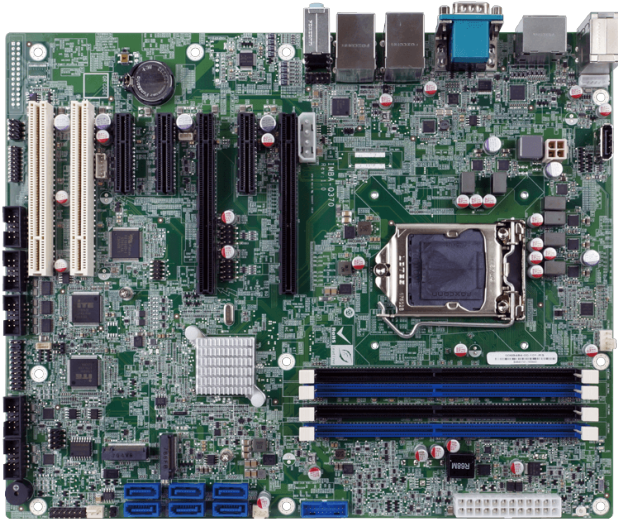


IMBA-Q370

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 |

| | |
|-----------------------|--------------------------------------------------------------------------------------------------------------------|
| | 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(PCIe, 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 |

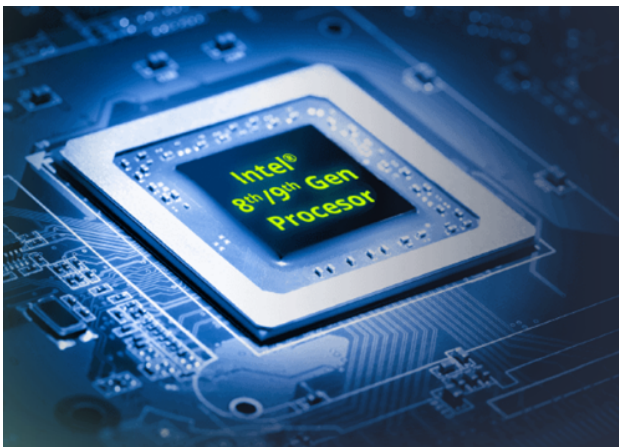
Ordering Information

| | |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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)



Additional Performance

137% better productivity vs 4th Gen processors or 10% performance gain from 7th Gen processors.



Media/Video Experience

High Dynamic Range (HDR) Rec.2020, HEVC 10-bit encode/ decode, VP9 10-bit decode, Chrome browser VP9 HW acceleration support.





New UX Capabilities

Speed and versatility with USB-C / USB 3.2 (10 Gbps)

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 |

DisplayPort & 4K UHD Premium Content Support

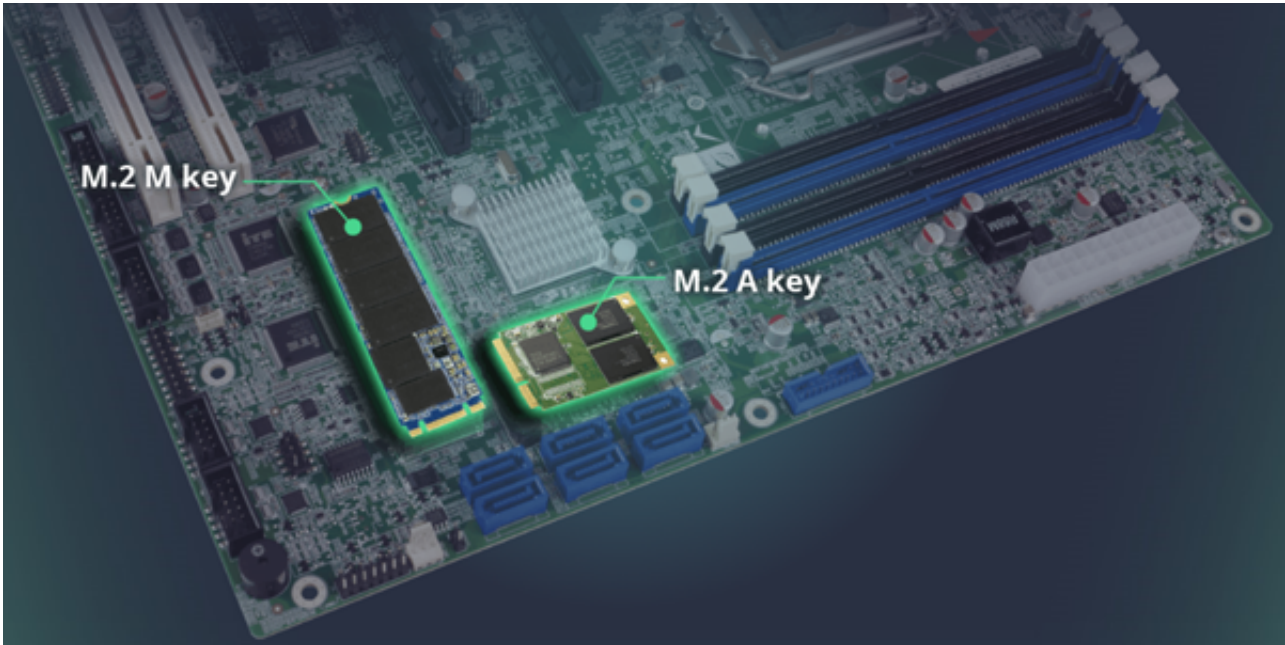
Intel® Coffee Lake/Coffee Lake Refresh OS Support

| 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 R55 (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.

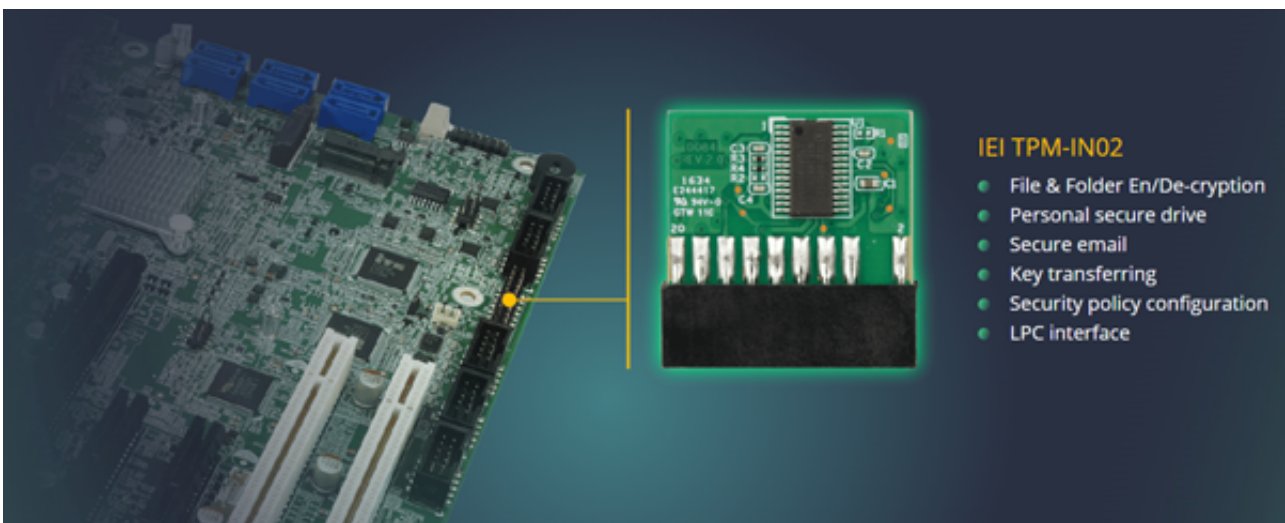
M.2 Expansion Slot

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.

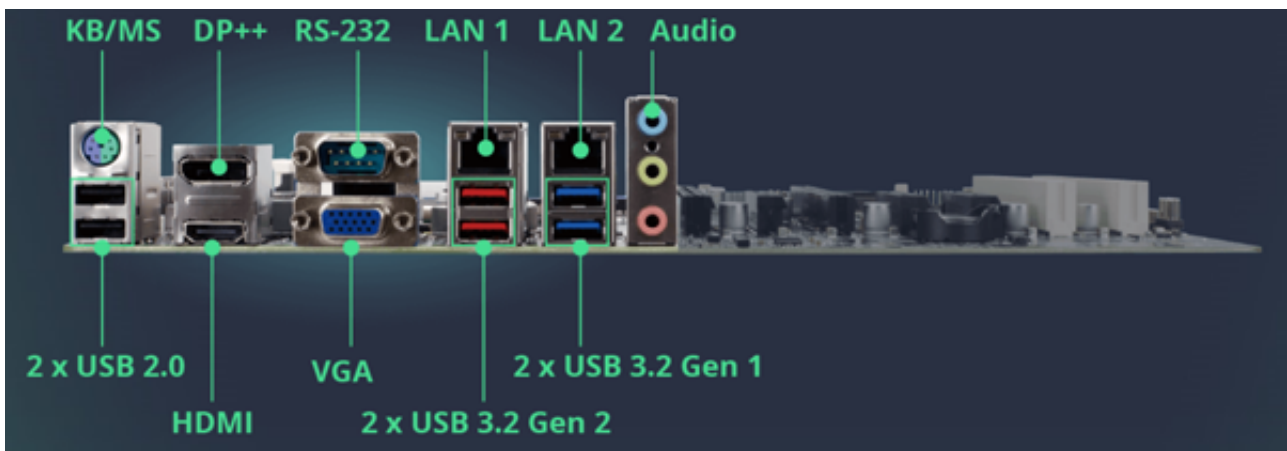
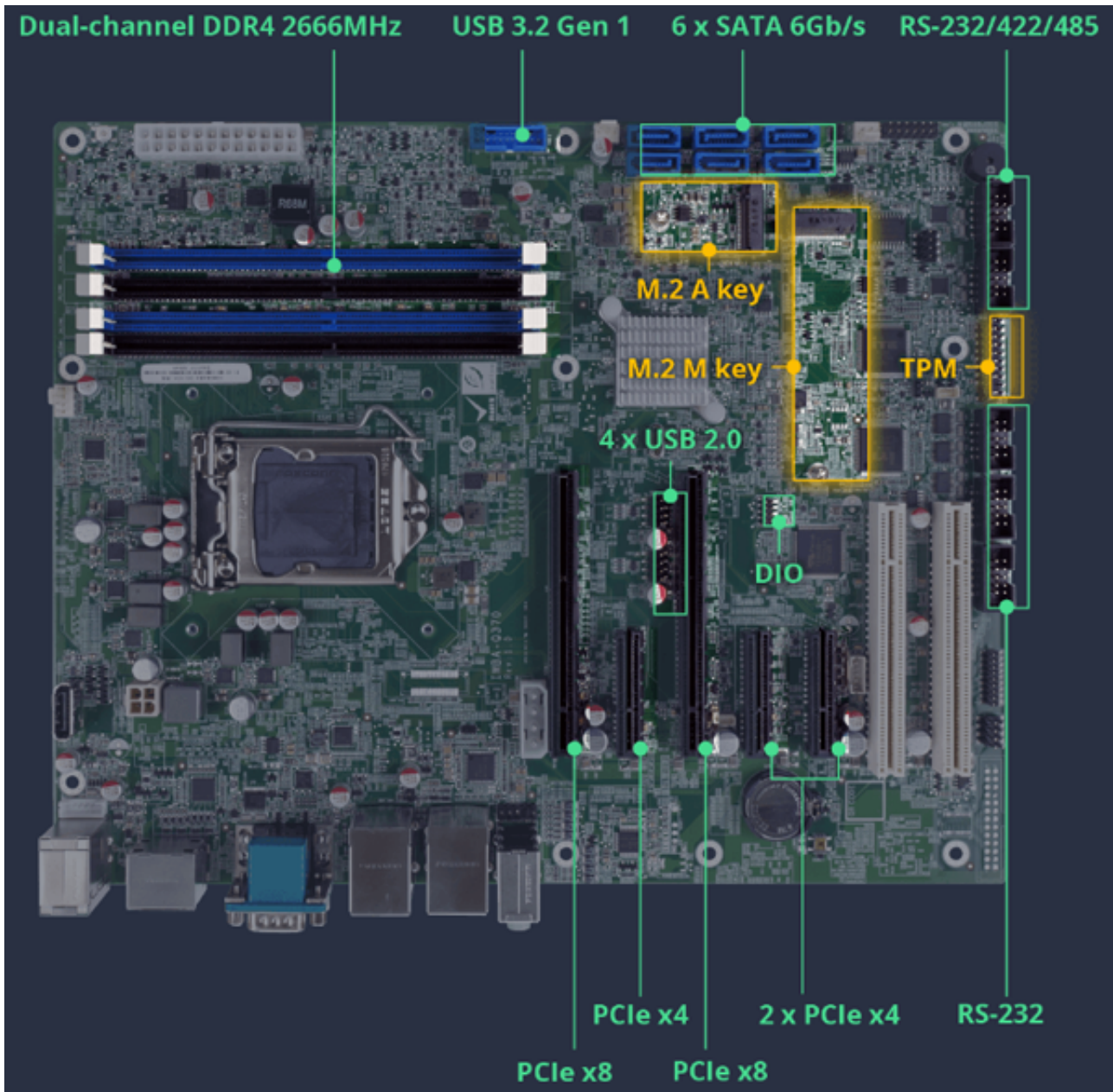


Powerful Security Function - IEI TPM Expansion -

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.

