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# Datasheet

## iBASE

### MI998

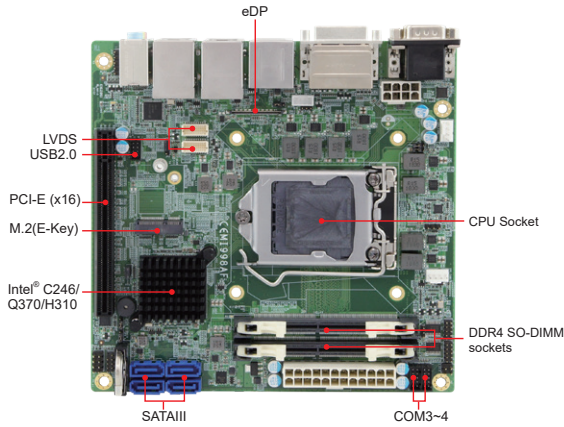
**Industrial Mini-ITX Motherboard for Intel® 9<sup>th</sup>/8<sup>th</sup> Gen.  
Xeon® E / Core™ i / Celeron® / Pentium® Series Processor**



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## Specifications

CPU Socket	LGA1151
CPU	9th/8th Gen Intel® Xeon® E / Core™ / Pentium® / Celeron® processors, up to 4.7GHz
PCH	MI998AF-C246: Intel C246 PCH MI998AF: Intel Q370 PCH MI998EF: Intel H110 PCH
Memory Types	2x DDR4 SO-DIMM, Max. 32GB (supports ECC by CPU SKU)
BIOS	AMI
Watchdog Timer	256 levels
H/W Monitor	Yes
Storage Device Interface	NVMe
Expansion Slots	1x PCI-E (x16)
Mini Type Slots	1x M.2 (E-key, type:2230) 1x M.2 (M-key, type:2280)
Graphics Controller	Intel® UHD Graphics P630
Video Output	Supports, DVI-D, HDMI (1.4), DisplayPort(1.2), and eDP or 24-bit Dual channel LVDS
Ethernet	1st LAN MI998AF-C246 & MI998AF: Intel® I219LM MI998EF: Intel® I219V; 2nd LAN MI998AF-C246: Intel® I210AT MI998AF & MI998EF: Intel® I211AT
I/O Chip	MI998AF-C246: COM1 ~ COM2 (RS232/422/485) MI998AF: COM1 ~ COM2 (RS232/422/485) MI998EF: COM1 ~ COM2 (RS232) COM3 ~ COM4: RS232
USB 2.0	MI998AF-C246 / MI998AF: 2x USB2.0 MI998EF: 2x USB2.0
USB 3.0/ 3.1	MI998AF-C246 / MI998AF: 6x USB3.0 MI998EF: 4x USB3.0
SATA	4x SATAIII
Audio	Intel® C246/ Q370/ H110 PCH-H built-in HD Audio controller + Realtek Codec ALC888S-VD2-GR
TPM	TPM(2.0)
Others	Digital I/O (4-in/4-out); RAID, iAMT (11.6) or Eup/ErP
Dimensions (L x W)	170mm x 170mm
Power Consumption	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)

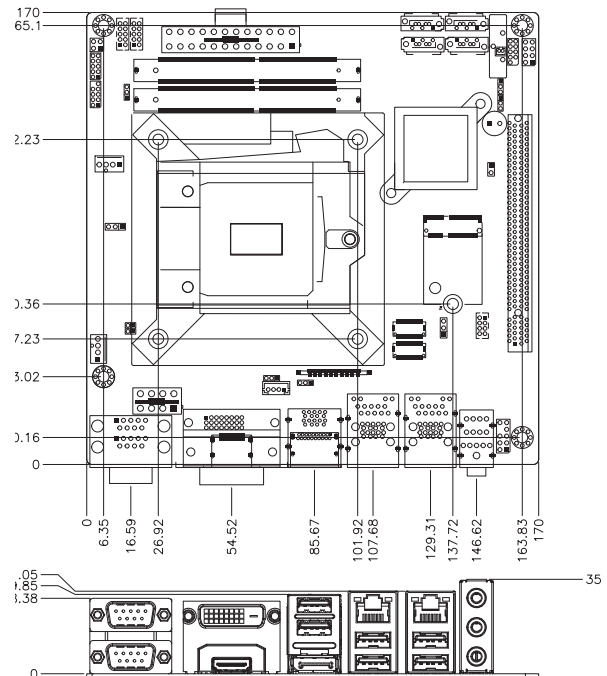
## Features

- 9th/8th Gen Intel® Xeon® E / Core™ / Pentium® / Celeron® processors, up to 4.7GHz
- 2x DDR4 SO-DIMM, Max. 32GB, ECC compatible
- Intel® Processor integrated graphics, supports DVI-D, HDMI, DisplayPort and 24-bit dual channel LVDS or eDP
- Dual Intel® Gigabit LAN
- 6x USB3.0, 2x USB2.0, 4x COM, 4x SATAIII
- 1x PCI-E (x16), 2x M.2
- Watchdog timer, Digital I/O, iAMT (11.6), TPM (2.0)

## Ordering Information

MI998AF-C246	LGA1151 C246 Mini-ITX motherboard w/ DVI-D, HDMI, DisplayPort, LVDS, Dual Gigabit LAN, RAID, iAMT(11.6), TPM(2.0)
MI998AFE-C246	LGA1151 C246 Mini-ITX motherboard w/ DVI-D, HDMI, DisplayPort, eDP, Dual Gigabit LAN, RAID, iAMT(11.6), TPM(2.0)
MI998AF	LGA1151 Q370 Mini-ITX motherboard w/ DVI-D, HDMI, DisplayPort, LVDS, Dual Gigabit LAN, RAID, iAMT(11.6), TPM(2.0)
MI998AFE	LGA1151 Q370 Mini-ITX motherboard w/ DVI-D, HDMI, DisplayPort, eDP, Dual Gigabit LAN, RAID, iAMT(11.6), TPM(2.0)
MI998EF	LGA1151 H310 Mini-ITX motherboard w/ DVI-D, HDMI, DisplayPort, LVDS, Dual Gigabit LAN, TPM(2.0)
MI998EFE	LGA1151 H310 Mini-ITX motherboard w/ DVI-D, HDMI, DisplayPort, eDP, Dual Gigabit LAN, TPM(2.0)

## Dimensions and Drawing



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