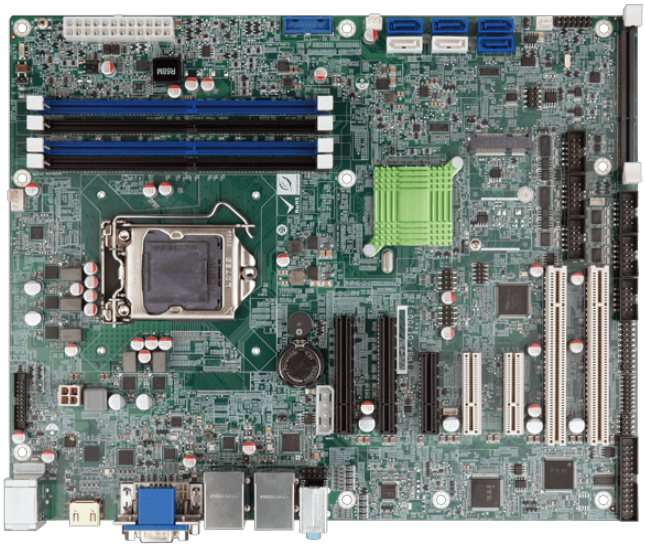
IMBA-Q170

ATX motherboard supports 14nm LGA1151 Intel® CPU Intel® Q170,



Features

» LGA 1151 socket supports Intel® 6th/7th generation Core™ i7/i5/i3, Pentium® or Celeron® processor supported

» Dual-channel DDR4 2133 MHz

» Support triple display with HDMI™, DVI and VGA

» Support USB 3.0, SATA 6Gb/s and PCI Express Gen3

» Support IPMI 2.0 via iRIS-2400 module

» IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

System	
CPU	LGA 1151 socket supports Intel® 6th/7th generation Core™ i7/i5/i3, Pentium® or Celeron® processor
Chipset	Intel® Q170
Memory	Four 288-pin 2133 MHz dual-channel DDR4 SDRAM unbuffered DIMMs
Memory Max.	64GB
Physical Characteristics	
Dimensions (LxWxH) (mm)	244 X 305
Net Weight	700g
Storage	
Storage	6 x SATA :6Gb/s (RAID 0/1/5/10 supported)
I/O Interface	
Display Output	1 x VGA :up to 1920x1200@60Hz
	1 x DVI-D :up to 1920x1200@60Hz
	1 x HDMI™ :2.0 (up to 4096x2160@60Hz)
	1 x iDP :interface for HDMI™, LVDS, VGA, DVI, DP (up to 3840x2160@60Hz)
Ethernet	2 x LAN :LAN1: Intel® I219LM with Intel® AMT 11.0 support
	LAN2: Intel® I210AT PCIe controller with NCSI support
Audio	Description: Realtek ALC662 HD codec supports 5.1-channel
	1 x Line in :on rear IO
	1 x Line out :on rear IO
	1 x Mic :on rear IO
	1 x Front Audio :2x5 pin
I/O Interface	4 x Internal RS-232 :2x5 pin, P=2.54
	2 x Internal RS-232/422/485 :2x5 pin, p=2.54
	2 x External USB 2.0
	4 x External USB 3.2 Gen1x1
	4 x Internal USB 2.0 :2x4 pin, P=2.0
	2 x Internal USB 3.2 Gen1x1 :2x10 pin, p=2.0
	1 x PS/2 :1x6 pin
	1 x DIO :8-bit digital I/O (2x5 pin)
	1 x LPT :2x13 pin, p=2.54

Expansion	2 x PCIe x8
	3 x PCIe x4
	2 x PCI Slot
	1 x PCIe mini Card Slot :Full-size slot (support mSATA)
Other Features	
iRIS	1 X iRIS-2400 slot
TPM	2x10 pin
Power	
Power Consumption	3.3V@1.65A, 5V@3.4A, 12V@8.58A, 5VSB@3.4A (Intel® Core™ i7 6700K 4.0GHz CPU with 32 GB (four 4 GB) 2133 MHz DDR4 memory)
Power Supply	support AT/ATX mode
Environment	
Operating Temperature	-20°C ~ 60°C
Storage Temperature	-30°C ~ 70°C
Humidity	5% ~ 95%, non-condensing

Ordering Information

IMBA-Q170-i2-R10	ATX Motherboard supports 14nm LGA1151 Intel® Core™ Intel® Q170, DDR4, Three Independent Displays VGA/ DVI-D / HDMI™ 2.0/ Dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio, IPMI2.0 and RoHS

Packing List

1 x IMBA-Q170-i2 single board computer	2 x SATA cable
1 x I/O shielding	1 x QIG

6th Generation Intel® Platform Overview

*Totally new 14nm processor using 2nd generation 3-D tri-gate transistors

*Support dual-channel DDR4 & DDR3L memory (ECC optional)

*Gen 9 graphics engine
» 3 independent displays with audio
» Display resolutions supporting up to 4K@60Hz

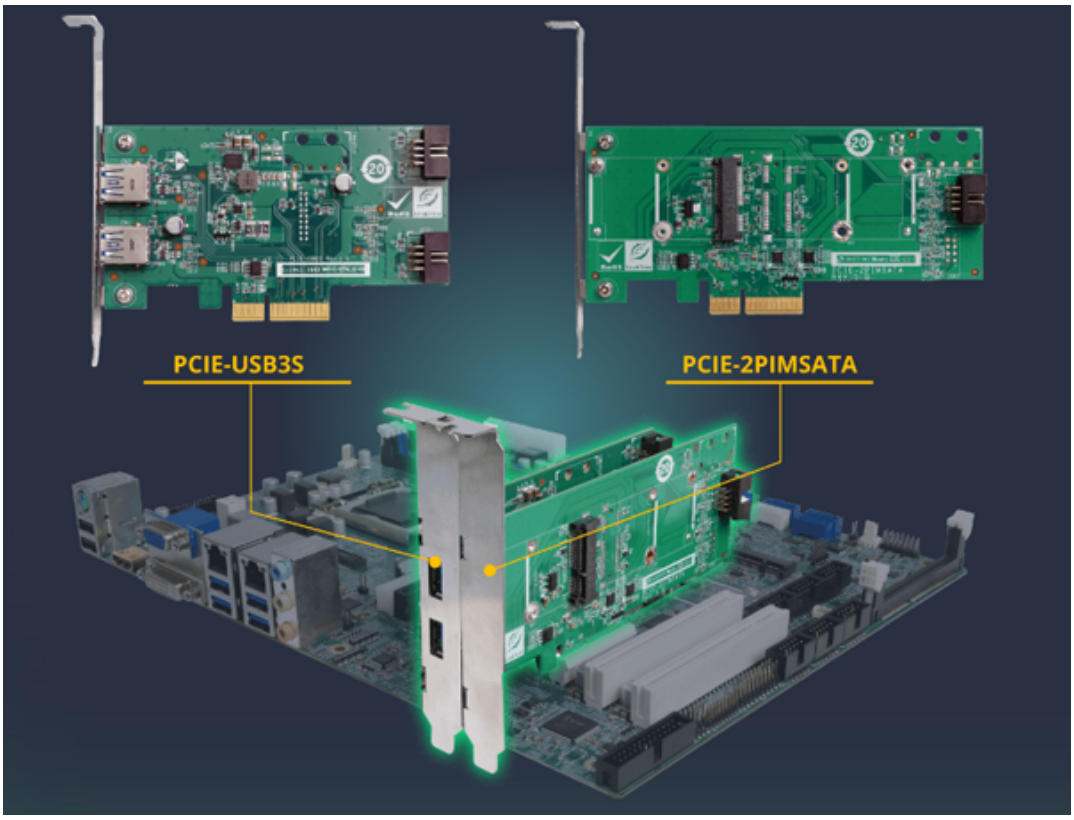
*High speed I/O flexibility

*Security
» HW Based Security features with Intel® PTT, Boot Guard, Intel® MPX
» SW Based Security: Intel® SGX

*Skylake 2-chip & single package solution
» Desktop & Workstation 2-chip platforms: socket type LGA1151
» Mobile 2-chip platforms: BGA 1140
» Low power ULT single package platform: BGA 1356

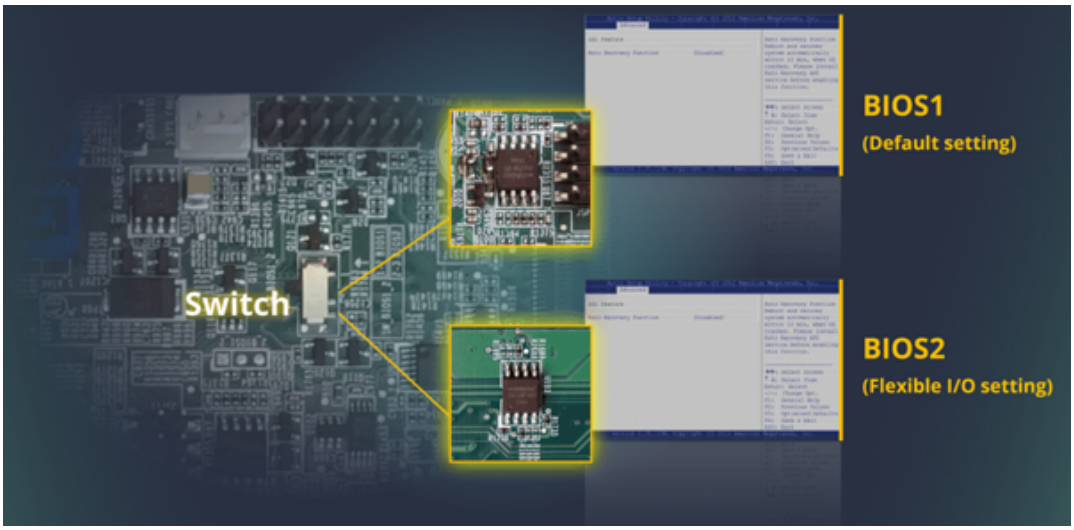
Flexible I/O and PCIe Configuration

Also, Skylake high-end CPU has three controllers that can separate PCIe x16 into different sets.



Dual BIOS (for skylake flexible I/O only)

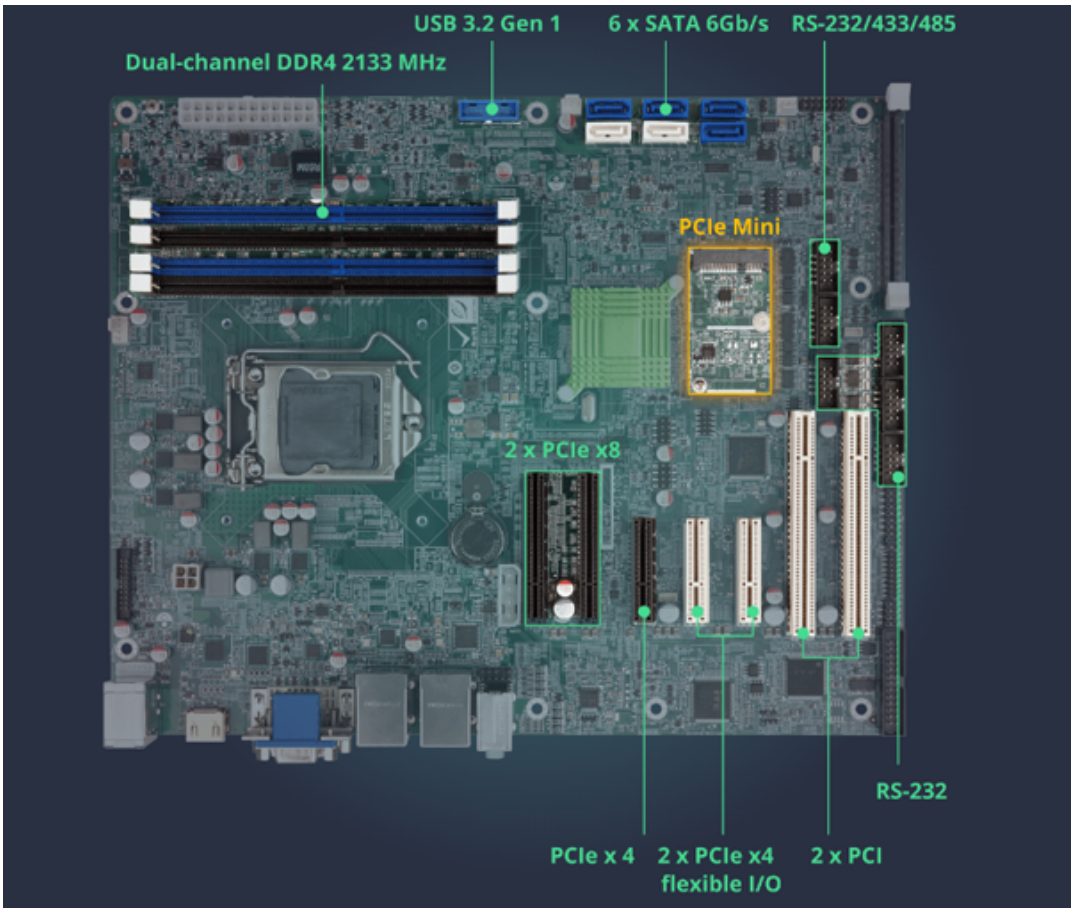
Easy for customer to switch to different ME firmware to achieve I/O flexibility



HDMI™ 2.0 & DP 1.2

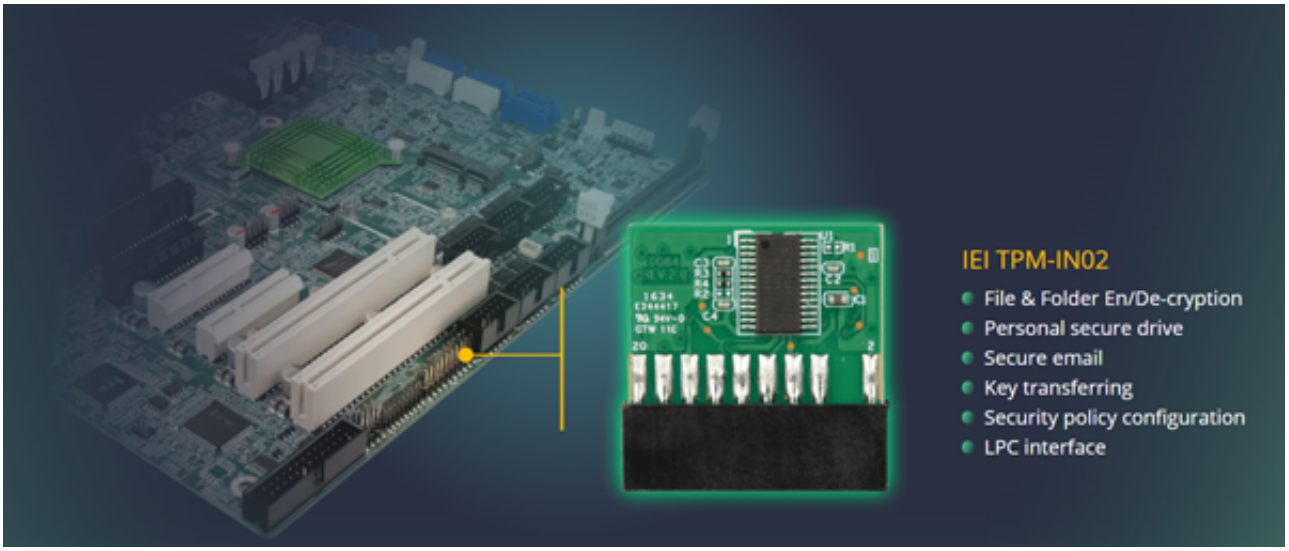
HDMI™ 2.0 & DP 1.2 can support Ultra HD 4K resolution (4096x2304@60Hz).

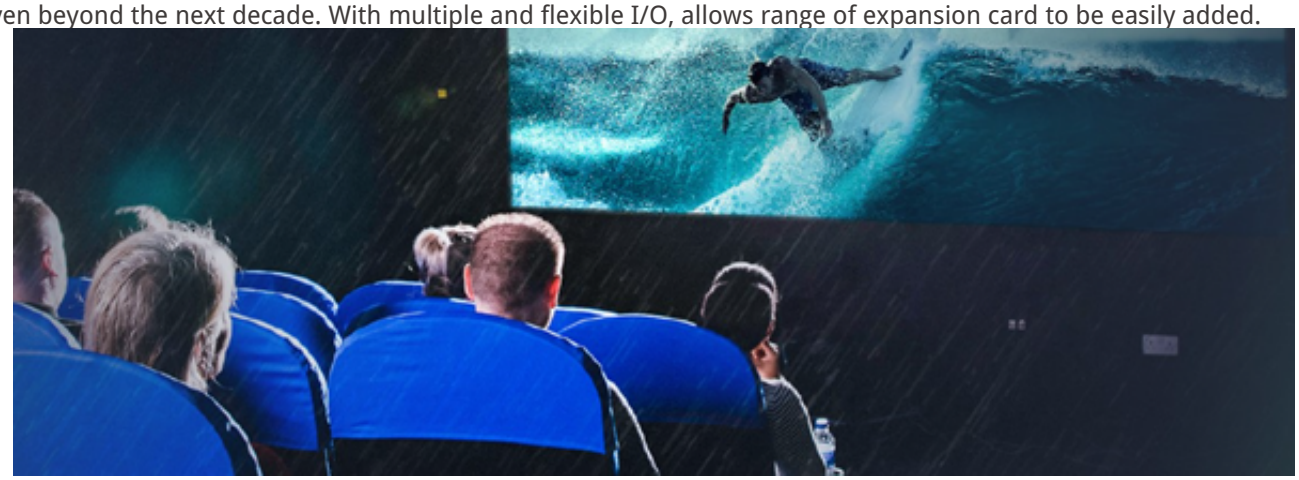
Product Overview



Powerful Security Function - IEI TPM Expansion -

Hardware-based security solution for data protection and reliable authentication via TPM that stores key, passwords and digital certificates.



Application Field

4D cinema control system needs to connect for multiple sensors,provide basic processing power, have integrated graphics Even though technology may push on as computer hardware gets faster, the IMBA-Q170-i2 is good-to-go even beyond the next decade. With multiple and flexible I/O, allows range of expansion card to be easily added.