

## Features

- 6th Generation Intel® Xeon® / Core™ i7 / i5 / i3 / Pentium® / Celeron® QC/DC processors, up to 4GHz
- 2x DDR4 SO-DIMM, Max. 32GB
- Intel® Processor integrated graphics device, supports DVI-D, HDMI and DisplayPort
- Dual Intel® Gigabit LAN
- 2x USB 2.0, 6x USB 3.0, 4x COM, 4x SATAIII
- 2x Mini PCI-E slots, 1x mSATA, 1x PCI-E(16x)
- Watchdog timer, Digital I/O, iAMT (11.0), TPM (1.2), iSMART

## System

CPU Type	LGA1151 for 6th Generation Intel® Xeon® / Core™ i7/i5/i3/ Pentium® / Celeron® QC/ DC processors, up to 4GHz
System Memory	2x DDR4 SO-DIMM, Max. 32GB (Supports ECC by CPU SKUs)
System Chipset	Intel® C236 / Q170 (MI991AF) / H110 PCH (MI991EF)
BIOS	AMI
Watchdog Timer	256 levels
SSD	1x mSATA
H/W Monitor	Yes
Expansion Slot	1x PCI-E(x16), 2x Mini PCI-E

## Graphics

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

## LAN

Controller	MI991AF: Intel® I219LM Gigabit LAN PHY MI991EF: 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 F81846D-I 3x RS232, 1x RS232/422/485(Jumper-less selection), 4x SATAIII (MI991AF) or 3x SATAIII (MI991EF)
USB	USB 3.0: 6 ports on board (MI991AF), 4 ports on board (MI991EF) USB 2.0: 2 ports on board (MI991EF), 2 ports via pin-header
Audio	Intel® C236/ Q170/ H110 PCH built-in HD audio + Realtek ALC662 codec
Others	Digital I/O(4-in/4-out), EuP/ErP, RAID, TPM(1.2), iAMT(1.1.0), iSMART

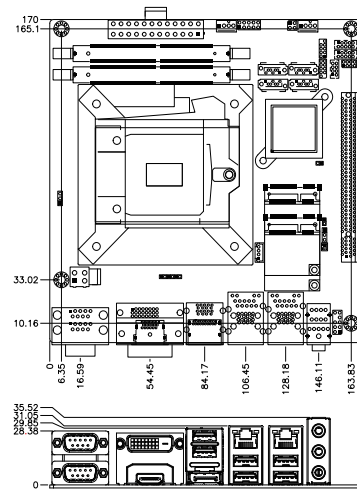
## Mechanical and Environmental

Dimensions	170mm x 170mm (6.7" x 6.7")
Max. Power Requirement	TBD
Operating Temperature	0°C~60°C (32°F~140°F)
Storage Temperature	-20°C~80°C (-4°F~176°F)
Relative Humidity	90% (non-condensing @60°C)

## Ordering Information

MI991AF-C236	LGA1151 C236 Mini-ITX motherboard w/ DVI-D, HDMI, DisplayPort, dual Gigabit LAN, RAID, iAMT (1.1.0), TPM (1.2), iSMART 3.0
MI991AF	LGA1151 Q170 Mini-ITX motherboard w/ DVI-D, HDMI, DisplayPort, dual Gigabit LAN, RAID, iAMT (1.1.0), TPM (1.2), iSMART 3.0
MI991EF	LGA1151 H110 Mini-ITX motherboard w/ DVI-D, HDMI, DisplayPort, dual Gigabit LAN, EuP/ErP, iSMART 3.0

## Dimensions and Drawing



### 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 <sup>3</sup>			
										Intel® AMT	Intel® TxT	Intel® VT-x	Intel® VT-d
Intel® Xeon® Processor E3 Family (Workstation) - 14nm Skylake Platform													
E3-1275 v5	3.6	4.0	8M	4/8	2133	✓	80W	GT2-P530	✓	AMT 11.0	✓	✓	✓
E3-1225 v5	3.3	3.7	6M	4/4	2133	✓	80W	GT2-P530	✓	AMT 11.0	✓	✓	✓
E3-1268L v5	2.4	3.4	8M	4/8	2133	✓	35W/25W	GT2-P530	✓	AMT 11.0	✓	✓	✓
Chipsets 6th Generation Intel® Core™ Processors - 14nm Skylake 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 - 14nm Skylake Platform													
G4400	3.3		3M	2/2	2133	✓	65W	GT1-510				✓	
G4400TE	2.9		3M	2/2	2133	✓	35W	GT1-510				✓	
Intel® Celeron® Processors - 14nm Skylake Platform													
G3900	2.8		2M	2/2	2133	✓	65W	GT1-510				✓	
G3900TE	2.6		2M	2/2	2133	✓	35W	GT1-510				✓	

### iSMART Technology

