



## EMX-Q170KP

Intel® 6/7th Generation Core™ Processor Mini ITX Motherboard with Intel® Q170 Chipset

- > Intel® 6/7th Generation Core™ Processor (Max. TDP at 95W)
- > Intel® Q170 Chipset
- > 2 x 260-pin DDR4 2133MHz SO-DIMM supports up to 32GB
- > 1 x Intel® I219LM Gigabit Ethernet PHY
- > 1 x Intel® I211AT PCIe Gigabit Ethernet
- > Realtek ALC888S & ALC897 (co-lay) Audio Codec
- > VGA, HDMI, DP++, Dual channel 18/24-bits LVDS (Chrontel CH7511B eDP to LVDS)
- > 5 x SATA III, 1 x SATA III or 1 x mSATA III switch by BIOS
- > 1 x PCIe x16
- > 1 x Full Size Mini-PCIe with mSATA Support (SATA III)
- > 1 x Half Size Mini PCIe
- > 4 x USB 3.0, 8 x USB 2.0
- > 1 x PS/2 Keyboard or Mouse with Dual deck USB 2.0
- > 5 x RS232, 1 x RS232/422/485
- > Line-in, Mic-in, Line-out
- > 8-bits GPIO
- > Support RAID 0, 1, 5, 10
- > Onboard Infineon SLB9665 support TPM 2.0
- > AT/ATX Power

### + Spec

#### System Information

<b>Processor</b>	Intel® LGA1151 Socket Supports 6/7th Generation Core™ i7/ i5/ i3 & Pentium®/Celeron® Processors (Max. TDP at 95W)
<b>Platform Controller Hub</b>	Intel® Q170 Chipset
<b>System Memory</b>	2 x 260-pin DDR4 2133MHz SO-DIMM supports up to 32GB
<b>I/O Chipset</b>	Nuvoton® NCT6106D
<b>BIOS Information</b>	AMI uEFI BIOS, 128Mbit SPI Flash ROM
<b>Watchdog Timer</b>	H/W Reset, 5~255 seconds/5~255 minutes
<b>H/W Status Monitor</b>	CPU temperature monitoring Voltages monitoring CPU fan speed control
<b>TPM</b>	Onboard Infineon SLB9665 support TPM 2.0
<b>Board</b>	Mini ITX

#### Expansion

<b>Expansion</b>	1 x PCIe x16 1 x Full Size Mini PCIe Supports mSATA (by auto switch IC) 1 x Half Size Mini PCIe
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#### I/O

<b>USB Port</b>	8 x USB 2.0 4 x USB 3.0
<b>COM Port</b>	5 x RS232 1 x RS232/422/485
<b>SATA</b>	5 x SATA III, 1 x SATA III or 1 x mSATA III switch by BIOS selection
<b>DIO</b>	1 x 8-bit GPIO
<b>MIO</b>	1 x PS/2 Keyboard or 1 x PS/2 Mouse
<b>Other</b>	Onboard Infineon SLB9665 support TPM 2.0

#### Display

<b>Graphic Chipset</b>	Intel® 7th Generation CPU integrated
<b>Spec. &amp; Resolution</b>	VGA: 2048 x 1536 @ 50Hz HDMI: 4096 x 2160 @ 24Hz DP: 4096 x 2304 @ 60Hz
<b>Multiple Display</b>	Triple Display
<b>LVDS</b>	Dual channel 18/24-bits LVDS (Chrontel CH7511B eDP to LVDS)

#### Audio

<b>Audio Codec</b>	Realtek ALC888S & ALC897 (co-lay) HD Audio Decoding Controller
<b>Audio Interface</b>	Mic-in, Line-out, Line-in
<b>Audio Amplifier</b>	6W Amplifier

#### Ethernet

<b>LAN Chipset</b>	1 x Intel® I219LM Gigabit Ethernet PHY, 1 x Intel® I211AT PCIe Gigabit Ethernet
<b>LAN Port</b>	2 x RJ-45

#### Mechanical & Environmental

<b>Operating Temperature</b>	0~60°C (32~140°F)
<b>Storage Temperature</b>	-40~ 75°C
<b>Operating Humidity</b>	40°C @ 95% relative humidity, non-condensing
<b>Weight</b>	0.40 kg
<b>Power Requirement</b>	+12V/+5V/5VSB/+3.3V/-12V
<b>ACPI</b>	Single power ATX Support S0, S3, S4, S5
<b>Power Mode</b>	AT/ATX
<b>Dimension (L x W)</b>	6.69" x 6.69" (170mm x 170mm)

#### Ordering Information



**Ordering Information**

EMX-Q170KP-B1R  
Intel® 6/7th Generation Core™ i7/ i5/ i3 Processor Mini ITX Motherboard with Intel® Q170 Chipset