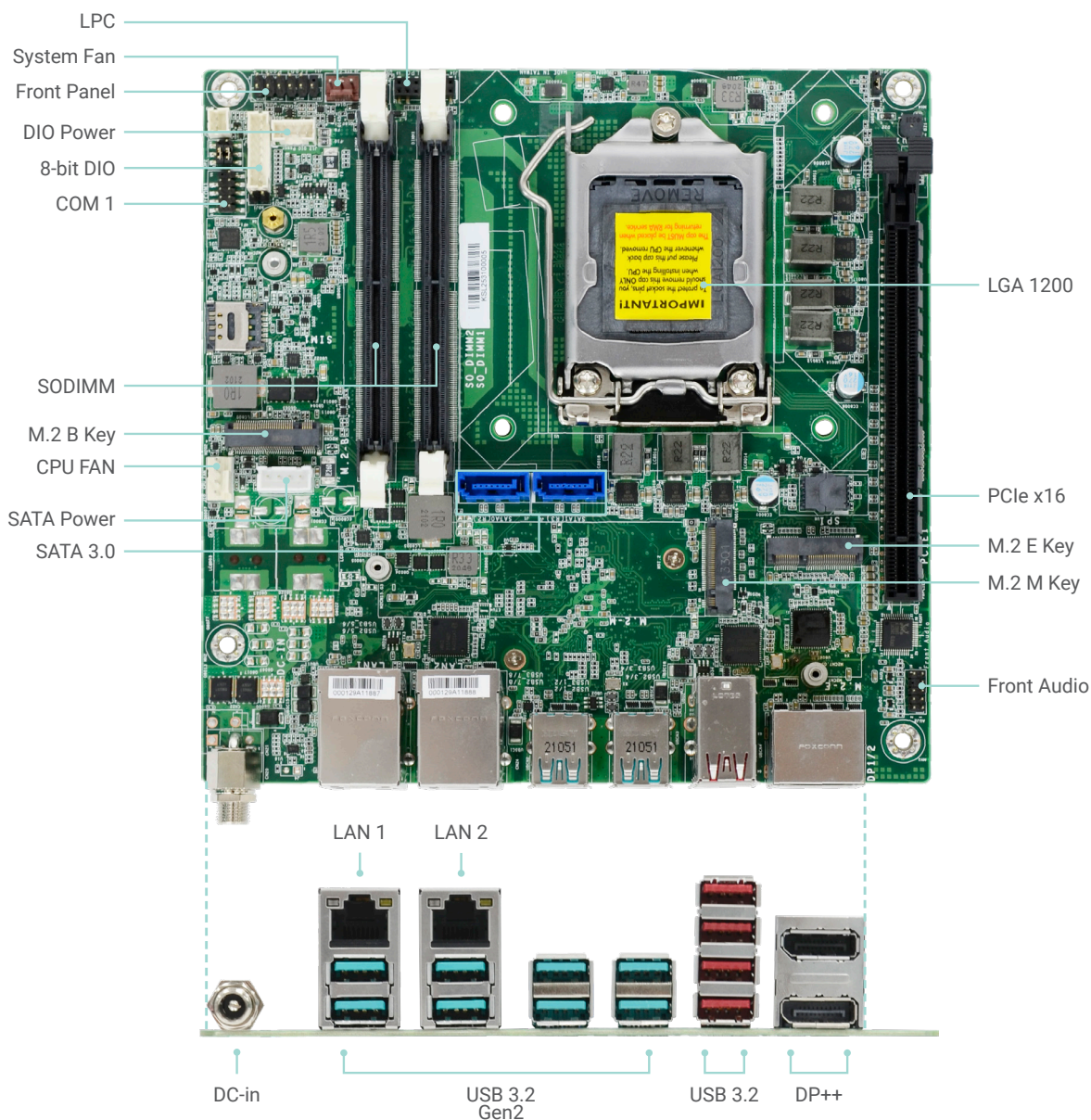


CMS171/CMS173-Q470E

Desktop

10th Gen Intel® Core™
Mini-ITX



Top View

KEY FEATURES



DDR4

2 DDR4 SODIMM up to 64GB



4K High Resolution

Supports 4K/ 2K resolution



Dual Displays

2 DP++



Multiple Expansion

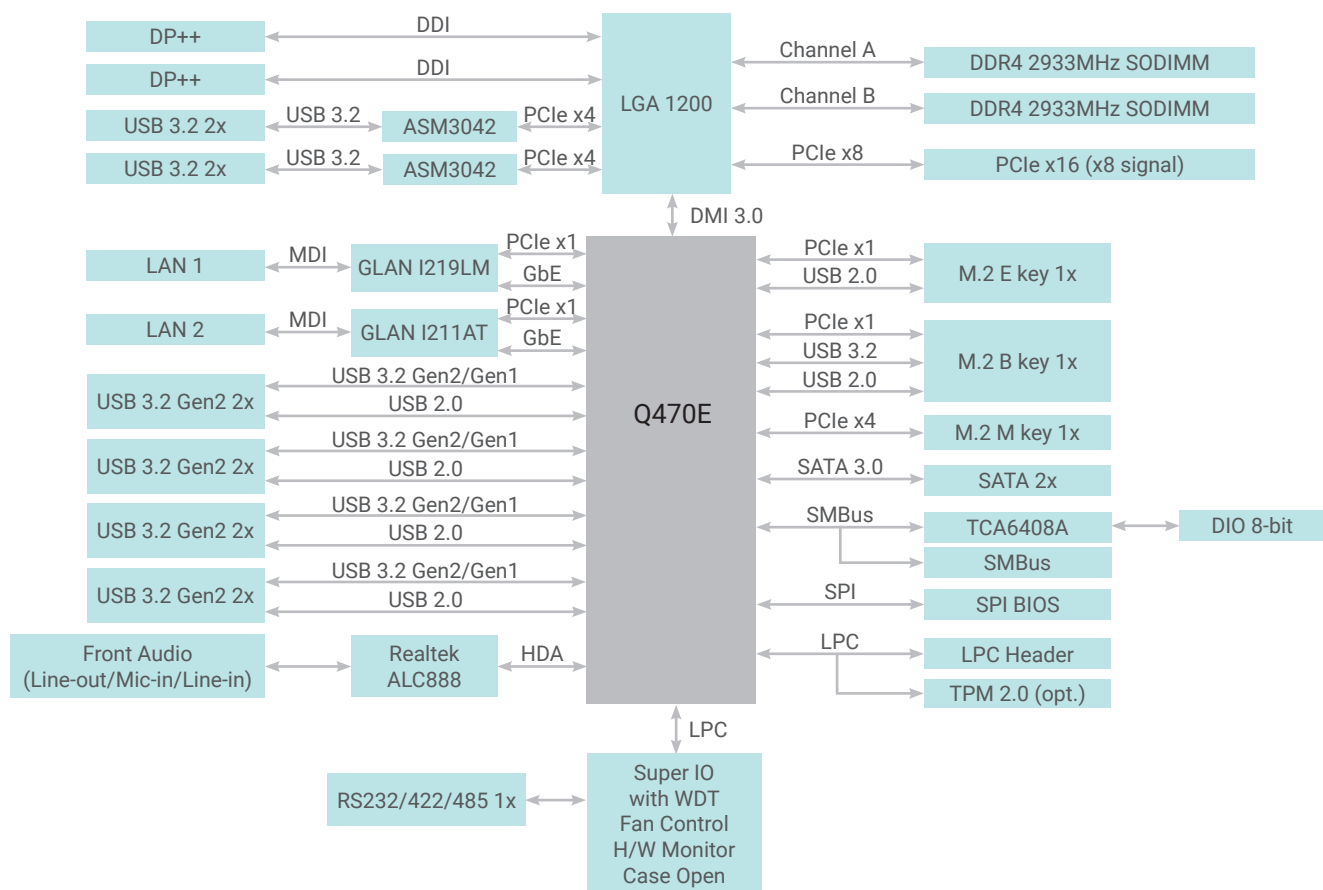
1 PCIe x16 (x8 signal),
1 M.2 E Key, 1 M.2 M Key,
1 M.2 B Key



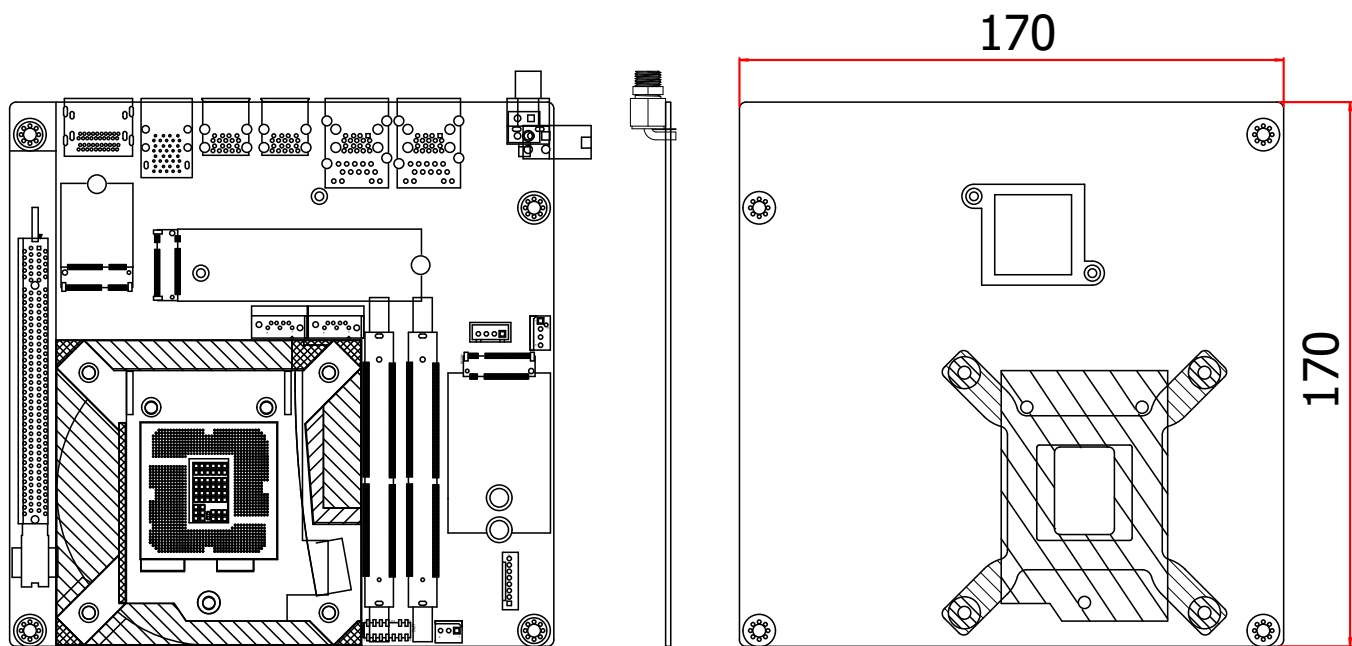
Rich I/O

2 Intel GbE, 8 USB 3.2 Gen2, 4 USB 3.2, 2 COM, 2 SATA 3.0, 1 SATA Power

BLOCK DIAGRAM



MECHANICAL DRAWING



SPECIFICATION

Model Name		CMS171/CMS173-Q470E
SYSTEM	Processor	10th Gen Intel® LGA 1200 Socket Processors, TDP support up to 65W Intel® Xeon® W-1290TE (10 Cores, 20M Cache, up to 4.5 GHz); 35W Intel® Xeon® W-1270TE (8 Cores, 16M Cache, up to 4.4 GHz); 35W Intel® Xeon® W-1250TE (6 Cores, 12M Cache, up to 3.8 GHz); 35W Intel® Core™ i9-10900E (10 Cores, 20M Cache, up to 4.7 GHz); 65W Intel® Core™ i9-10900TE (10 Cores, 20M Cache, up to 4.5 GHz); 35W Intel® Core™ i7-10700E (8 Cores, 16M Cache, up to 4.5 GHz); 65W Intel® Core™ i7-10700TE (8 Cores, 16M Cache, up to 4.4 GHz); 35W Intel® Core™ i5-10500E (6 Cores, 12M Cache, up to 4.2 GHz); 65W Intel® Core™ i5-10500TE (6 Cores, 12M Cache, up to 3.7 GHz); 35W Intel® Core™ i3-10100E (4 Cores, 6M Cache, 3.8 GHz); 65W Intel® Core™ i3-10100TE (4 Cores, 6M Cache, to 3.6 GHz); 35W Intel® Pentium® G6400E (2 Cores, 4M Cache, 3.8 GHz); 58W Intel® Celeron® G5900E (2 Cores, 2M Cache, 3.2 GHz); 58W Intel® Celeron® G5900TE (2 Cores, 2M Cache, 3.0 GHz); 35W
	Chipset	Intel® Q470E Chipset
	Memory	Two 260-pin SODIMM up to 64GB (Non-ECC) Dual Channel DDR4 2933MHz
	BIOS	AMI SPI 256Mbit
	Controller	Intel® UHD Graphics 630 (only Pentium G5400/Celeron G4900 support 610)
GRAPHICS	Feature	OpenGL 4.5, DirectX 12, OpenCL 2.1 HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9 HW Encode: AVC/H.264, MPEG2, JPEG, HEVC/H265, VP8, VP9
	Display	2 x DP++ DP: resolution up to 4096 x 2106 @ 60Hz
	Dual Displays	2 x DP++
	Interface	1 x PCIe x16 (Gen 3) (x8 signal) 1 x M.2 2230 E key (PCIe/USB 2.0/Intel CNVi support) for WiFi6 1 x M.2 2280 M key (PCIe x4 Gen3 NVMe/SATA/Intel Optane Memory support) for SSD 1 x M.2 3042/3052 B key (PCIe/USB3.0) for 4G LTE/5G with SIM holder
AUDIO	Audio Codec	Realtek ALC888
ETHERNET	Controller	1 x Intel® I219LM PHY with iAMT12 and vPro (10/100/1000Mbps) (Core i7/i5 supports iAMT) 1 x Intel® I211AT PCIe (10/100/1000Mbps)
REAR I/O	Ethernet	2 x GbE (RJ-45)
	Serial	1 x RS-232/422/485 (RS-232 w/ power) (DB-9)
	USB	8 x USB 3.2 Gen2 4 x USB 3.2
	Display	2 x DP++
INTERNAL I/O	Serial	1 x RS-232/422/485 (RS-232 w/ power) (2.0mm pitch)
	Audio	1 x Front Audio Header
	SATA	2 x SATA 3.0 (up to 6Gb/s) 1 x SATA Power RAID 0/1
	DIO	1 x 8-bit DIO
	LPC	1 x LPC
	SMBus	1 x SMBus
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds
SECURITY	TPM	Infineon TPM1.2/2.0 (optional)
POWER	Type	CMS171: Single 12V +/-10% DC CMS173: Wide Range 15~36V
	Connector	DC-in Jack
	Consumption	TBD
	RTC Battery	CR2032 Coin Cell
OS SUPPORT	Microsoft	Windows 10 IoT Enterprise LTSC 2019 RS5
	Linux	Ubuntu 20.04
ENVIRONMENT	Temperature	Operating: -5 to 65°C Storage: -40 to 85°C
	Humidity	Operating: 5 to 90% RH Storage: 5 to 90% RH
	MTBF	TBD
MECHANISM	Dimensions	Mini-ITX Form Factor 170mm (6.7") x 170mm (6.7")
	Height	PCB: 1.6mm Top Side: TBD Bottom Side: TBD
CERTIFICATION	Certification	CE, FCC, RoHS, UKCA

ORDERING INFORMATION

Model Name	P/N	Display	GbE	USB 3.2	Power	Temp.
CMS171-Q470E	770-CMS1711-000G	2 DP++	2	12	12VDC	-5 to 65°C
CMS173-Q470E	770-CMS1731-000G				15-36VDC	

PACKING LIST

• 1 CMS171/CMS173 motherboard	
• 1 Serial ATA data cable w/lock (Length: 500mm)	332-553001-005G
• 1 Serial ATA power Y cable (Length: 300mm, 1 x SATA POWER 15P*2 TO 4P HSG)	A81-002044-016G
• 1 COM port cable (Length: 250mm, 1 x COM port)	A81-015011-001G

OPTIONAL ITEMS

• 1 COM port cable (Length: 250mm, 1 x COM port)	A81-015011-001G
• USB 2.0 port cable (Length: 350/398mm)	A81-001066-016G
• USB 3.2 Gen1 port cable (Length: 320mm)	A81-001052-023G
• USB 3.2 Gen2 port cable (Length: 350mm)	A81-001075-017G
• DP to HDMI Dongle	612-D2H13M-000G