



539.00 EUR  
incl. 19% VAT, plus [shipping](#)

- Intel Apollo Lake !
- 2x Gigabit LAN !
- Fanless !
- Modular !



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MiTAC's MB1-10AP Embedded Box PC is the next generation box pc with Intel® Apollo Lake processor. The whole new SOC structure packs more powerful capability for your tasks or applications.

The MB1-10AP's 1.5 liter fan-less chassis design and expandable module design give it the flexibility to adapt to every workspace and environment, whether implemented as an Embedded Box PC. Din Rail mount support allows it to be used in factory environment and application. VESA mount support allows for space-saving and rear-mounting on flat-screen displays. Flexibilities also mean a rich array of I/O ports (including 3 x Ethernet RJ45, 4 x USB 3.0, 1 x HDMI, 2 x RS232/422/485, 1 x 3PIN Terminal Block Power Input, 1 x Expansion Socket) to add a variety of peripherals. Storage expandability is supported for high-density hard drives in 2.5" HDD bracket design. Two mPCIe (one shared with mSATA) slots provide the support of SSD and wireless interfaces which allow effortless connection to Wi-Fi and Bluetooth networks, and 4G connectivity. HDMI and one additional expansion display module extend your visual experience with support for dual displays.

#### Optional Modules

- MS-01VGA-D10 VGA Port Expansion Module
- MS-01DVI-D10 DVI-D Port Expansion Module
- MS-01DPN-D10 DisplayPort Expansion Module
- MS-02COM-D10 Expansion Module with 2 x RS232 / 422 / 485
- MS-08DIO-T10 Expansion Module with 8-bit Isolated DIDO (4 x DI, 4 x DO)

#### MB1-10AP (MB1-10AP) Specifications

MECHANICAL

|                        |                                                                                                     |
|------------------------|-----------------------------------------------------------------------------------------------------|
| THERMAL DESIGN         | Fanless                                                                                             |
| MOUNTING               | Wallmount / 100 mm x 100 mm<br>VESA Mount & Din Rail Mount<br>Combo Kit (Optional)                  |
| DIMENSIONS (W X D X H) | 6.9" x 4.1" x 2.2" (170 x 105 x 57 mm)                                                              |
| WEIGHT                 | 1.3kg (2.8 lb)                                                                                      |
| MATERIAL               | Top cover: Aluminum Alloy /<br>Bezel and chassis: Steel                                             |
| CPU                    | Intel® Apollo Lake-M N4200 /<br>N3350 Processor                                                     |
| CHIPSET                | Intel® SoC Integrated                                                                               |
| SYSTEM MEMORY          | DDR3L 1866 MHz / 1 x 204-pin<br>SO-DIMM / Max. 8GB (Non-ECC)                                        |
| GRAPHICS               | Intel® HD Graphics                                                                                  |
| DISPLAY INTERFACE      | HDMI 1.4 / Optional<br>DisplayPort/VGA/DVI-D by<br>Expansion Module                                 |
| STORAGE SLOT           | 1 x 2.5 HDD / SSD (Default w/<br>HDD Bracket) / 1 x mSATA                                           |
| ETHERNET               | 2 x Intel® I210-IT Giga LAN (2 x<br>PoE LAN: Optional) / 1 x Realtek<br>RTL8154 LAN (Up to 480Mbps) |
| AUDIO                  | Realtek® ALC662                                                                                     |
| I/O CHIPSET            | Nuvoton NCT6116D                                                                                    |
| TPM                    | Nuvoton NPCT750AAAYX<br>TPM2.0 (Optional)                                                           |

SYSTEM

|                  |                                                                                                                                                                                                                                        |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EXPANSION SLOT   | LTE/Wireless: Mini PCIe Full size<br>(USB / PCIe), w/ SIM Card<br>Holder (w/ Full to Half size<br>adapter plate) / Storage: mPCIe<br>Full size (USB / PCIe / SATA)                                                                     |
| INTERNAL SPEAKER | 1 x Buzzer                                                                                                                                                                                                                             |
| INDICATOR        | Power Button / Power LED / HDD<br>LED                                                                                                                                                                                                  |
| FRONT I/O        | 1 x HDMI 1.4 / 4 x USB 3.0 / 2 x<br>SMA Antenna (Optional for<br>WiFi/LTE function) / 1 x Xpansion<br>Module Door / 2 x RS232 / 422 /<br>485 (Support Power 5V / 12V)<br>3 x RJ-45 / 1 x Mic-in / 1 x<br>Line-out / 1 x 3-pin Terminal |
| REAR I/O         | Block Power Input / 2 x SMA<br>Antenna (Optional for WiFi/LTE<br>function)                                                                                                                                                             |
| WATCHDOG TIMER   | 1~255 steps by software program                                                                                                                                                                                                        |
| POWER INPUT      | 8~24V Wide Range DC Input w/<br>Terminal Block Connectivity                                                                                                                                                                            |
| POWER ADAPTER    | Optional                                                                                                                                                                                                                               |

POWER REQUIREMENT

|               |                       |                                                                                                                                                                                                          |
|---------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ENVIRONMENTAL | OPERATING TEMPERATURE | -25°C to 70°C (For non-PoE SKU) / -25°C to 60°C (For PoE SKU) / with 0.7m/s Air Flow and Wide Temperature                                                                                                |
|               | OPERATING HUMIDITY    | Memory/Storage<br>10% ~ 90% R/H<br>(Non-condensing)                                                                                                                                                      |
|               | VIBRATION RESISTANCE  | Operating: 5Hz~500Hz / 5Grms / 3Axis (w/ SSD, according to IEC60068-2-64)                                                                                                                                |
|               | SHOCK RESISTANCE      | Operating: 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)                                                                                                                        |
|               | CERTIFICATION         | CE / FCC Class A                                                                                                                                                                                         |
| OS            | OS SUPPORT            | Windows® 10 64-bit / Linux (support by request)                                                                                                                                                          |
| PACKING LIST  | PACKAGE               | 1 x Driver CD / 1 x Quick Installation Guide / 1 x Embedded System / 1 x Wall Mount Brackets (2PCS in 1 set) / 1 x 3 pin Terminal Block Power Connector / 1 x Full to Half Size mPCIe Card Adapter Plate |
|               |                       |                                                                                                                                                                                                          |