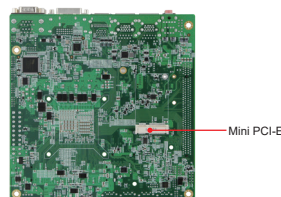


Features

- Onboard 6th Gen Intel® Xeon® E3 / Core™ i7/i5/i3 / Celeron® QC/DC processors, up to 3.7GHz
- 2x DDR4 SO-DIMM, Max. 32GB, ECC compatible
- Intel® Processor integrated graphics device, supports DVI-D, HDMI (2.0), DisplayPort and 24-bit dual-channel LVDS
- 2x Intel® Gigabit LAN
- 4x USB 2.0, 6x USB 3.0, 6x COM, 4x SATAIII
- 1x PCI-E (x16), 2x Mini PCI-E, 1x mSATA, 1x M.2
- Watchdog timer, Digital I/O, iAMT (11.0), TPM (2.0), vPro, iSMART 3.0



Specifications

| | |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| CPU Socket | BGA1440 |
| CPU | 6th Gen Intel® Xeon® E3 / Core™ i7/i5/i3 / Celeron® QC/DC processors, up to 3.7GHz |
| PCH | MI990VF series: Intel® CM236 PCH MI990EF series: Intel® HM170 PCH |
| Memory Types | 2x DDR4 SO-DIMM, Max. 32GB (supports ECC by CPU SKUs) |
| BIOS | AMI |
| Watchdog Timer | 256 levels |
| H/W Monitor | Yes |
| Storage Device Interface | 1x mSATA via Mini PCI-E (Thru SATA III) 1x M.2 slot (Thru SATA III & PCI-E) |
| Expansion Slots | 1x PCI-E (x16) |
| Mini Type Slots | 2x Mini PCI-E 1x M.2 |
| Graphics Controller | 6th Gen Intel® Xeon® / Core™ i7/ i5/ i3 / Celeron® processor integrated |
| Video Output | Supports DVI-D, HDMI (2.0), DisplayPort and 24-bit dual-channel LVDS |
| Ethernet | MI990VF series: Intel® I219LM Gigabit LAN PHY MI990EF series: Intel® I219V Gigabit LAN PHY Intel® I211AT PCI-E Gigabit LAN (as 2nd LAN) |
| I/O Chipset | Fintek F81866AD-I |
| Serial Port | 5x RS232 1x RS232/422/485 (jumperless selection) |
| USB 2.0 | 4xs USB 2.0 via pin-header |
| USB 3.0/ 3.1 | 6x USB 3.0 on board |
| Serial ATA | MI990VF series: 4x SATA III MI990EF series: 2x SATA III |
| Audio | Intel® CM236 / HM170 PCH built-in HD audio + Realtek ALC892 codec |
| TPM | TPM (2.0) |
| Others | Digital I/O(4-in/4-out), RAID, iAMT (11.0), iSMART |
| Dimensions (L x W) | 170mm x 170mm (6.7" x 6.7") |
| Power Consumption | Intel® Core™ i5-6400EQ 2.4GHz w/ 2x 8GB DDR4-2133 +12V: 2.84A; +5V: 1.45A; +5VSB: 0.058A; +3.3V: 0.52A |
| 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

| | |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MI990VF-X28E | BGA1440 Intel® CM236/ Xeon® E3-1505M v5(2.8GHz) Mini-ITX motherboard w/ DVI-D, HDMI (2.0), DisplayPort, LVDS, dual Gigabit LAN, RAID, iAMT (11.0), TPM (2.0), vPro, iSMART (3.0), CPU cooler on board |
| MI990VF-6820E | BGA1440 Intel® CM236/ Core™ i7-6820EQ(2.8GHz) Mini-ITX motherboard w/ DVI-D, HDMI (2.0), DisplayPort, LVDS, dual Gigabit LAN, RAID, iAMT (11.0), TPM (2.0), vPro, iSMART (3.0), CPU cooler on board |
| MI990VF-6440E | BGA1440 Intel® CM236/ Core™ i5-6440EQ(2.7GHz) Mini-ITX motherboard w/ DVI-D, HDMI (2.0), DisplayPort, LVDS, dual Gigabit LAN, RAID, iAMT (11.0), TPM (2.0), vPro, iSMART (3.0), CPU cooler on board |
| MI990EF-6100E | BGA1440 Intel® HM170/ Core™ i3-6100E(2.7GHz) Mini-ITX motherboard w/ DVI-D, HDMI (2.0), DisplayPort, LVDS, dual Gigabit LAN, RAID, EuP/ErP compliant, iSMART (3.0), CPU cooler on board |

Dimensions and Drawing

