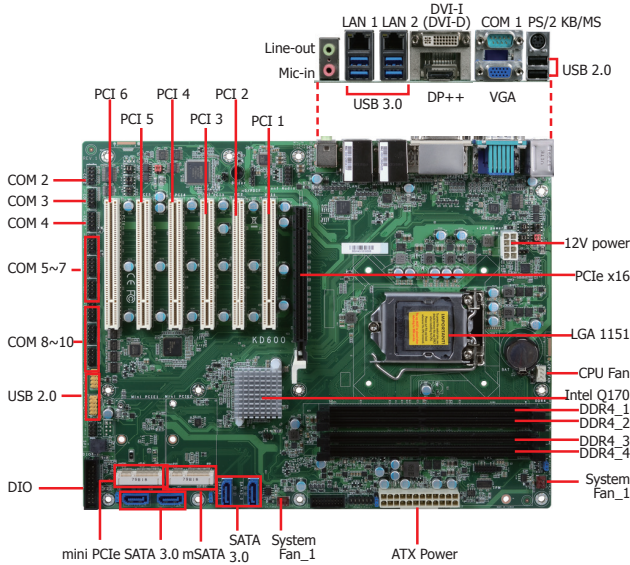
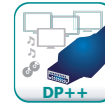


## ATX-Mainboard



### Features

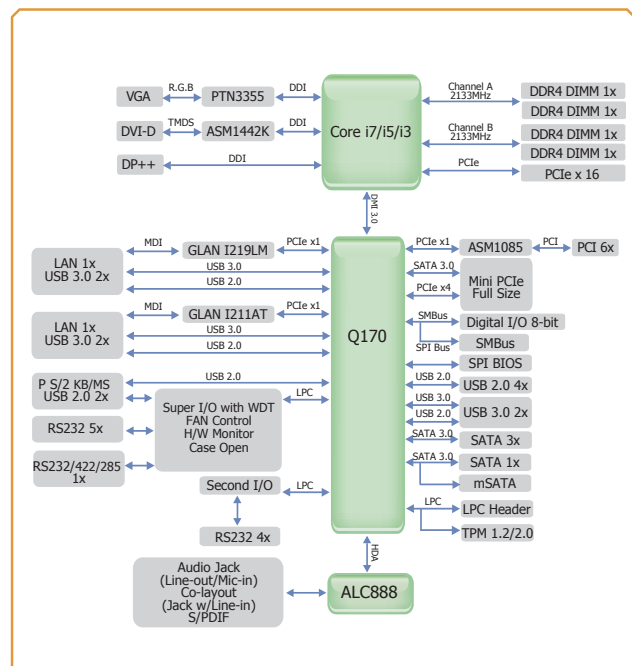
- **4 DDR4 DIMM up to 64GB**
- **Three display ports: VGA, DVI-D, DP++**  
Supports three independent displays
- **DP++ resolution up to 4096x2160 @ 60Hz**  
DVI-D resolution up to 1920x1200 @ 60Hz
- **Multiple expansion: 6 PCI, 1 PCIe x16, 1 Mini PCIe**
- **Rich I/O: 2 Intel GbE, 10 COM, 6 USB 3.0, 6 USB 2.0**



### Mechanical Drawing



### Block Diagram



## ATX-Mainboard

### Specifications

<b>SYSTEM</b>	<b>Processor</b>	6th/7th Generation Intel® Core™ /Pentium®/Celeron® LGA 1151 Socket Processors with TDP up to 65W	
	<b>Chipset</b>	Intel® Q170 Chipset	
	<b>Memory</b>	4 288-pin DIMM up to 64GB	Dual Channel DDR4 2133/2400MHz
	<b>BIOS</b>	Insyde 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 @ 60Hz
	<b>Triple Displays</b>	VGA + DVI-D + DP++	
<b>EXPANSION</b>	<b>Interface</b>	6 x PCI 1 x Mini PCIe	1 x PCIe16
<b>AUDIO</b>	<b>Audio Codec</b>	Realtek ALC888S-VD2-GR	
<b>ETHERNET</b>	<b>Controller</b>	1 x Intel® I219LM PCIe (10/100/1000Mbps) 1 x Intel® I211AT PCIe (10/100/1000Mbps)	
<b>REAR I/O</b>	<b>Ethernet</b>	2 x GbE (RJ-45)	
	<b>USB</b>	4 x USB 3.0	2 x USB 2.0
	<b>Serial</b>	1 x 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 DVI-I (DVI-D signal) 1 x DP++	
	<b>Audio</b>	1 x Line-out	1 x Mic-in
<b>INTERNAL I/O</b>	<b>Serial</b>	1 x RS-232/422/485 (RS-232 w/ power) (2.54mm pitch) 8 x RS-232	
	<b>USB</b>	2 x USB 3.0 (2.00mm pitch) 4 x USB 2.0 (2.54mm pitch)	
	<b>Audio</b>	1 x S/PDIF	
	<b>SATA</b>	4 x SATA 3.0 (up to 6Gb/s) 1 x mSATA (co-lay with SATA_4)	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 (optional)	
<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 LTSB (64 bits) Windows 7 (32/64bit) for 6th Generation Processors		
<b>ENVIRONMENT</b>	<b>Temperature</b>	Operating: 0 to 60°C	Storage: -40 to 85°C
	<b>Humidity</b>	Operating: 5 to 90% RH	Storage: 5 to 90% RH
	<b>MTBF</b>	TBD	
<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

### Ordering Information

Model Name	P/N	Memory	GbE	RS-232/422/485	RS-232	USB 3.0	USB 2.0	Power	Thermal	Temp.
<b>KD600-Q170</b>	<b>TBD</b>	4 DIMM	2	2	8	6	6	24-pin ATX / 8-pin ATX 12V	Active	0 to 60°C

### Packing List

• 1 KD600-Q170 motherboard	
• 1 COM port cable (W/Bracket, Length: 400mm, 2 x COM ports)	A81-015012-001G
• 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)	332-253010-026G
• USB 3.0 port cable (Length: 320mm)	A81-001052-023G
• COM port cable (W/Bracket, Length: 400mm, 2 x COM ports)	A81-015012-001G
• Serial ATA data cable (Length: 500mm)	332-553001-005G
• I/O shield	A49-KD6000-000G
• Thermal Solution (35W, Height: 37.3mm)	A71-103004-000G
• Thermal Solution (65W, Height: 72.8mm)	552-200049-000G
• Thermal Solution (95W, Height: 69.3mm)	761-103001-000G