MARS355

Motion Automation Relay System
Intel Celeron processor, Bay Trail J1900

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 a fanless box PC based on Intel® J1900 processor. It comes with one DDR3L DIMM socket up to 4GB DDR3L 1333 with Non-ECC support and integrated HD Graphic controller. MARS355 can operate at temperatures from 0° C to 50° C. This fanless box is a controller suitable for applications such as industrial automation, CNC machine tools, laser cutting machines, wire cutting machines, spot welding machines, sand mills, etc. It can be equipped with a touch screen to meet the needs of the human-machine interface panel controller.

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 Encodeer
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)

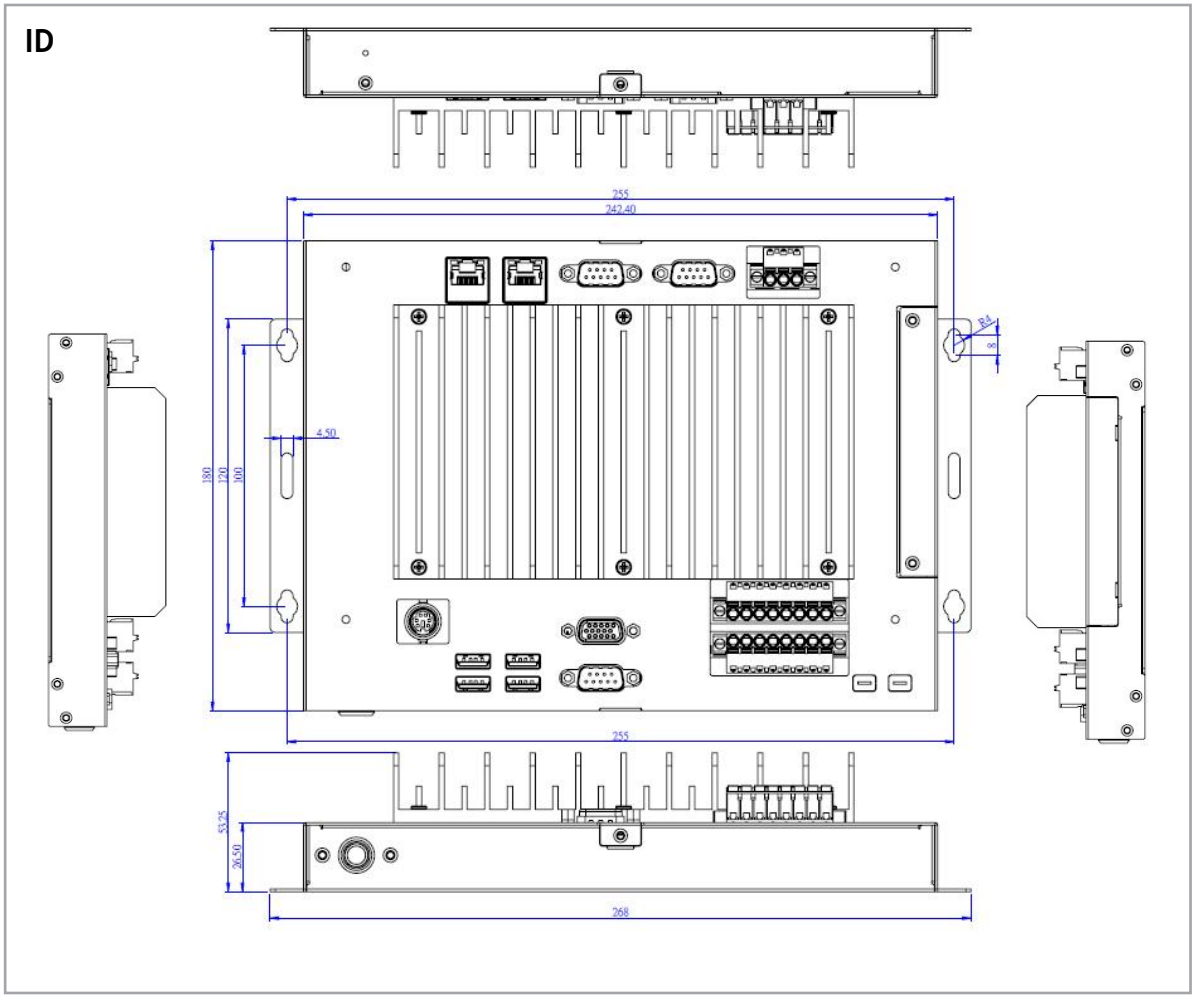
Storage

- 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)

ID



Power Requirement

- 1x 3-pin terminal block for DC power input.
- DC24 input ±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 + MIII
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