



Main Features

- Intel® Celeron® processor, Bay Trail J1900, TDP 10W.
- 1 x SO-DIMM DDR3L with non-ECC SO-DIMM 1333MHZ up to 4GB.
- Support Multi Display VGA or LVDS
- 2 x Intel® GbE LAN ports, 4 x USB3.0, 6 x USB2.0, 1 x PS2, 1 x RS232, 1 x RS232/485/422.
- 1 x Pen Mount 9000 Resistive type touch controller.
- 1 x MPG, 8DI/4DO/ WDT, SM Bus, DC24V

Product Overview

MARS355 is fan less box PC based on Intel® Celeron® processor, Bay Trail J1900, TDP 10W CPU. It comes with one DDR3L DIMM socket up to 4GB DDR3L 1333 with Non-ECC support and integrated HD Graphic controller. MARS355 operates temperature range from 0°C to 50°C. This fan less box is aimed at embedded applications for outdoor or semi-outdoor environment. Such as industrial automation, CNC machine, Robot, AI, Machine Vision applications...etc.

Specifications

CPU / Chipset

- Intel® Celeron® processor, Bay Trail J1900, 2.0GHz, 4-core processor.

Main Memory

- 1x 204-pin SO-DIMM DDR3L-1333MHz 4GB Max.

BIOS

- AMI (UEFI)

Display

- 1 x LVDS dual channel 18/24bit.

System

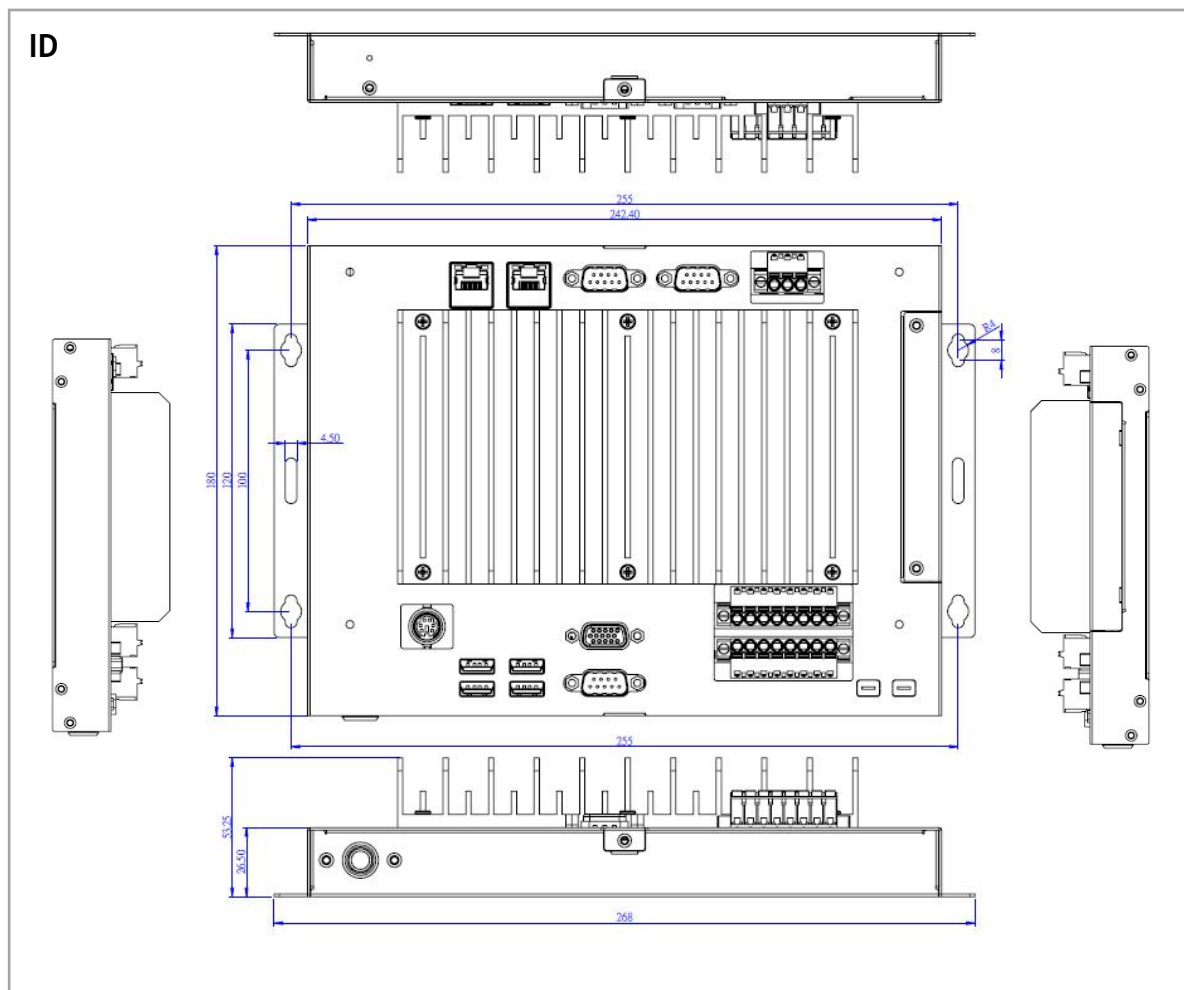
- FPGA:
 - Use TI XIO2001 PCIe to PCI bridge
 - Use LATTICE LCMXO2-1200UHC FPGA
- 1 x Encoder
- 8 x D/I , 4 x D/O
- 1x Watchdog Timer Alert
- IRQ exclusive
- D 0~D15, D/I 0~7, D/O 0~7
- Use Everspin MR256A08BYS35 NVRAM
- COM3: for touchscreen controller, PenMount 9000 series R/S touch controller (refer to the attached)

Storage

- 1 x M.2 2280 M-Key

Rear I/O

- 2x RJ45 (Vertical type connector)
- 2x USB3.0 dual stack USB (Vertical type connector)
- 1x 3pin terminal block, 24VDC input, connector use 2EHDVM-03P (refer to the attached)
- 1x PS2 (Vertical type connector)
- 1x DB9 for COM1, RS232 (vertical type connector)
- 1x DB9 for COM2, RS232/422/485 (vertical type connector)
- 1x DB15 for VGA
- 2x 8pin terminal block for 8 D/I, 4 D/O, WDT Timer Alert (refer to the attached)
- 2x Mechatrolink (MIII)



Power Requirement

- 1x 3-pin terminal block for DC power input.
- DC24 input $\pm 10\%$
- AT/ATX power mode (by jumper setting, default AT)
- 1x 4pin +12VDC/1A output (refer to the attached)
Pin define: +12V, +12V, GND, GND

Dimensions

- 242.4mm X 180mm X 53.25 mm (without mounting bracket)
- 268mm X 180mm X 53.25 mm (with mounting bracket)

Environment

- Board level operation temperature : -10°C to 60°C
- Storage temperature : -20°C to 85°C
- Relative humidity:
10% to 90% (operating, non-condensing)
5% to 90% (non-operating, non-condensing)

Certifications

- Meet CE / FCC Class A

Shock

IEC 60068 2-27

- Faces: 6 sides
- Duration: 11ms
- Acceleration : SSD : 50G

Vibration

Non-operation (X-Y-Z): Sine vibration

Sine wave vibration test : Acceleration: 2g rms

Frequency: 5 – 500 Hz

Test Axis: X,Y,Z axis

Test Time: 1 Hour per axis

Total Test Time: 3 Hour

Operation (X-Y-Z): Random vibration

Random vibration test (Operating) : Accelerate: 2g rms

Frequency: 5 – 500 Hz

Test Axis: X,Y,Z axis

Test Time: 1 Hour (Each axis).

Total Test Time: 3 Hours

Ordering Information

Barebone

- MARS355 (P/N: 6879MR350000F)

J1900 + FPGA + MII

1 VGA / 1 LVDS / 4 USB3.0, DDR3L up to 4GB / 1 M.2 support 2280

2 x 8pin terminal block for 8xD/I & 4xD/O / 24V in put

- MARS355-E (P/N: 10JF0MARS02X0)

J1900 + FPGA

1 VGA / 1 LVDS / 4 USB3.0, DDR3L up to 4GB / 1 M.2 support 2280

2 x 8pin terminal block for 8xD/I & 4xD/O / 24V in put