

MIC-7900

Compact Fanless System with Intel® Xeon® SoC Processor



Features

- Intel® Xeon® D-1539/D-1559 SoC processor
- Wide operating temperature (-20 ~ 50 °C)
- 4 x GigaLAN and 4 x USB 3.0
- 2 x RS-232/422/485 and 2 x RS232 serial ports (with expansion cable)
- 1 x 2.5" HDD/SSD, 1 x CFast, 1 x M.2
- 9 ~ 36 V_{DC} input power range
- IP40 dust proof for deployment in harsh environment
- Supports FlexIO and iDoor technology, flexible configure additional Comport, DIO, Remote switch IO
- Supports Advantech i-Modules
- Supports Advantech SUSI-API and embedded software

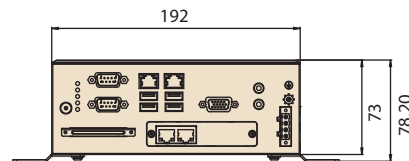
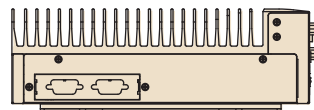
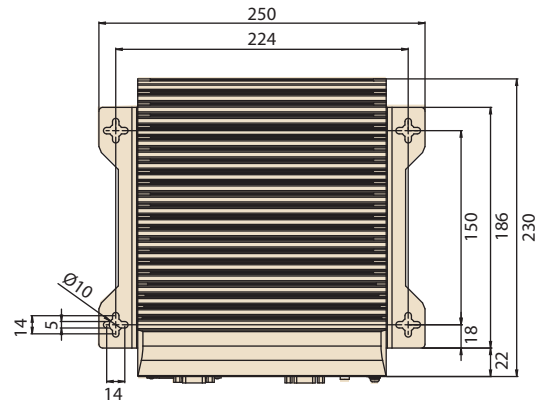
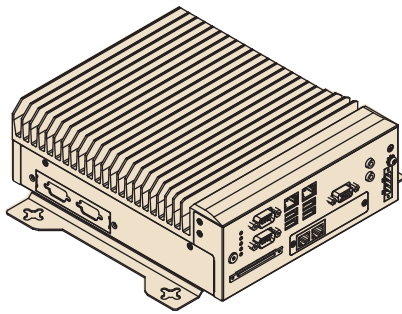


Specifications

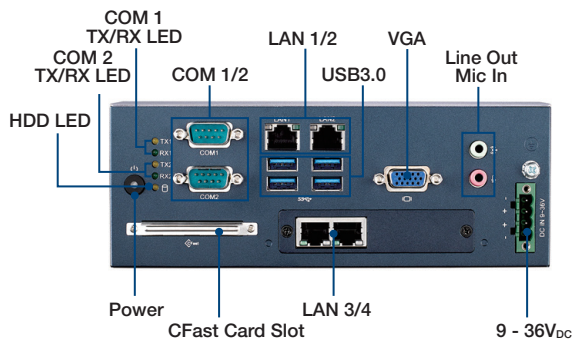
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|----------------|------------------------|---|-----------------------------------|------------------------------|
| System Chipset | CPU | D-1539 | D-1559 | |
| | Maximum Speed | 1.6GHz | 1.5GHz | |
| | Max Turbo Frequency | 2.2GHZ | 2.1GHz | |
| | L3 Cache | 12M | 18M | |
| | Core Number | 8 | 12 | |
| | TDP | 35W | 45W | |
| | BIOS | AMI® SPI 64 Mb | | |
| Memory | Technology | Dual-channel DDR4 2133/2400 MHz (supports ECC) | | |
| | Socket | 2 x 260-pin SODIMM (up to 16 GB per socket) | | |
| | Maximum Capacity | 32 GB | | |
| Display | Chipset | ASPEED 1400 with 256MB VGA memory provides basic 2D VGA functoin | | |
| | VGA | 1 x DP15, up to 1920 x 1200 maximum resolution | | |
| Ethernet | Controller | LAN1/2: Intel® i210IT (supports wake-on-LAN) LAN3/4: Intel® i210IT | | |
| | Interface | 4 x RJ45 | | |
| Storage | HDD | 1 x 2.5" HDD/SSD (up to 2 x 2.5" SSD by optional kit; 2 x 3.5" HDD by i-Module) | | |
| | CFast | 1 | | |
| | M.2 | 1 (NVMe PCIe x4, 22110; support M.2 2280 via optional bracket) | | |
| I/O | USB | 4 x USB 3.0 and 1 x internal USB 2.0 | | |
| | Serial Port | 2 x DB9, RS232/422/485 with automatic flow control and 2 x RS-232 (with optional cable expansion) | | |
| | Audio | 2 (1 x line out and 1 x mic in) | | |
| Security | TPM | Supports TPM 2.0 (Infineon SLB9665XQ2.0) | | |
| Expansion | Module | Supports Advantech i-Modules | | |
| | Mini PCIe | 1 x mini PCIe (does not support m-SATA) | | |
| LED and Switch | LED | 2 x TX, 2 x RX, and 1 x Storage | | |
| | Button | 1 x Power on/off switch | | |
| Power | Type | ATX/AT | | |
| | Input Voltage | 9 ~ 36 V _{DC} | | |
| | Power consumption | D-1539: Typical: 21.5W, Maximum: 45.0W D-1559: Typical: 29.9W, Maximum: 74.8W | | |
| Watchdog Timer | Output | System reset | | |
| | Interval | Programmable 1 ~ 255 sec/min | | |
| Environment | Temperature | Operating (w/ industrial wide-temp SSD) -20 ~ 50 °C with 0.7 m/s air flow | Operating (with HDD) 0 ~ 40 °C | Non-operating -40 ~ 85 °C |
| | Humidity | 95% @ 40 °C (non-condensing) | | |
| | Vibration | With SSD: 3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis With 2.5" HDD: 1 Grms @ 5 ~ 500 Hz, random, 1 hr/axis | | |
| | Shock | With SSD: 20G, IEC 60068-2-27, half-sine wave, 11 ms duration | | |
| Mechanical | Dimensions (W x H x D) | 73 x 192 x 230 mm (2.91" x 7.55" x 9.05") | | |
| | Weight | 2.9 kg (6.39 lbs) | | |
| | Installation | Desktop/wall mount | | |
| Certifications | EMC | CE/FCC Class B, CCC, BSMI | | |
| | Safety | UL, CCC, BSMI | | |

Dimensions

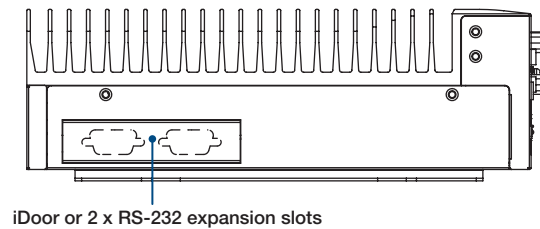
Unit: mm



Front View



Side View



Ordering Information

| Part Number | CPU | VGA | 2.5" HDD/SSD | CFast | M.2 | USB 3.0 | GbE | COM | PCIe |
|---------------|--------|-----|--------------|-------|-----|---------|-----|----------------------|---------------------|
| MIC-7900-S5A2 | D-1559 | 1 | 1 | 1 | 1 | 4 | 4 | 4, up to 6 via cable | i-Module (optional) |
| MIC-7900-S6A2 | D-1539 | 1 | 1 | 1 | 1 | 4 | 4 | 4, up to 6 via cable | i-Module (optional) |

Packing List

| Part Number | Description | Quantity |
|----------------|---|----------|
| MIC-7900 | MIC-7900 barebone system | 1 |
| 2001790000 | MIC-7900 startup manual (ENG+SC) | 1 |
| 2001790010 | MIC-7900 startup manual (TC) | 1 |
| 2061790000 | CD-ROM | 1 |
| 1701200220 | Dual DB9 port cable (for COM expansion) | 1 |
| 1652003234 | 4-pin Phoenix power connector | 1 |
| 1700013095-01 | SATA cable | 1 |
| 1700024372-01 | SATA power cable | 1 |
| 1990019498N000 | RAM thermal pad | 2 |
| 1960070543T005 | 2 x Mounting bracket | 2 |

Optional i-Modules*

| Part Number | Description |
|------------------|---|
| MIC-75M10-00A2 | 1-slot expansion module (1 x PCIe) |
| MIC-75M11-00A2 | 2-slot expansion module (1 x PCIe and 1 x PCI slots) |
| MIC-75M13-00A2 | 4-slot expansion module (1 x PCIe and 3 x PCI slots) |
| MIC-75M20-00C1 | 2-slot expansion module (2 x PCIe slots) |
| MIC-75M20-01A2** | 2-slot expansion module (2 x PCIe slots) |
| MIC-75M40-00A2** | 4-slot expansion module (4 x PCIe slots) |
| MIC-75G20-10A2 | GPU card expansion module (2 x PCIe and 2 x removable 2.5" storage bay) |
| MIC-75G30-00A2** | Dual GPU card expansion module (3 x PCIe and 2 x removable 2.5" storage bay, 1 x HDMI, 1 x DP) |
| MIC-75GF10-00A1 | MXM GPU expansion module (1 x MXM, 1 x PCIe and 2 x removable 2.5" storage bay, 1 x HDMI, 3 x DP) |
| MIC-75S00-00A1 | 2 x removable 2.5" storage bay |
| MIC-75S20-00A2 | 2-slot expansion storage module (2 x PCIe and 2 x removable 2.5" storage bay) |
| 98R17520301 | 2 x 3.5" HDD kit |

*Please refer to i-Module datasheet for more detail.

Embedded OS

| Part Number | Description |
|-------------|---------------------------------------|
| 2070014719 | WES7P MIC-7900 x64 V5.8.0 10MUI image |

Optional Accessories

| Part Number | Description |
|---------------------|---|
| Adaptor | |
| 96PSA-A230W24P4-3* | ADP A/D 100-240V 230W 24V C14 TERMINAL BLOCK 4P |
| 96PSA-A150W19P4-3 | ADP A/D 100-240V 150W 19V C14 TERMINAL BLOCK 4P |
| 1702002600 | Power cord (USA) UL/CSA, 3-pin, 10A, 125V, 1.83 M, 180 D |
| 1700022940-01 | Power cord PSE, 3-pin, 7A, 125V, 3M, DAC-ST01 |
| 1702002605 | Power Cord (EU), 3-pin, 10A, 250V 1.83M, 90D |
| Din Rail PSU | |
| 96PSD-A240W24-MN | A/D 100-240V 240W 24V NDR DIN RAIL |
| 1700031170-01 | DC-DC power cord, A cable TEM*4/TEM*4 UL2464 18AWG 150cm |
| 1700029720-01 | AC-DC power cord (US), M cable AC CONN 3P 183cm |
| 1700030520-01 | AC-DC power cord (CN), M cable conn 3P CCC 10A 250V 150cm |
| 1700031408-01 | AC-DC power cord (EU), M cable conn 3P/G-TEM*3 80CM |

* Please use 230W adaptor when i-Module is added.

Note:

- MIC-7900 supports Advantech iDoor modules (both MOS and PCM series), excluding the PoE model.
- The **PCM** series module requires a bracket (P/N: **1960065854N001**) that must be ordered separately.

Optional Flex I/O* & Kits

| Part Number | Description |
|---------------------|--|
| Flex I/O | |
| AIIS-DIO32-00A1E** | AIIS GPIO module (32 bit) |
| PCA-TPM-00B1E | TPM 2.0 module |
| 98R17500401 | MIC Remote power on/off FIO |
| 98R17500601 | MIC COMport kit FIO |
| 98R17500701 | MIC Remote power on/off kit for SFIO |
| 98R17500801 | MIC Reset/Remote power on/off/5VDC kit FIO |
| 98R17500901 | MIC GPIO kit FIO |
| Storage Kit | |
| 98R1752010E | 2nd 2.5" HDD/SSD kit (used in 2-slot i-Module) |
| 98R1752020E | 2 x 2.5" SSD kit (7mm thick SSD, used insides of MIC-7900) |
| Mounting Kit | |
| 98R17500210 | MIC Din Rail Mounting kit |
| 98R17500501 | MIC Wall Mounting kit |

* Please refer to Flex I/O datasheet for more detail.

** AIIS-DIO32 requires a DB37 bracket (P/N: 1960068787N002)

Note: To support Flex I/O, Dual LAN module will be replaced.