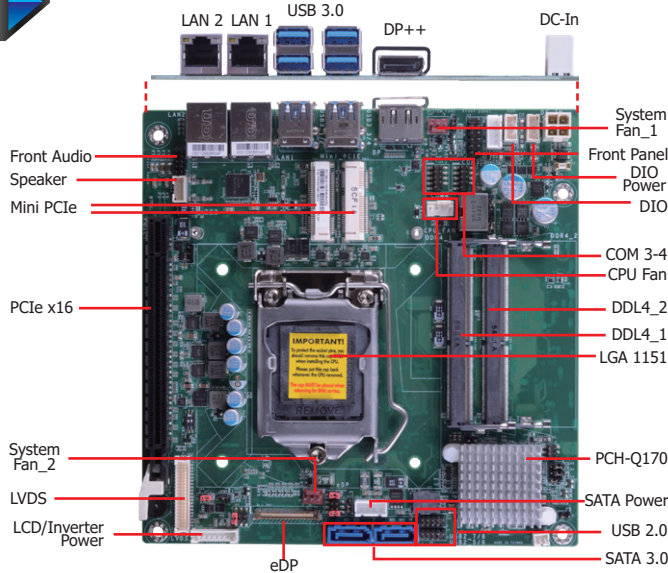


SD106-Q170

Desktop

Q170

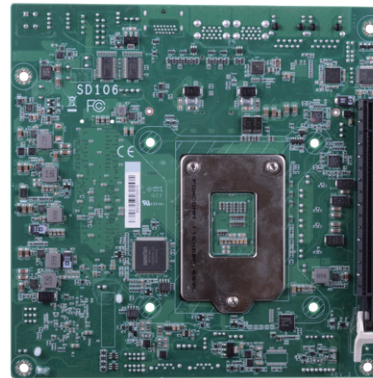


(PCIe x16 Front Side)



(PCIe x16 Bottom Side)

Option



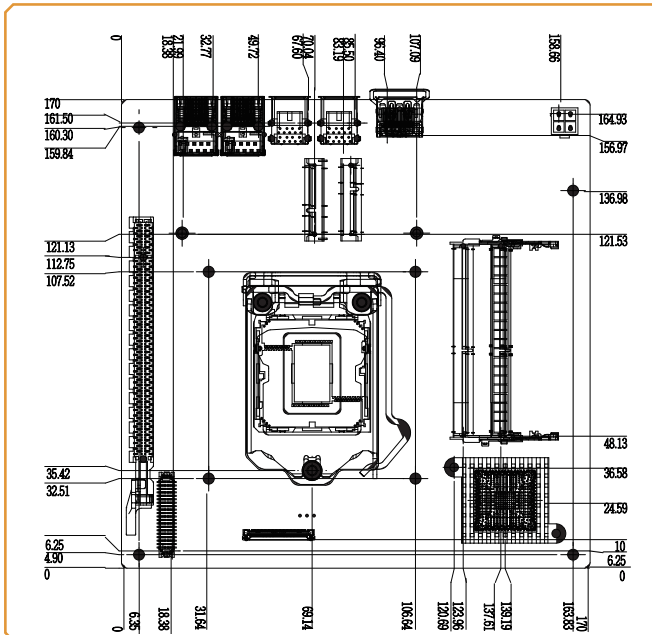
(PCIe x16 Bottom Side)

Features

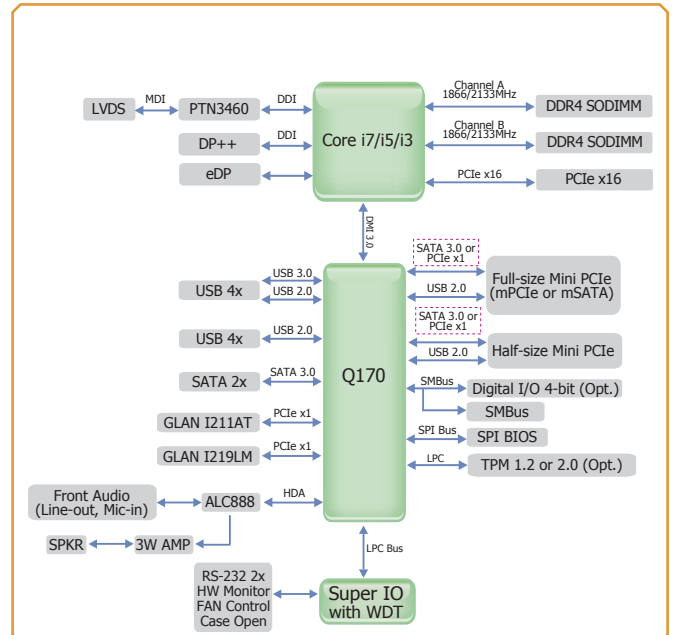
- 2 DDR4 2133MHz SODIMM up to 32GB
- Three independent displays: DP++ + LVDS + eDP
- DP++ resolution supports up to 4096x2304 @ 60Hz
- Multiple expansion: 1 PCIe x16, 2 Mini PCIe
- Storage: 2 SATA 3.0
- Rich I/O: 2 Intel GbE, 2 COM, 4 USB 3.0, 4 USB 2.0



Mechanical Drawing



Block Diagram



Specifications

SYSTEM	Processor	7th Generation Intel® Core™ Processors, LGA 1151 Socket Intel® Core™ i7-7700 Processor, Quad Core, 8M Cache, 3.6GHz (4.2GHz), 65W Intel® Core™ i5-7500 Processor, Quad Core, 6M Cache, 3.4GHz (3.8GHz), 65W Intel® Core™ i3-7101E Processor, Dual Core, 3M Cache, 3.9GHz, 65W 6th Generation Intel® Core™ Processors, LGA 1151 Socket Core i7-6700TE (Skylake-S/R0-SR2LP) / 35W / LGA1151 Core i7-6700 (Skylake-S/R0-SR2BT) / 65W / LGA1151 Core i5-6500 (Skylake-S/R0-SR2BX) / 65W / LGA1151 Core i5-6500TE (Skylake-S/R0-SR2LR) / 35W / LGA1151 Core i3-6100TE (Skylake-S/R0-SR2LS) / 35W / LGA1151 Core i3-6100 (Skylake-S/S0-SR2HG) / 51W / LGA1151 Pentium-G4400 (Skylake-S/R0-SR2DC) / 54W / LGA1151 Pentium-G4400TE (Skylake-S/R0-SR2LT) / 35W / LGA1151 Celeron G3900TE (Skylake-S/R0-SR2LU) / 35W / LGA1151	
	Chipset	Intel® Q170 Chipset	
	Memory	Two 260-pin SODIMM up to 32GB	Dual Channel DDR4 1866/2133MHz
	BIOS	Insyde SPI 128Mbit	
	Controller	Intel® HD Gen 9 Graphics	
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 eDP 1 x LVDS 1 x DP++	eDP: resolution up to 4096x2304@ 60Hz LVDS: resolution up to 1920x1080 @ 60Hz DP++: resolution up to 4096x2304@ 60Hz
	Triple Displays	DP++ + eDP + LVDS	
	Interface	1 x Full-size Mini PCIe (USB/PCIe/SATA, SATA by default) 1 x Half-size Mini PCIe (USB/PCIe/SATA, Mini PCIe by default) 1 x PCIe x16	
EXPANSION	Audio Codec	Realtek ALC888S-VD2-GR	
AUDIO	Controller	1 x Intel® I219LM PCIe with iAMT11.0 (10/100/1000Mbps) (only Core i7/i5 supports iAMT) 1 x Intel® I211AT PCIe (10/100/1000Mbps)	
ETHERNET	Ethernet	2 x GbE (RJ-45)	
	USB	4 x USB 3.0	
	Display	1 x DP++	
REAR I/O	USB	4 x USB 2.0 (2.00mm pitch)	
	Display	1 x LVDS LCD Panel Connector 1 x eDP	
	Audio	1 x Audio (Line-out/Mic-in) 1 x Speaker (3W amplifier)	
	SATA	2 x SATA 3.0 (up to 6Gb/s)	
	SMBus	1 x SMBus (2.00mm pitch)	
	Serial	2 x RS-232 (2.00mm pitch)	
	Others	1 x Intrusion (2.54mm pitch) 1 x CPU FAN (2.54mm pitch) 2 x SYS FAN (2.54mm pitch)	
	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	
INTERNAL I/O	TPM	TPM2.0 (opt.)	
WATCHDOG TIMER	Type	15~36V DC in	
SECURITY	RTC Battery	CR2032 Coin Cell	
POWER		Windows 7 Windows 10	Windows 8.1
OS SUPPORT	Temperature	Operating: 0 to 60°C	Storage: -40 to 85°C
	Humidity	Operating: 5 to 90% RH	Storage: 5 to 90% RH
	MTBF	457, 253 hrs @ 25°C; 270, 131 hrs @ 45°C; 171, 981 hrs @ 60°C Calculation model: Telcordia Issue 2 Environment: GB, GC – Ground Benign, Controlled	
ENVIRONMENT	Dimensions	Mini-ITX Form Factor	170mm (6.7") x 170mm (6.7")
	Height	PCB: 1.6mm	Top Side: 16.34mm, Bottom Side: 4.2mm
MECHANICAL			

Ordering Information

Model Name	P/N	Memory	GbE	DP++	LVDS	eDP	RS-232	SATA 3.0	USB 3.0	USB 2.0	Power	Thermal	Temp.
SD106-Q170	770-SD1061-000G	2 SODIMM	2	1	1	1	2	2	4	4	15~36V DC-in	Cooler	0 to 60°C

Packing List

• 1 SD106-Q170 motherboard	
• 1 COM port cable (Length: 250mm, 1 x COM ports)	A81-015011-001G
• 1 Serial ATA data with power cable (Length: 500mm)	332-553001-005G

Optional Items

• USB port cable (Length: 200mm)	A81-001032-016G
• COM port cable (Length: 250mm, 1 x COM ports)	A81-015011-001G
• 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
• I/O shield	A49-SD1060-000G
• I/O shield (Thin Type)	A49-SD1060-110G
• I/O shield (Thin Type Non Audio)	A49-SD1060-100G