



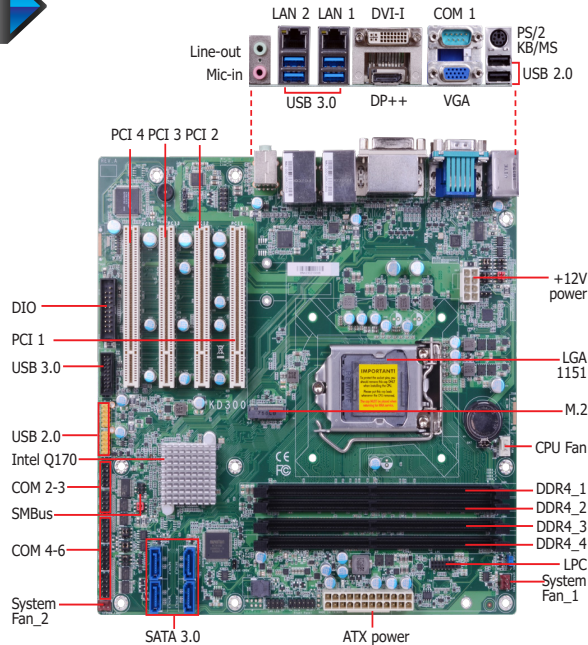
6th/7th Gen Intel® Core™ Processor microATX



KD300-Q170

Desktop

Q170



▶ Features

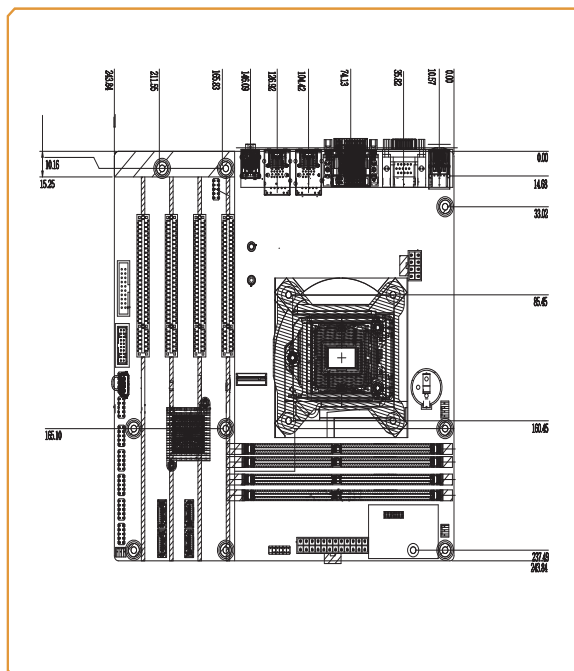
- **4 DDR4 DIMM up to 64GB**
- **Three display ports: VGA, DVI-D, DP++ Supports three independent displays**
- **DP++ resolution up to 4096x2160 @ 60Hz DVI-D resolution up to 1920x1200 @ 60Hz**
- **Multiple expansion: 4 PCI, 1 M.2**
- **Rich I/O: 2 Intel GbE, 6 COM, 6 USB 3.0, 6 USB 2.0**



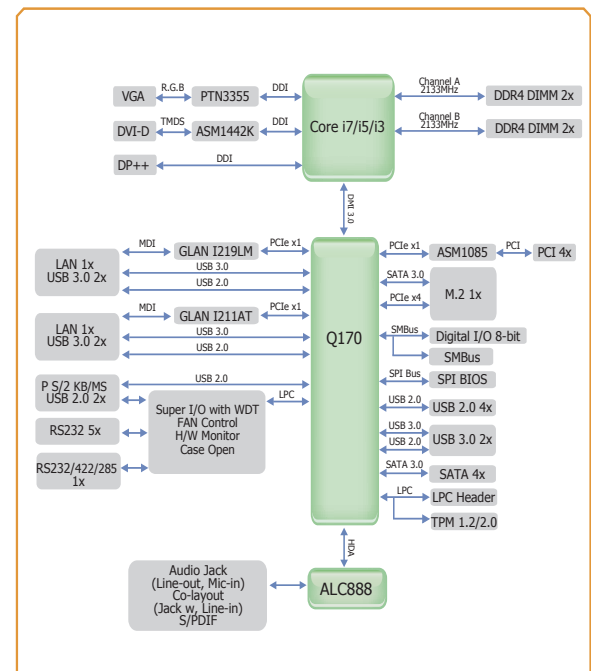
▶ Ordering Information

Model Name	P/N	Memory	GbE	RS-232/422/485	RS-232	USB 3.0	USB 2.0	Power	Thermal	Temp.
KD300-Q170CRM	770-KD3002-100G	4 DIMM	2	2	4	6	6	24-pin ATX / 8-pin ATX 12V	Active	0 to 60°C

▶ Mechanical Drawing



▶ Block Diagram





Specifications

SYSTEM	Processor	6th/7th Generation Intel® Core™ /Pentium®/Celeron® LGA 1151 Socket Processors with TDP up to 95W	
	Chipset	Intel® Q170 Chipset	
	Memory	4 288-pin DIMM up to 64GB	Dual Channel DDR4 2133/2400MHz
	BIOS	Insyde SPI 128Mbit	
GRAPHICS	Controller	Intel® HD Gen 9 Graphics	
	Feature	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	
	Display	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 @ 60Hz
	Triple Displays	VGA + DVI-D + DP++	
EXPANSION	Interface	4 x PCI 1 x M.2 2260/2280 M key (SATA3.0/PCIe Gen3 x4 NVMe)	
AUDIO	Audio Codec	Realtek ALC888S-VD2-GR	
ETHERNET	Controller	1 x Intel® I211AT PCIe (10/100/1000Mbps) 1 x Intel® I219LM PCIe with iAMT 11.6 (10/100/1000Mbps) (only core i7/i5 supports iAMT)	
REAR I/O	Ethernet	2 x GbE (RJ-45)	
	USB	4 x USB 3.0	2 x USB 2.0
	Serial	1 x RS-232/422/485 (RS-232 w/ power) (DB-9)	
	PS/2	1 x PS/2 (mini-DIN-6)	
	Display	1 x VGA 1 x DVI-I (DVI-D signal) 1 x DP++	
	Audio	1 x Line-out 1 x Mic-in 1 x Line-in (opt., MOQ required)	
INTERNAL I/O	Serial	1 x RS-232/422/485 (RS-232 w/ power) (2.54mm pitch) 4 x RS-232 (default)	
	USB	2 x USB 3.0 (2.00mm pitch) 1 x vertical USB 2.0 (opt.)	4 x USB 2.0 (2.54mm pitch)
	Audio	1 x S/PDIF 1 x Front Audio	
	SATA	4 x SATA 3.0 (up to 6Gb/s)	RAID 0/1/5/10
	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 TPM2.0/1.2 (optional)	
POWER	Type	ATX	
	Connector	8-pin ATX 12V power	24-pin ATX power
	Consumption	TBD	
	RTC Battery	CR2032 Coin Cell	
OS SUPPORT		Windows 7 32/64-bit Window 8.1 64-bit Windows 10 64-bit Linux Note: 7th Gen CPU SKU ONLY support Windows 10 64-bit & Linux	
ENVIRONMENT	Temperature	Operating: 0 to 60°C	Storage: -40 to 85°C
	Humidity	Operating: 5 to 90% RH	Storage: 5 to 90% RH
	MTBF	TBD	
MECHANICAL	Dimensions	microATX form factor	244mm (9.6") x 244mm (9.6")
	Height	PCB: TBD	Top Side: TBD, Bottom Side: TBD

Packing List

• 1 KD300-Q170 motherboard	
• 1 COM port cable (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: 350/398mm)	A81-001066-016G
• COM port cable (Length: 300mm, 2 x COM ports)	A81-015026-023G
• Serial ATA data cable (Length: 500mm)	332-553001-005G
• Thermal solution (For 35W, Height: 37.3mm)	A71-103004-000G
• Thermal solution (For 65W, Height: 72.8mm)	552-200049-000G
• Thermal solution (For 95W, Height: 69.3mm)	761-103001-000G
• USB 3.0 port cable (Length: 320mm)	A81-001052-023G
• DP to HDMI Dongle	612-D2H13M-000G

Assured Systems

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