

MS-9A79

Palm-Size Box PC with Intel® Apollo Lake/Apollo Lake-I Series SoC Platform for Ultra Low-Power Fanless Solution



CERTIFIED EN
60068-2-1
60068-2-2
60068-2-30
Thermal-TX Class



Features

- Intel® Apollo Lake/Apollo Lake-I Series SoC
- LPDDR4 2133 MHz onboard memory up to 4GB
- Triple independent displays: Mini-DP, HDMI, LVDS
- 2 GbE LAN with RJ-45
- Mini-PCIe (Full size with NANO SIM-Holder), Mini-PCIe (Half size with mSATA) Slots
- SATA 3.0 (2.5" SSD/HDD) for storage
- 2 USB 3.2 Gen 1, 2 USB 2.0, 2 COM (2 RS-485), GPIO, Audio
- 4 opening reserved for antennas
- Anti-Vibration & Shockproof Design to Compliance IEC 61373
- Wide operating temperature : -20 ~ 70°C
- Compliance EN60068-2-1, EN60068-2-2, EN60068-2-30 TX Class
- DC-IN 12V

Ordering Information

| Part Number | Description |
|--|-------------|
| Please check MSI IPC website at http://ipc.msi.com for details. | |

Packing List

| Part Number | Description |
|--|-------------|
| Please check MSI IPC website at http://ipc.msi.com for details. | |

Optional Item

| Part Number | Description |
|--|-------------|
| Please check MSI IPC website at http://ipc.msi.com for details. | |

Specifications

| | | MS-9A79-A1 | MS-9A79-A2 | MS-9A79-A3 |
|---------------------------------|----------------------------------|--|---|--|
| System Processor | CPU | Intel® Atom™ x5 Processor E3940, QC, 9.5W | Intel® Celeron® Processor N3350, DC, 6W | Intel® Celeron® Processor J3455, QC, 10W |
| | Frequency | 1.6 GHz up to 1.8 GHz | 1.1 GHz up to 2.4 GHz | 1.5 GHz, up to 2.3 GHz |
| | L2 Cache | 2MB | | |
| | CPU Type | BGA | | |
| | Chipset | Integrated in SoC Process | | |
| | BIOS | AMI | | |
| Memory | Technology | Single-channel LPDDR4 2133 MHz | | |
| | Max. Capacity | Onboard 4 GB | | |
| | Socket | N/A | | |
| Graphic | Controller | Intel® HD Graphics | | |
| | Graphic Memory | Depends on CPU | | |
| | Multiple Display | 2 or 3 independent displays | | |
| | Display Interface | HDMI up to 3840 x 2160 @30 Hz Mini-DP up to 4096 x 2160 @60 Hz LVDS up to 1920 x 1200 @60 Hz (optional by cable) DVI-I up to 1920 x 1200 @60 Hz (optional by MS-99C0) | | |
| Ethernet | Controller | 2 x Intel® I210-IT GbE LAN | 2 x Intel® I211-AT GbE LAN | |
| Audio | Controller | Realtek® ALC887-VD2-CG HD Audio Codec | | |
| H/W Monitor | Watchdog Timer | 256-level Watchdog Timer | | |
| TPM | Controller | Pin Header | | |
| Expansion Slot | M.2 | N/A | | |
| | Mini-PCIe | 1 x Full-size (w/ NANO SIM-Holder) 1 x Half-size (Shared w/ mSATA) | | |
| Storage | SATA | 1 x 2.5" HDD/SSD Bay | | |
| | mSATA | 1 x Half-size (Shared w/ Mini-PCIe) | | |
| I/O Interface | RJ-45 | 2 | | |
| | PoE | N/A | | |
| | Audio | 1 x Line-out 1 x Mic-in | | |
| | USB | 2 x USB 2.0 2 x USB 3.2 Gen 1 | | |
| | Serial | 2 x COM ports COM1: RS-232/422/485, 0V/5V/12V COM2: RS-232/422/485, 0V/5V/12V | | |
| | GPIO | 16-bit (8*GPI; 8*GPO), 5V | | |
| | CANbus | CAN 2.0B (by BOM option) | | |
| | HDMI | 1 | | |
| | LVDS | 1 (by BOM option) | | |
| | VGA | N/A | | |
| Antenna | 4 openings reserved for antennas | | | |
| Power Supply | DC Input | DC-in 12V Jack (5.5mm/2.5mm) / Phoenix pluggable with latch (Support OCP/OVP Protection) | | |
| | AC Input | N/A | | |
| | IP Rating | N/A | | |
| Environment | Operating Temperature | -10~45°C (HDD) -20~70°C (w/ WT devices) Note: Thermal w/ Airflow:0.7m/s | -10 ~ 45°C (HDD) -10 ~ 55°C (SSD/mSATA) Note: Thermal w/ Airflow:0.7m/s | |
| | Operating Humidity | 10 ~ 90%, non-condensing | | |
| | Storage Temperature | -40 ~ 80°C | -20 ~ 80°C | |
| | Storage Humidity | 10 ~ 90%, non-condensing | | |
| | Vibration | IEC61373 Category 1, Class A | | |
| | Shock | IEC61373 Category 1, Class A | | |
| Physical characteristics | Dimensions (WxDxH) | 155 x 110 x 55 mm | | |
| | Weight | 1.1 kg | | |
| | Mounting | Wall mount (STD)/DIN-rail mount(STD)/VESA mount(by BOM option) | | |
| Certification | EMC | FCC, CE, RCM, VCCI, BSMI | | |
| | Safety | BSMI | | |
| Software Platform | OS Support | Windows 10 IoT Enterprise LTSC/SAC 1809 (64-bit, RS5) Linux Fedora 25 (by request) Linux Ubuntu 16.04 (by request) | | |