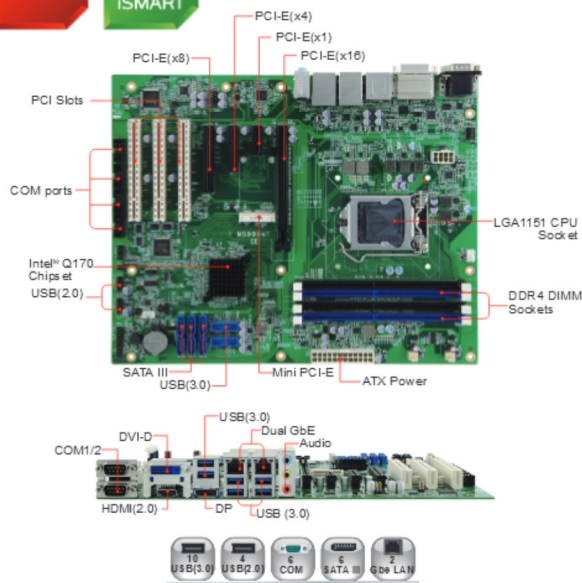




Features

- 6th Generation Intel® Core™ i7/i5/i3/ Pentium® / Celeron® QC/DC processors, up to 4GHz
- 4x DDR4 DIMM, Max. 64GB
- Intel® processor integrated graphics device supports DVI-D, HDMI and DisplayPort
- Dual Intel® Gigabit LAN
- 4x USB 2.0, 10x USB 3.0, 6x COM, 6x SATAIII
- 1x PCI-E(x16), 1x PCI-E(x8) [(x1) Link], 1x PCI-E(x4) [(x1) Link], 1x PCI-E(x1), 3x PCI
- 1x Mini PCI-E
- Watchdog timer, Digital I/O, iAMT(11.0), TPM(1.2), vPro, iSMART

System

CPU	LGA1151 for 6th Generation Intel® Core™ i7 / i5 / i3 / Pentium® / Celeron® QC/ DC processors, up to 4GHz
System Memory	4x DDR4 DIMM, Max. 64GB (Supports ECC by CPU SKUs)
System Chipset	Intel® Q170 / H170 PCH
BIOS	AMI
Watchdog Timer	256 levels
SSD	N/A
H/W Monitor	Yes
Expansion Slots	1x PCI-E(x16), 1x PCI-E(x8), 1x PCI-E(x4), 1x PCI-E(x1), 3x PCI, 1x Mini PCI-E

Graphics

VGA Controller	6th Generation Intel® Core™ i7 / i5 / i3 / Pentium® / Celeron® QC/ DC processors integrated
VGA Memory	Max. Shared memory – 1024MB
Display Interface	Supports DVI-D, HDMI and DisplayPort

LAN

Controller	MB990VF series: Intel® I219LM Gigabit LAN PHY MB990EF series: Intel® I219V Gigabit LAN PHY Intel® I211AT PCI-E Gigabit LAN (as 2nd LAN)
Connector	RJ-45 on board

Multi I/O

I/O Chipset	Fintek F81866AD-I 5x RS232, 1x RS232/422/485 (jumperless selection), 6x SATAIII
USB	6 ports on board, 4 ports via pin-header (USB 3.0) 4 ports via pin-header (USB 2.0)
Audio	Intel® Q170 PCH built-in HD audio + Realtek ALC892 codec
Others	Digital I/O (4-in/4-out), EuP/ErP compliance, RAID, TPM(1.2), iAMT(11.0), iSMART

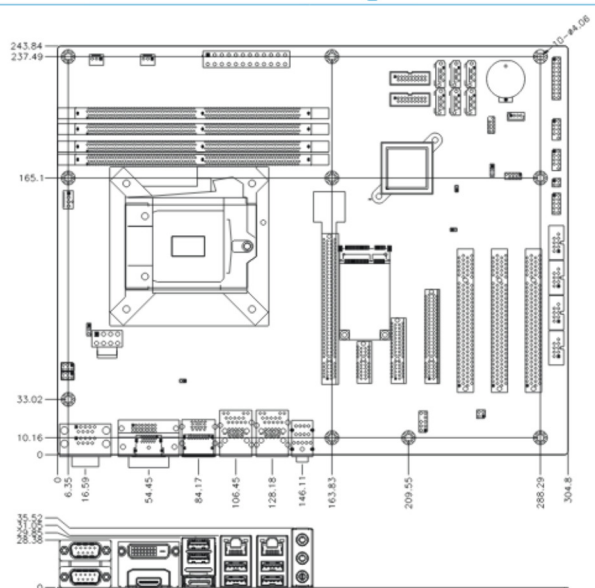
Mechanical and Environmental

Dimensions	338mm x 122mm (13.31" x 4.8")
Max. Power Requirement	Intel® Core™ i7-6700 3.4GHz w/4 x 4GB DDR4-2133 +12V : 7.12A ; +5V : 1.99A +3.3V : 0.43A ; +5VSB : 0.15A
Operating Temperature	0°C~60°C (32°F~140°F)
Storage Temperature	-20°C~80°C (-4°F~176°F)
Relative Humidity	10% ~ 90% (non-condensing)

Ordering Information

MB990VF	LGA1151 Q170 ATX Motherboard w/ DVI-D, HDMI, DisplayPort, dual Gigabit LAN, RAID, iAMT (11.0), TPM (1.2), vPro, iSMART
MB990EF	LGA1151 H170 ATX Motherboard w/ DVI-D, HDMI, DisplayPort, dual Gigabit LAN, RAID, EuP/ErP, iSMART

Dimensions and Drawing

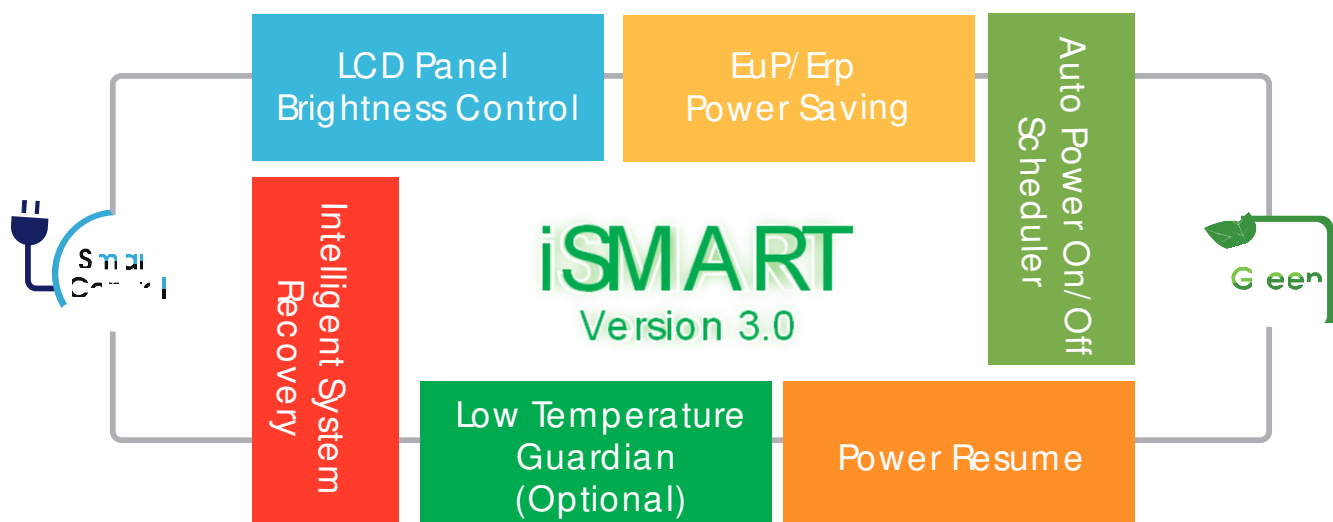


Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

Desktop Processor Reference Table

Processor Number	Base Freq (GHz)	Intel® Turbo Boost Technology - max single core turbo freq (GHz)	Last Level Cache	Cores/Threads	Memory Speed Support (DDR4)	ECC Memory Support	TDP	Intel Integrated Graphics	Intel® vPro	Intel Technology ³			
										Intel® AMT	Intel® TXT	Intel® VT-x	Intel® VT-d
Intel® Xeon® Processor E3 Family (Workstation) - 14nmSkylake Platform													
E3-1275 v5	3.6	4.0	8M	4/ 8	2133	√	80W	GT2-F530	√	AMT 11.0	√	√	√
E3-1225 v5	3.3	3.7	6M	4/ 4	2133	√	80W	GT2-F530	√	AMT 11.0	√	√	√
E3-1268L v5	2.4	3.4	8M	4/ 8	2133	√	35W 25W	GT2-F530	√	AMT 11.0	√	√	√
Chipsets6th Generation Intel® Core™Processors - 14nmSkylake Platform													
i7-6700	3.4	4.0	8M	4/ 8	2133		65W	GT2-530	√	AMT 11.0	√	√	√
i7-6700TE	2.4	3.4	8M	4/ 8	2133		35W	GT2-530	√	AMT 11.0	√	√	√
i5-6500	3.2	3.6	6M	4/ 4	2133		65W	GT2-530	√	AMT 11.0	√	√	√
i5-6500TE	2.3	3.3	6M	4/ 4	2133		35W	GT2-530	√	AMT 11.0	√	√	√
i3-6100	3.7		4M	2/ 4	2133	√	65W	GT2-530			√	√	√
i3-6100TE	2.7		4M	2/ 4	2133	√	35W	GT2-530			√	√	√
Intel® Pentium® Processors - 14nmSkylake Platform													
G4400	3.3		3M	2/ 2	2133	√	65W	GT1-510				√	
G4400TE	2.9		3M	2/ 2	2133	√	35W	GT1-510				√	
Intel® Celeron® Processors - 14nmSkylake Platform													
G3900	2.8		2M	2/ 2	2133	√	65W	GT1-510				√	
G3900TE	2.6		2M	2/ 2	2133	√	35W	GT1-510				√	

iSMART Technology



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