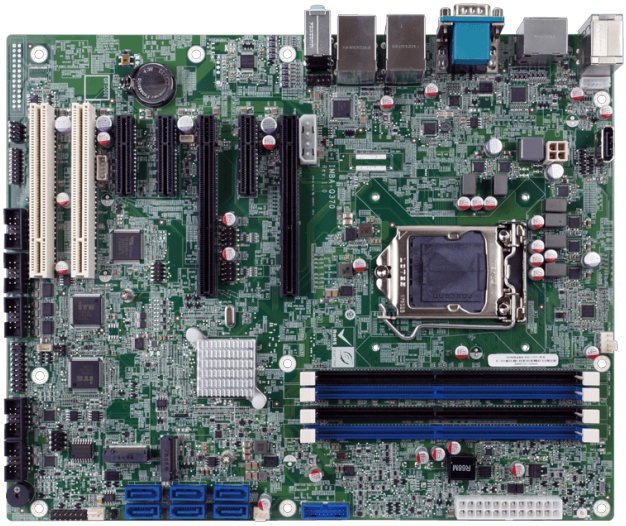
IMBA-Q370

ATX motherboard supports 14nm LGA1151 Intel® 8th/9th Generation Core™ i9/i7/i5/i3, Celeron® and Pentium® processor, DDR4, triple independent displays, dual GbE LAN, M.2, USB 3.1 Gen 2 (10Gb/s), SATA 6Gb/s, HD Audio and RoHS



Features

» LGA1151 Intel® 8th/9th Generation Core™ i9/i7/i5/i3, Pentium® or Celeron® processor

» Dual-channel DDR4 2666MHz

» Support VGA, HDMI & DP++

» Support M.2 A key for WLAN expansion, M key for storage

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

Specifications

System	
CPU	LGA1151 socket supports 8th/9th generation Intel® Core™ i9/i7/i5/i3, Pentium® or Celeron® processor
Chipset	Intel® Q370
Memory	Four 288-pin 2666/2400 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 1920x1080@60Hz
	1 x HDMI :up to 4096x2304@30Hz
	2 x Display Port :1 X DP++ (up to 4096x2304@60Hz); 1 X internal Displayport (up to 4096x2304@60Hz);
Ethernet	2 x LAN :LAN1 : Intel® I219LM PCIe controller with AMT 11.0 support
	LAN2: Intel® I211AT PCIe controller
Audio	Description: Realtek ALC662 HD codec
	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	1 x External RS-232
	3 x Internal RS-232 :25 in , 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=2.54
	2 x Internal USB 3.2 Gen1x1 :2x10 pin, p=2.0

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	2 x PS/2 :1 X 1x6 pin
	1 x DIO :8-bit digital I/O (2x5 pin)
Expansion	2 x PCIe x8
	3 x PCIe x4
	2 x PCI Slot
	2 x M.2(NGFF) :1 x A key(2230/3030), 1 X M key(PCLe, USB, SATA)
Other Features	
TPM	2x10 pin
Power	
Power Consumption	3.3V@1.65A, 5V@3.4A, 12V@8.58A, 5VSV@3.4A (Intel® Core® i7-8700K up to 4.60 GHz CPU with 32GB 2600MHz DDR4 memory)
Power Supply	Support AT/ATX mode
	ErP/EuP Compliant
Environment	
Operating Temperature	-20°C ~ 60°C
Storage Temperature	-30°C ~ 70°C
Humidity	5% ~ 95%, non-condensing
Certifications	
Safety & EMC	CE/FCC compliant

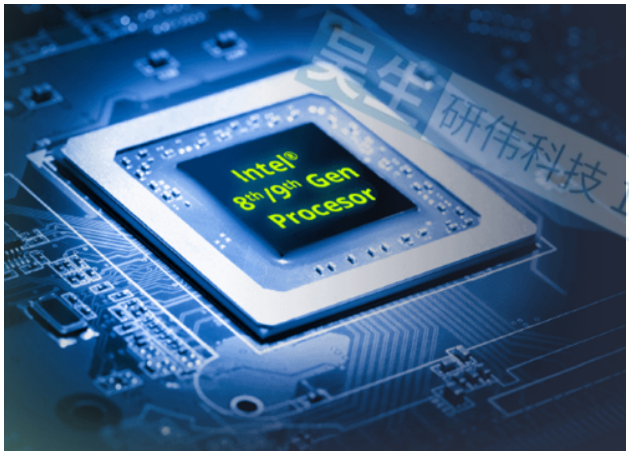
Ordering Information

IMBA-Q370-R20	ATX motherboard supports 14nm LGA1151 Intel® 8th/9th Generation Core™ i9/i7/i5/i3, Celeron® and Pentium® processor, DDR4, triple independent displays, dual GbE LAN, M.2, USB 3.2, SATA 6Gb/s, HD Audio and RoHS

Packing List

1 x IMBA-Q370 single board computer	2 x SATA cable
1 x I/O shielding	1 x QIG

8th Generation Intel® Core™ Platform Overview



*Additional performance with 1.37x better productivity and up to 6 processor cores vs 4th generation processors

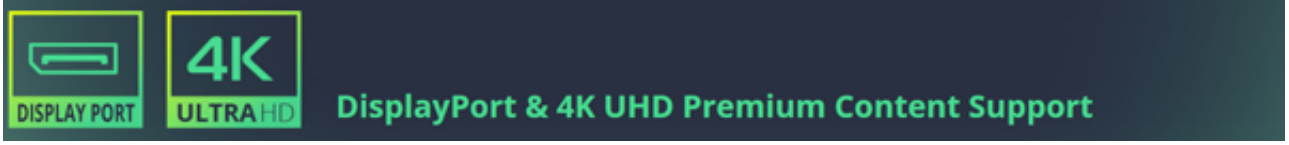
*Speed and versatility with USB-C and USB 3.2

*Gen 11 graphics engine
- 3 independent displays with audio stream
- Display resolutions supporting up to 4K@60Hz/5K@30Hz

*Security
- Intel® Device Protection Technology with Boot Guard
- Intel® Memory Protection Extensions (Intel® MPX)
- Intel® Software Guard Extensions (Intel® SGX)

Intel® Coffee Lake/Coffee Lake Refresh Graphics Support

Time	2015	2016	2018	2019
Platform Name	Skylake	Kaby Lake	Coffee Lake	Coffee Lake Refresh
Graphics	Gen9 graphics Intel® HD 510–530	Gen9 graphics Intel® HD 615–620	Gen9 graphics Intel® UHD	Gen9.5 Intel® Graphics GT2
DirectX Support	Direct 12/11.3	Direct 12/11.3	Direct 12/11.3	Direct 12/11.3
OpenGL Support	4.4	4.4	4.5	4.5



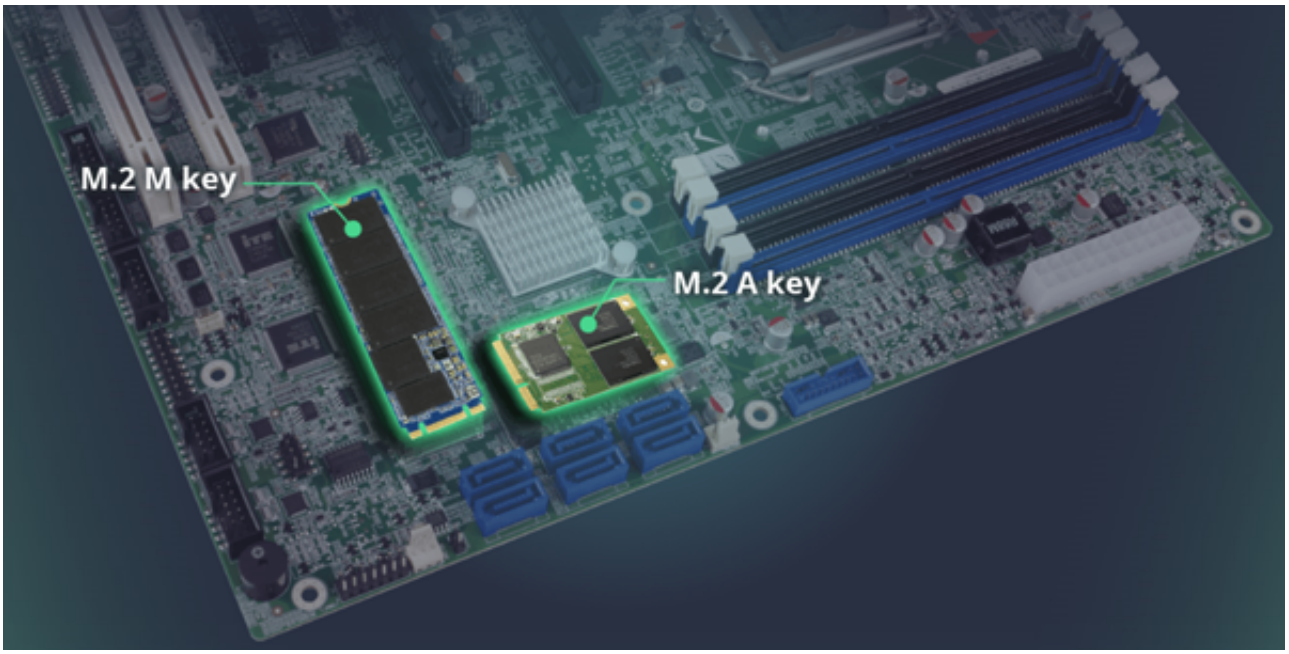
Intel® Coffee Lake/Coffee Lake Refresh OS Support

Type	Operating System		Support	
	Coffee Lake	Coffee Lake Refresh	Coffee Lake	Coffee Lake Refresh
Microsoft	Windows* 10 Enterprise & IOT Enterprise (64bit)	Windows* 10 IoT Enterprise RS5 (64bit)	Intel / Microsoft	Intel / Microsoft
Linux	Ubuntu	Ubuntu*, SUSE, Red Hat* Enterprise (64bit)	Open Source community/Canonical Ltd	Canonical Ltd., Attachmate Group, Red Hat, and open source community
	Yocto	Yocto Project* BSP tool-based embedded Linux distribution (64bit)	Yocto project community	Intel, Yocto Project community
RTOS	Wind River VxWorks	Wind River VxWorks* 7 (64bit)	Wind River systems	Wind River systems

** Distributions supported depend on each CPU sku.

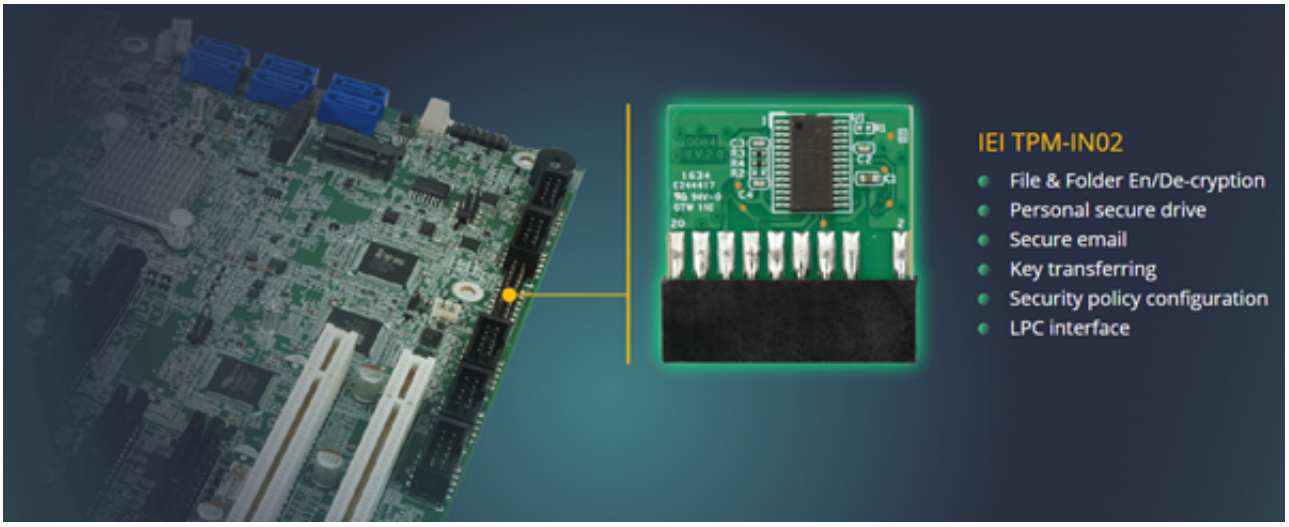
M.2 Expansion Slot

The M.2 form factor was borne out of the need for multiple options for small form factor cards, including SSDs in different sizes and with different capacities, and possibilities for extending capacities even further. With M.2 A Key and B Key expansion slot, IMBA-Q370 can support Bluetooth, WiFi and SSD storage.

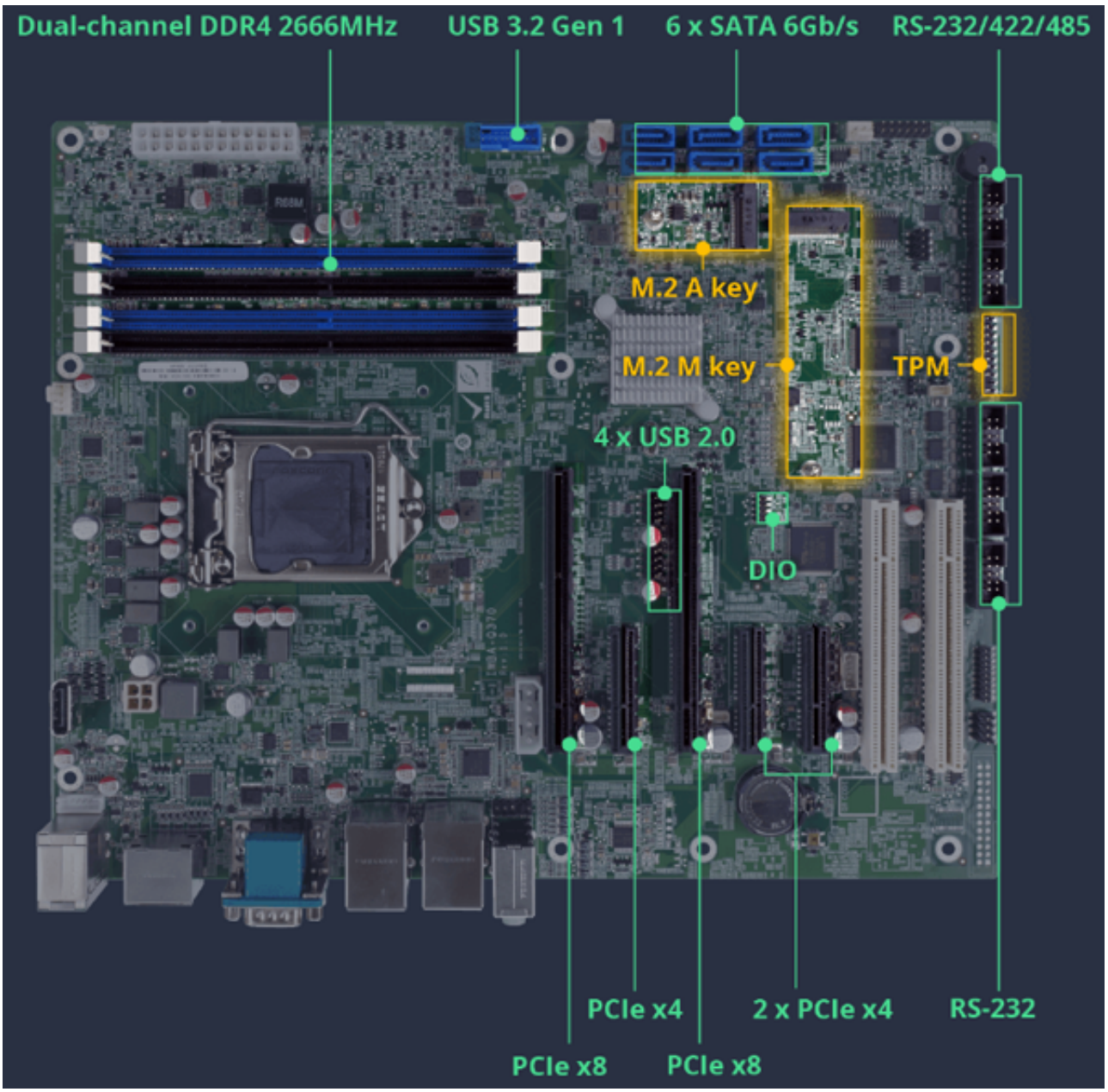


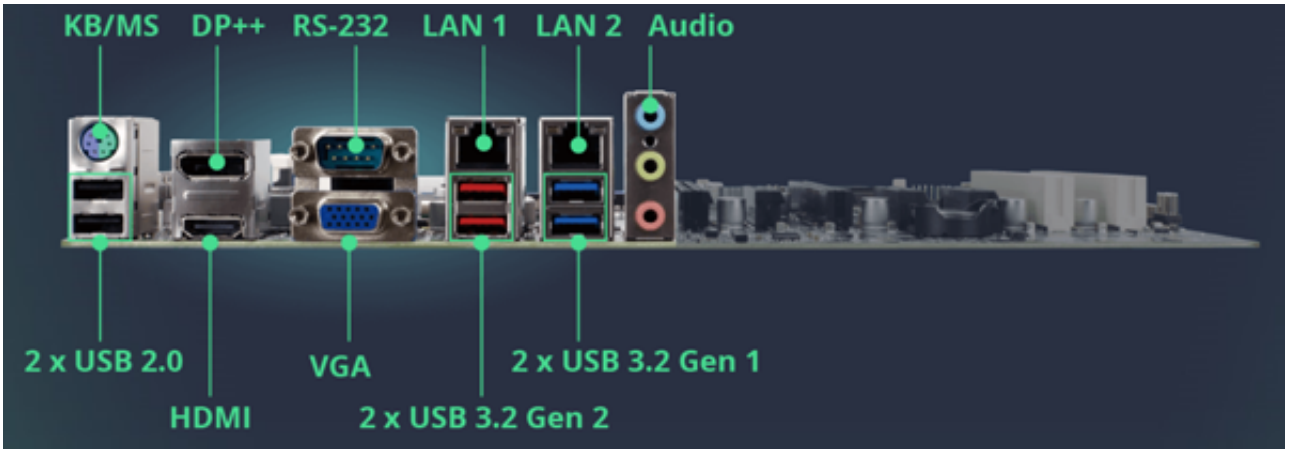
Powerful Security Function - IEI TPM Expansion -

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



Product Overview





Application Field

Factory automation including CNC machine SCADA computer must be the most resilient computer. With expectation of 24/7/365 operation, the hardware and software must work together to handle any increased loads from additional machines, sensors and inputs. With the flexibility for expansion, reliability for storage and built-in, the manager can stop worrying about the control system and get on with production.