

Intel® Celeron®/Core™ i Fanless Box Computer with 6 x COM (2 x RS-232/485), 7 x USB, 2 x LAN

## Overview

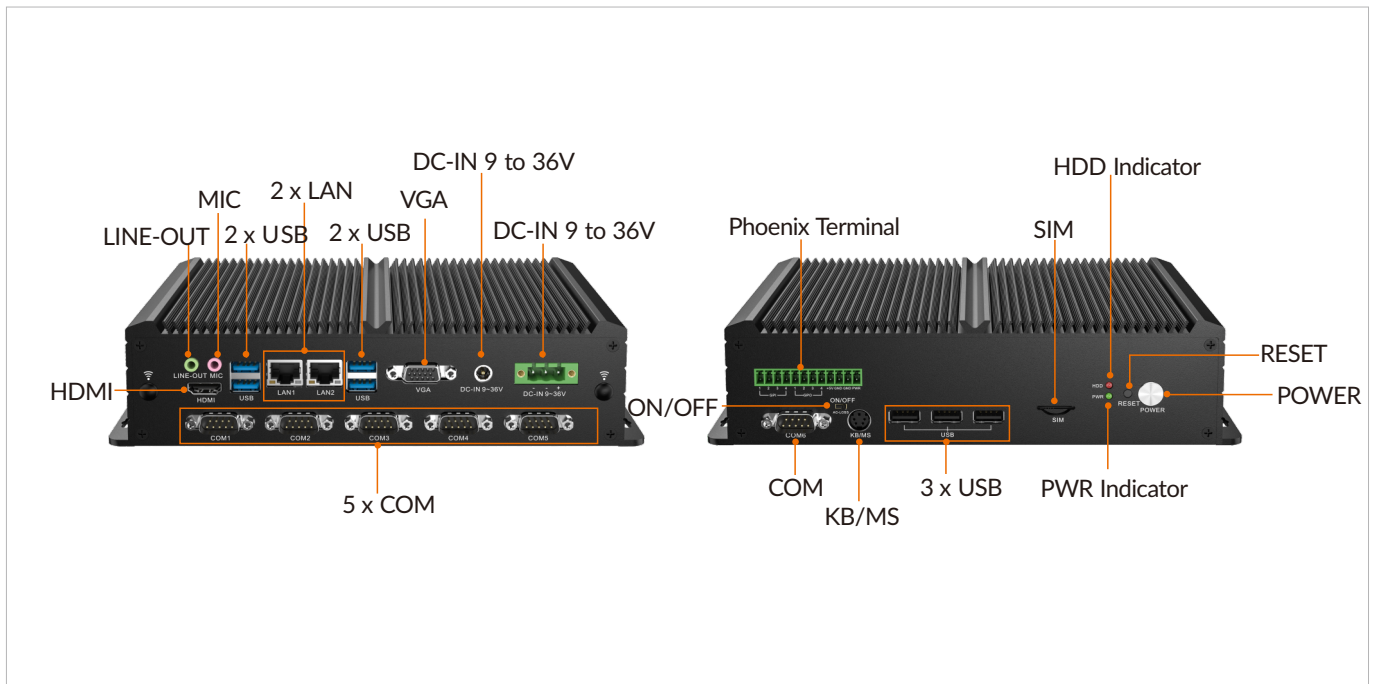
The MBC-2500 fanless industrial computer features a cableless design, ensuring excellent resistance to vibrations and interferences. Its modular design, featuring a CPU board that plugs into an I/O board, not only reduces the time and cost required for product updates but also allows for easy customization to meet specific customer application needs. Moreover, the MBC-2500 offers a wide range of I/O interfaces and expansion, including COM, GbE LAN, GPIO, WiFi, and 4G connectivity.

## Features

- Intel® Celeron® Core™ i3/i5/i7 processor
- 6 x COM (2 x RS-232/485), 2 x LAN, 7 x USB, 1 x VGA, 1 x HDMI
- 1 x 2.5" SATA HDD/SSD, 1 x mSATA
- 1 x Full length mini PCIe, 1 x M.2 NVME
- 9 to 36VDC power input



## I/O Interfaces



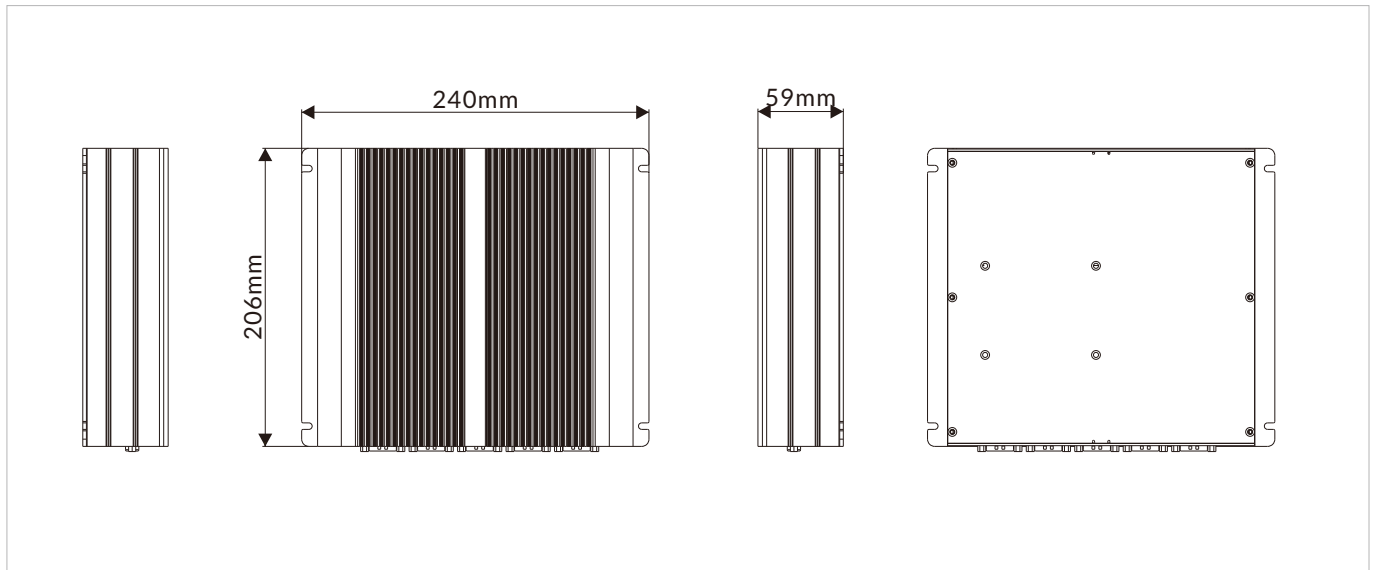
## Specifications

| System                 | MBC-2500-J1900                                          |  | MBC-2500-5020U           | MBC-2500-6300U                                                   |
|------------------------|---------------------------------------------------------|--|--------------------------|------------------------------------------------------------------|
| CPU                    | Intel® Celeron® J1900                                   |  | Intel® Core™ i3-5020U    | Intel® Core™ i5-6300U                                            |
| CPU TDP                | 10W                                                     |  | 10W                      | 15W                                                              |
| Memory                 | 1 x DDR3L 1333 MHZ SO-DIMM up to 8GB                    |  |                          | 2 x DDR4 2133 MHZ SO-DIMM up to 32GB                             |
| Storage                | 1 x 2.5" SATA HDD<br>1 x mSATA                          |  |                          | 1 x 2.5" SATA HDD<br>1 x mSATA<br>1 x M.2 2260/2280 NVME PCIe x4 |
| BIOS                   | AMI UEFI                                                |  |                          |                                                                  |
| Watchdog Timer         | Software programmable. Supports 256 levels system reset |  |                          |                                                                  |
| I/O Ports              |                                                         |  |                          |                                                                  |
| USB                    | 6 x USB 2.0, 1 x USB 3.0                                |  | 5 x USB 2.0, 2 x USB 3.0 | 3 x USB 2.0, 4 x USB 3.0                                         |
| Serial                 | 6 x COM (COM5/6 supports RS-232/485)                    |  |                          |                                                                  |
| Ethernet               | 2 x RJ45 GbE Intel® I210AT                              |  |                          |                                                                  |
| Display                | 1 x VGA, 1 x HDMI                                       |  |                          |                                                                  |
| SIM Card Slot          | 1 x SIM card slot                                       |  |                          |                                                                  |
| DIO                    | 4 x DI, 4x DO                                           |  |                          |                                                                  |
| Expansion Slot         |                                                         |  |                          |                                                                  |
| Mini PCIe              | 1 x Full length mini PCIe                               |  |                          |                                                                  |
| M.2                    | 1 x M.2 2260/2280 NVME PCIE x4                          |  |                          |                                                                  |
| RF Communication       |                                                         |  |                          |                                                                  |
| Wi-Fi                  | Mini PCIe expansion (optional)                          |  |                          |                                                                  |
| Cellular               | Mini PCIe expansion (optional)                          |  |                          |                                                                  |
| Bluetooth              | Mini PCIe expansion (optional)                          |  |                          |                                                                  |
| GNSS                   | Mini PCIe expansion (optional)                          |  |                          |                                                                  |
| Audio                  |                                                         |  |                          |                                                                  |
| Audio                  | Mic in, line out                                        |  |                          |                                                                  |
| Power                  |                                                         |  |                          |                                                                  |
| Button                 | Yes                                                     |  |                          |                                                                  |
| Remote Power On/Off    | 2-pin remote switch                                     |  |                          |                                                                  |
| DC Input               | 9 to 36VDC                                              |  |                          |                                                                  |
| Power Mode             | AT/ATX                                                  |  |                          |                                                                  |
| Operating System       |                                                         |  |                          |                                                                  |
| Windows                | Windows 7, Windows 10                                   |  |                          |                                                                  |
| Linux                  | Ubuntu                                                  |  |                          |                                                                  |
| Mechanical             |                                                         |  |                          |                                                                  |
| Dimensions (W x D x H) | 240 x 206 x 59mm (9.45 x 8.11 x 2.32 inches)            |  |                          |                                                                  |
| Weight (N.W.)          | 2.5 kg (5.51 lbs)                                       |  |                          |                                                                  |
| Mounting               | Wall mount                                              |  |                          |                                                                  |
| Material               | Aluminum alloy                                          |  |                          |                                                                  |
| Environment            |                                                         |  |                          |                                                                  |
| Operating Temperature  | -10 to 60°C(14 to 140°F)                                |  |                          |                                                                  |
| Storage Temperature    | -20 to 60°C(-4 to 140°F)                                |  |                          |                                                                  |
| Relative Humidity      | 10%~95% @ 40°C (104°F), non-condensing                  |  |                          |                                                                  |
| Certification          |                                                         |  |                          |                                                                  |
| EMC                    | CE, FCC Class A                                         |  |                          |                                                                  |

## Specifications

| System                 | MBC-2500-8145U                                                 | MBC-2500-8265U        | MBC-2500-8565U        |
|------------------------|----------------------------------------------------------------|-----------------------|-----------------------|
| CPU                    | Intel® Core™ i3-8145U                                          | Intel® Core™ i5-8265U | Intel® Core™ i7-8565U |
| CPU TDP                | 15W                                                            |                       |                       |
| Memory                 | 2x DDR4 2400 MHZ SO-DIMM up to 32GB                            |                       |                       |
| Storage                | 1 x 2.5" SATA HDD<br>1 x mSATA, 1 x M.2 2260/2280 NVME PCIe x4 |                       |                       |
| BIOS                   | AMI UEFI                                                       |                       |                       |
| Watchdog Timer         | Software programmable. Supports 256 levels system reset        |                       |                       |
| I/O Ports              |                                                                |                       |                       |
| USB                    | 3 x USB 2.0, 4 x USB 3.0                                       |                       |                       |
| Serial                 | 6 x COM (COM 5/6 supports RS-232/485)                          |                       |                       |
| Ethernet               | 2 x RJ45 GbE Intel® I210AT                                     |                       |                       |
| Display                | 1 x VGA, 1 x HDMI                                              |                       |                       |
| SIM Card Slot          | 1 x SIM card slot                                              |                       |                       |
| DIO                    | 4 x DI, 4 x DO                                                 |                       |                       |
| Expansion Slot         |                                                                |                       |                       |
| Mini PCIe              | 1 x Full length mini PCIe                                      |                       |                       |
| M.2                    | 1 x M.2 2260/2280 NVME PCIE x4                                 |                       |                       |
| RF Communication       |                                                                |                       |                       |
| Wi-Fi                  | Mini PCIe expansion (optional)                                 |                       |                       |
| Cellular               | Mini PCIe expansion (optional)                                 |                       |                       |
| Bluetooth              | Mini PCIe expansion (optional)                                 |                       |                       |
| GNSS                   | Mini PCIe expansion (optional)                                 |                       |                       |
| Audio                  |                                                                |                       |                       |
| Audio                  | Mic in, line out                                               |                       |                       |
| Power                  |                                                                |                       |                       |
| Button                 | Yes                                                            |                       |                       |
| Remote Power On/Off    | 2-pin remote switch                                            |                       |                       |
| DC Input               | 9 to 36VDC                                                     |                       |                       |
| Power Mode             | AT/ATX                                                         |                       |                       |
| Operating System       |                                                                |                       |                       |
| Windows                | Windows 10                                                     |                       |                       |
| Linux                  | Ubuntu                                                         |                       |                       |
| Mechanical             |                                                                |                       |                       |
| Dimensions (W x D x H) | 240 x 206 x 59mm (9.45 x 8.11 x 2.32 inches)                   |                       |                       |
| Weight (N.W.)          | 2.5 kg (5.51 lbs)                                              |                       |                       |
| Mounting               | Wall mount                                                     |                       |                       |
| Material               | Aluminum alloy                                                 |                       |                       |
| Environment            |                                                                |                       |                       |
| Operating Temperature  | -10 to 60°C(14 to 140°F)                                       |                       |                       |
| Storage Temperature    | -20 to 60°C(-4 to 140°F)                                       |                       |                       |
| Relative Humidity      | 10%~95% @ 40°C (104°F), non-condensing                         |                       |                       |
| Certification          |                                                                |                       |                       |
| EMC                    | CE, FCC Class A                                                |                       |                       |

## Dimensions



## Optional Accessories

| Part No.        | Description                    |
|-----------------|--------------------------------|
| A.02.001.000022 | AC/DC power adaptor 60W 12V 5A |
| C.02.009.000039 | AC/DC power adaptor 84W 12V 7A |

## Ordering Information

| Part No.       | Description                                                                                                |
|----------------|------------------------------------------------------------------------------------------------------------|
| MBC-2500-J1900 | Celeron® J1900 MBC with 6x COM (2x RS-232/485), 2x LAN, 7x USB, 1x VGA, 1x HDMI, 1x SIM socket, 9 to 36VDC |
| MBC-2500-5020U | Core™ i3-5020U MBC with 6x COM (2x RS-232/485), 2x LAN, 7x USB, 1x VGA, 1x HDMI, 1x SIM socket, 9 to 36VDC |
| MBC-2500-8145U | Core™ i3-8145U MBC with 6x COM (2x RS-232/485), 2x LAN, 7x USB, 1x VGA, 1x HDMI, 1x SIM socket, 9 to 36VDC |
| MBC-2500-6300U | Core™ i5-6300U MBC with 6x COM (2x RS-232/485), 2x LAN, 7x USB, 1x VGA, 1x HDMI, 1x SIM socket, 9 to 36VDC |
| MBC-2500-8265U | Core™ i5-8265U MBC with 6x COM (2x RS-232/485), 2x LAN, 7x USB, 1x VGA, 1x HDMI, 1x SIM socket, 9 to 36VDC |
| MBC-2500-8565U | Core™ i7-8565U MBC with 6x COM (2x RS-232/485), 2x LAN, 7x USB, 1x VGA, 1x HDMI, 1x SIM socket, 9 to 36VDC |