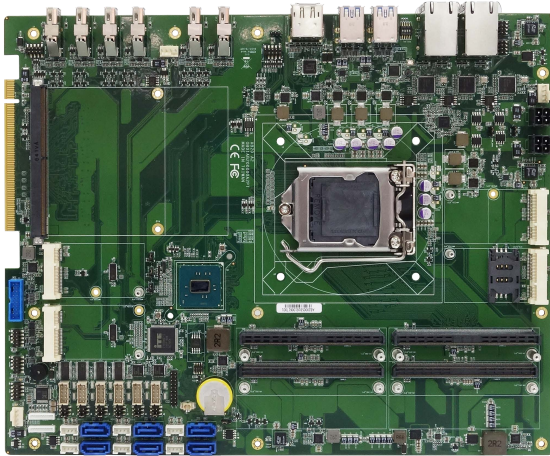
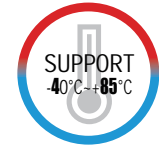


# AB20

PERFECTRON

Intel® Q170 ATX Rugged Motherboard



## Main Features

- Supports Intel® LGA 1151 14nm Skylake-S Processor
- Multi Display: VGA, HDMI, DisplayPort
- Mezzanine type Rugged DDR4 1866/2133 MHz, up to 64 GB
- 1 x MXM Graphic Card Slot,  
4 x mPCIe (2 with mSATA supported)
- 6 x SATAIII
- 6 x USB3.0, 4 x USB2.0
- 6 x COM ports
- 16-bit DIO
- Operating Temp. -40 ~ 85°C
- 12V DC in

## ► Specifications

### System

CPU Type	Intel® 14nm Skylake-S processor Core™ i7-6700 3.4 GHz (8M Cache, 65W) Core™ i5-6500 3.2 GHz (6M Cache, 65W) Core™ i7-6700TE 2.4 GHz (8M Cache, 35W) Core™ i5-6500TE 2.3 GHz (8M Cache, 35W)
Chipset	Intel® Q170
Memory Type	4 x Rugged DIMM dual channel DDR4 1866/2133MHz, up to 64GB
BIOS	AMI® UEFI BIOS
Super I/O	ITE8786E
Watchdog	1-255 sec. or 1-255 min. software programmable, can generate system reset
Expansion Slot	1 x PCIe x16 Golden finger 4 x mPCIe (2 with mSATA supported) 1 x MXM slot support MXM 3.0/3.1

### Display

Chipset	Intel® HD Graphics 530
Independent Display Capability	VGA, HDMI, DisplayPort

### Audio

Codec	Realtek ALC888 HDA Codec
-------	--------------------------

### Ethernet

Chipset	3 x Intel® i210IT & 1 x Intel® i219LM GbE
WOL	Yes
Boot from LAN	Yes

### Rear I/O

DisplayPort	1 6 from MXM module
HDMI	1
Ethernet	4 x RJ45
USB	4 x USB 3.0

### I/O Interface

SATA	6 x SATAIII (6 Gb/s)
USB	2 x USB3.0 4 x USB2.0
COM	6 x COM ports (2 x RS232/422/485, 4 x RS232)
VGA	2 (1 from CPU, 1 from MXM module)
Audio	Line-in, Line-out, Mic
FAN	1 x CPU fan 1 x System fan 1 x MXM fan
DIO	16-bit (8 in/8 out)

### Mechanical and Environment

Form Factor	ATX Industrial MB
Power Type	12V DC in (4-pin + 4-pin)
Dimension	305 x 244 mm (12" x 9.6")
Operating Temp.	-40°C to 85°C
Storage Temp.	-40°C to 85°C
Relative Humidity	10% to 90%, non-condensing

► **Block Diagram**

