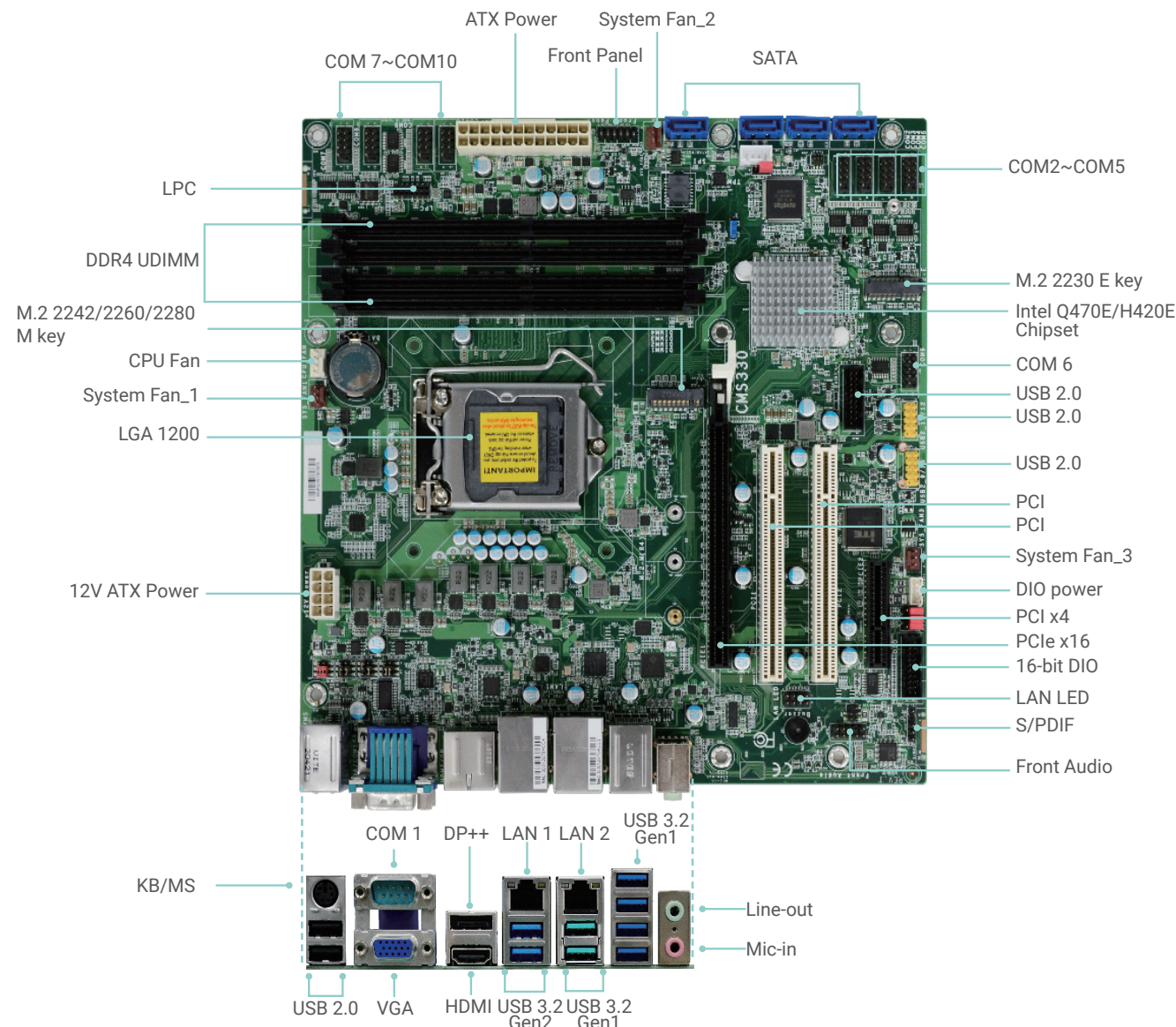


CMS330-Q470E/H420E

10th Gen Intel® Core™
Desktop
microATX



Top View

*The photo above refers to CMS330-Q470E.

KEY FEATURES



DDR4

Q470E: 2 DDR4 UDIMM up to 128GB
H420E: 2 DDR4 UDIMM up to 64GB



4K High Resolution

Supports 4K/ 2K resolution



Multiple Displays

Q470E: VGA + DP++ + HDMI
H420E: VGA + DP++, VGA + HDMI, DP++ + HDMI



Multiple Expansion

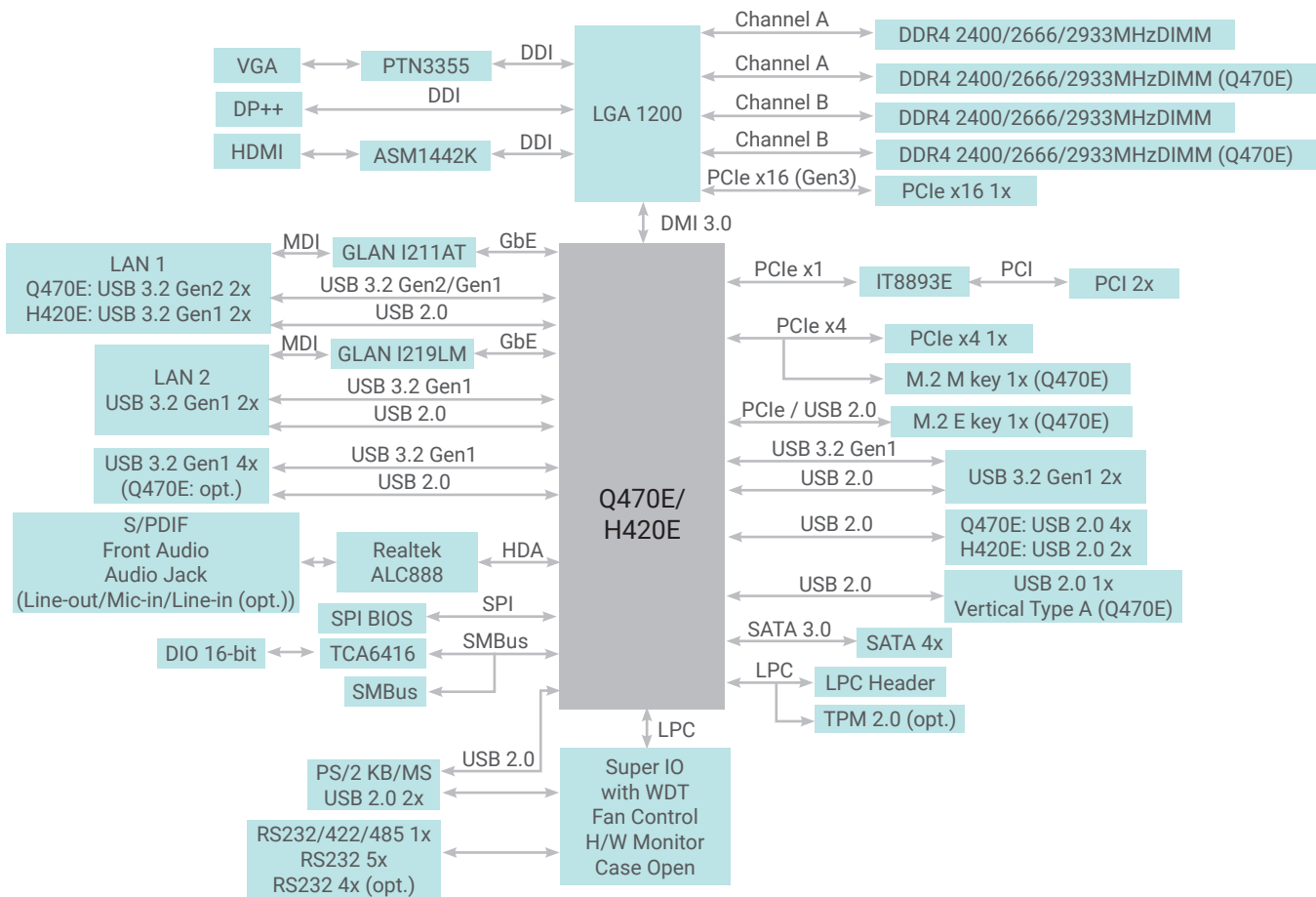
1 PCIe x16, 1 PCIe x4, 2 PCI, M.2 M & E key (Q470E)



Rich I/O

2 GbE, 6 COM, 4 SATA, Q470E: up to 17 USB
H420E: up to 10 USB

BLOCK DIAGRAM



MECHANICAL DRAWING



SPECIFICATION

System	Processor	10th Generation Intel® LGA 1200 Socket Processors, TDP support up to 125W 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® Pentium® G6400TE (2 Cores, 4M Cache, 3.2 GHz); 35W 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/H420E Chipset	
	Memory	Q470E: Four 288-pin Non-ECC UDIMM up to 128GB H420E: Two 288-pin Non-ECC UDIMM up to 64GB Dual Channel DDR4 2400/2666/2933MHz	
	BIOS	AMI SPI 256Mbit	
	Controller	Intel® HD Gen 9 Graphics	
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: MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9	
	Display	1 x VGA 1 x DP++ 1 x HDMI 1.4b	VGA: resolution up to 1920x1200 @ 60Hz DP++: resolution up to 4096x2160 @ 60Hz HDMI: resolution up to 4096x2160 @ 24Hz
	Multiple Displays	Q470E: VGA + DP++ + HDMI H420E: VGA + DP++ / VGA + HDMI / DP++ + HDMI	
	Interface	1 x PCIe x16 (Gen 3) 1 x PCIe x4 (Gen 3) 2 x PCI Q470E: 1 x M.2 2242/2260/2280 M key (PCIe Gen3 x4 NVMe/SATA/Intel® Optane Memory and intel RST support) 1 x M.2 2230 E key (USB 2.0/PCIe)	
	Audio Codec	Realtek ALC888	
Ethernet	Controller	1 x Intel® I211AT PCIe (10/100/1000Mbps) 1 x Intel® I219LM PHY with iAMT12.0 (10/100/1000Mbps) (Q470E: Core i9/ i7/i5 supports iAMT)	
Rear I/O	Ethernet	2 x GbE (RJ-45)	
	Serial	1 x RS-232/422/485 (RS-232 w/ power) (DB-9)	
	USB	2 x USB 3.2 (Q470E: Gen2; H420E: Gen1) 2 x USB 3.2 Gen1 (Q470E: Up to 6 x USB 3.2 Gen1, MOQ required) 2 x USB 2.0	
	Display	1 x VGA 1 x DP++ 1 x HDMI	
	PS/2	1 x PS/2 (mini-DIN-6)	
	Audio	1 x Line-out 1 x Mic-in	1 x Line-in (opt., MOQ required)
	Internal I/O	5 x RS-232 (2.54mm pitch) (Up to 9 x RS-232, MOQ required) 2 x USB 3.2 Gen 1 Q470E: 4 x USB 2.0 (2.54mm pitch, Colay vertical Type A, opt.: MOQ required) H420E: 2 x USB 2.0 (2.54mm pitch, Colay vertical Type A, opt.: MOQ required) 1 x USB 2.0 Vertical Type A (Q470E default SKU)	
Internal I/O	Audio	1 x Front Audio Header 1 x S/PDIF	
	SATA	4 x SATA 3.0 (up to 6Gb/s, SATA 3) (Q470E: RAID 0/1/5/10)	
	DIO	1 x 16-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 TPM2.0 (opt., MOQ required)	
Power	Type	ATX	
	Connector	8-pin ATX 12V power 24-pin ATX power	
	Consumption	TBD	
	RTC Battery	CR2032 Coin Cell	

OS Support	Microsoft	Windows 10 IoT Enterprise 64-bit
	Linux	Linux Ubuntu 20.04
Environment	Temperature	Operating: -5 to 65°C
		Storage: -30 to 60°C with RTC Battery; -40 to 85°C without RTC Battery
	Humidity	Operating: 5 to 95% RH
		Storage: 5 to 95% RH
	MTBF	TBD
Mechanism	Dimensions	micro ATX Form Factor
		244mm (9.6") x 244mm (9.6")
	Height	PCB: 1.6mm
Top Side: TBD Bottom Side: TBD		
Certifications	Certifications	CE, FCC Class B

PACKING LIST

1 CMS330 motherboard	
1 COM port cables (Length: 300mm, 2 x COM ports)	A81-015026-023G
1 Serial ATA data cable (Length: 500mm)	332-553001-005G
1 I/O shield	TBD