ADVANTECH MIO-2375 Board Computers User Manual
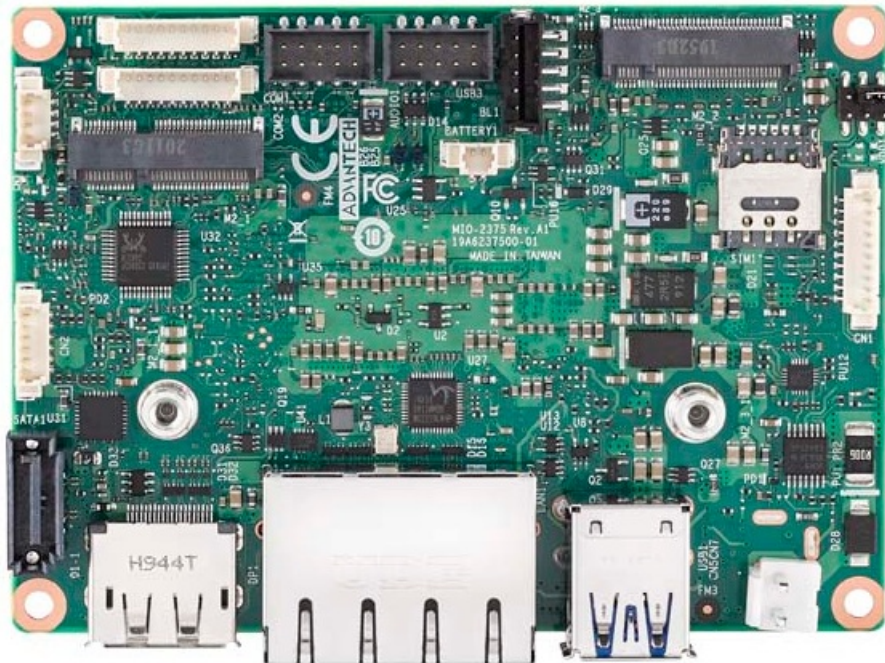
ADVANTECH MIO-2375 Board Computers

Packing List

Before card installation, check that the following items are included in your shipment:

1. 1 x MIO-2375 single-board computer
2. 1 x Startup manual
3. 1 x SATA cable
4. 1 x Audio cable
5. 2 x COM cable
6. 1 x SATA power cable
7. 1 x USB cable
8. 1 x AT power cable
9. 1 x Cooler (heatsink)
10. 1 x Screw kit (4 x standoffs)
11. 1 x DeviceOn package

If any of the above items are missing or damaged, contact your distributor or sales representative immediately.

Note 1: For more information regarding MIO-2375, refer to the Advantech website for further information.
Note 2: Acrobat Reader is required to view any PDF

Specifications

General

- **CPU:**
  - Intel® i7-1185G7E/1185GRE quad-core, base frequency 1.8 GHz, max. turbo frequency 4.4 GHz
  - Intel® i5-1145G7E quad-core, base frequency 1.5 GHz; max. turbo frequency 4.1 GHz
  - Intel® i3-1115G4E dual-core, base frequency 2.2 GHz; max. turbo frequency 3.9 GHz
- **System Memory**

- Dual-channel, onboard LDDR4x @ 4267 MHz, up to 32 GB
- **Cache**
  - Intel® i7-1185G7E/1185GRE: 12 MB
  - Intel® i5-1145G7E: 8 MB
  - Intel® i3-1115G4E: 6 MB
- BIOS: AMI uEFI 256 Mbit
- Watchdog Timer: 255 timer intervals, programmable via software; multi-level WDT (configured via iManager)
- Battery: Lithium 3 V/210 mAH
- Audio: High definition (HD) audio, Line-In, Line-Out, Mic-In

Expansion Interface

- 1 x M.2 B-Key 2242/3042 (M-Key available upon request)
- 1 x M.2 E-Key 2230

Display

- Controller: Intel® Iris® Xe Graphics
- Maximum Resolution:
  - Display Port: DP 1.4 (DP++), up to 4096 x 2304 x 36 bpp @ 60 Hz; with DSC 7680 x 4320 x 30 bpp @ 60 Hz
  - Embedded DisplayPort: eDP 1.4 HBR3, up to 4096 x 2304 x 36 bpp @ 60 Hz; with DSC 7680 x 4320 x 30 bpp @ 60 Hz
  - Optional MIPI-DSI: MIPI-DSI 2.5 GHz, up to 3200 x 2000 x 24 bpp @ 60 Hz; with DSC 5120 x 3200 x 24 bpp @ 60 Hz
  - Dual Display: DP + eDP/MIPI-DSI

Ethernet Interface

- Speed: 10/100/1000 Mbps
- Controller: GbE1 – Intel i219, GbE2 – Intel i210-AT

Mechanical and Environmental

- Dimensions: 100 x 72 mm/3.9 x 2.8 in
- Power Supply Type: Supports ACPI
- Power Requirements: +12 V ± 10% (supports 2-pin AT power connector and DC jack as a default)
- Operating Temperature: 0 ~ 60 °C/32 ~ 140 °F Extended: -40 ~ 85 °C/-40 ~ 185 °F
- Weight: 0.26 kg/0.57 lb

Jumpers and Connectors

The board features several jumpers that allow the system to be configured according to the application. The function of each jumper and connector is listed below..

Jumpers	
Label	**Function**
SW1	Automatic Power On Setting
VDD1	LCD Power Setting

Connectors	
Label	**Function**
CN1	Front panel
CN2	GPIO
CN3	I2C
CN4	FAN
CN5	DC power in
Battery1	RTC battery
EDP1	eDP
BL1	Inverter power output
DP1	DP++
USB1	USB2.0+3.2
USB3	Internal USB
M2_1	M.2 E-key
M2_2	M.2 B/M-key
SIM1	Nano SIM
LAN1	RJ45_2x1_W/XFMR&LED
SATA1	SATA_7V
Audio1	Audio
COM1	COM1
COM2	COM2

Jumpers and Connectors (Cont.)

| SW1	Automatic Power On Setting
Setting	Function
(1-8) on	AT mode (default)
(1-8) off	ATX mode
(3-6) on	Clear CMOS
(3-6) off	Normal (retain CMOS)
(2-7) (4-5)	Test only

Load BIOS Defaults

- Step 1: Power off the device
- Step 2: Move the DIP switch from Position 3 to 6, then power on the device
- Step 3: Access the BIOS and load default settings (do not clear time or clear CMOS) Pop out to remind users to shut the device down and move the DIP switch from Position 6 to 3.
- Step 4: Restart the device

Clear CMOS

Remove the battery (battery 1) The system will stop for 3 seconds, show checksum errors, and clear time settings.

VDD1	LCD Power
Setting	Function
(1-3)	+3.3V (default)
(3-5)	+5V
(3-4)	+12V
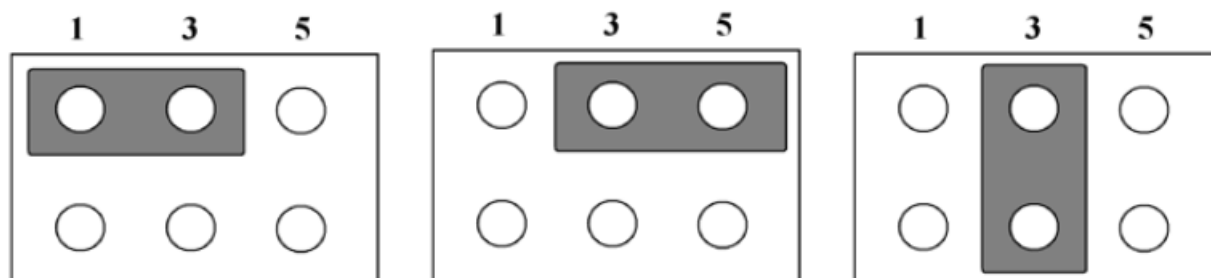
Caution: The computer is provided with a battery-powered real-time clock circuit. Batteries are at risk of exploding if incorrectly replaced. Replace only with same or equivalent type as recommended by the manufacturer. Discard used batteries according to manufacturer's instructions.
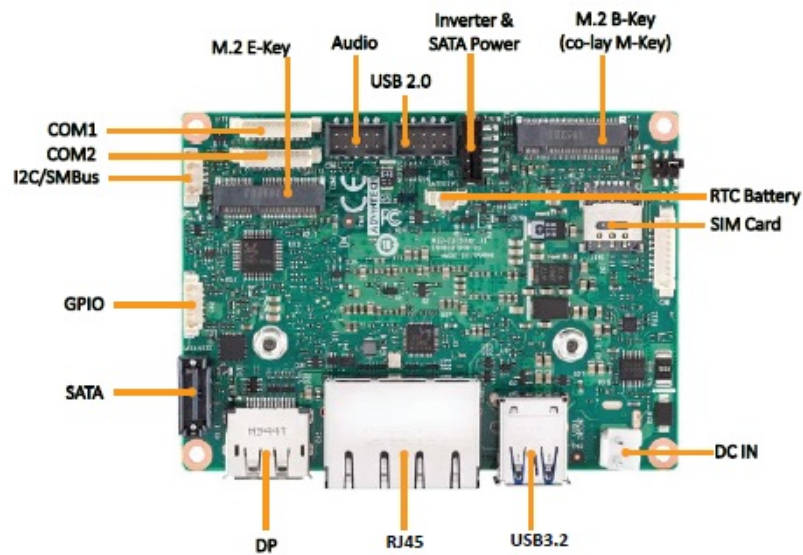
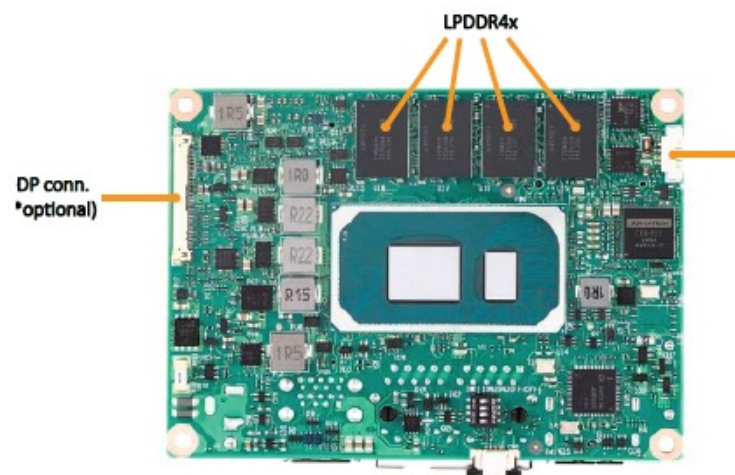## Connector Locations

Figure 1. Connector Locations (Top)

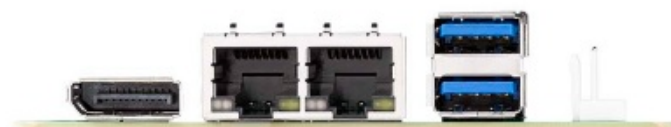
Figure 2. Connector Locations (Underside)

Figure 3. Connector Locations (Coastline)

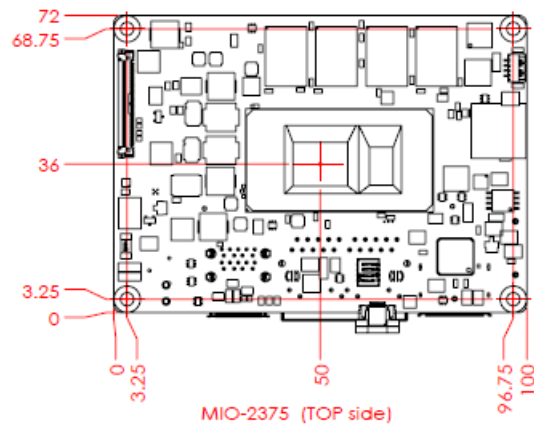**Mechanical Drawings**

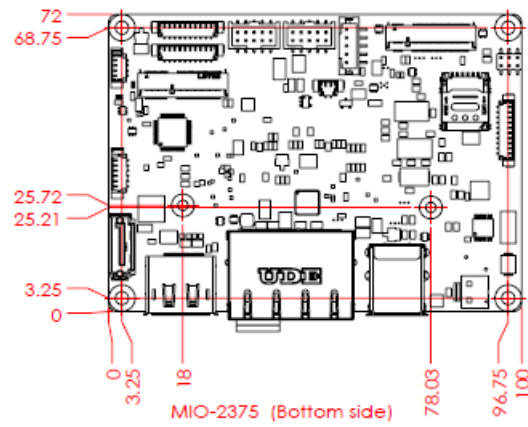*Figure 4. Mechanical Drawing (Top View)*

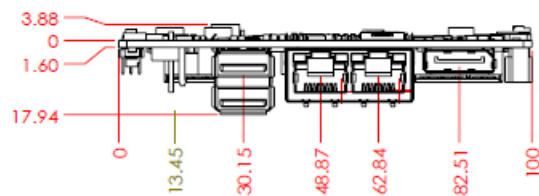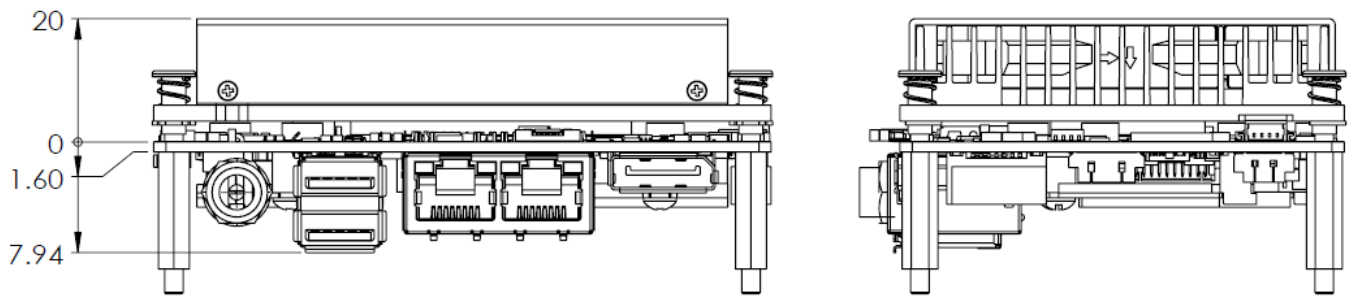*Figure 5. Mechanical Drawing (Underside View*

Figure 6. Mechanical Drawing (Side View)

Figure 7. Mechanical Diagram (with Cooler)

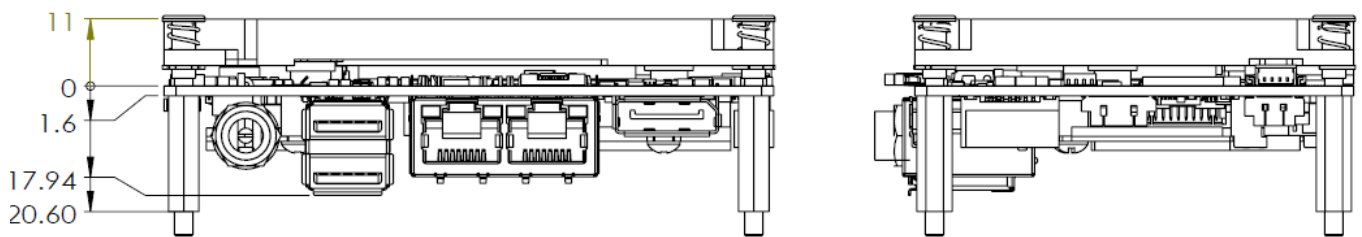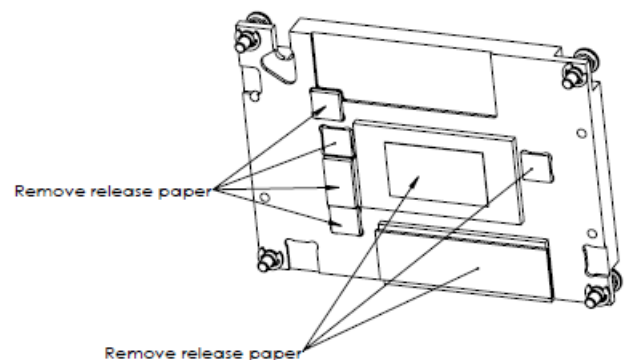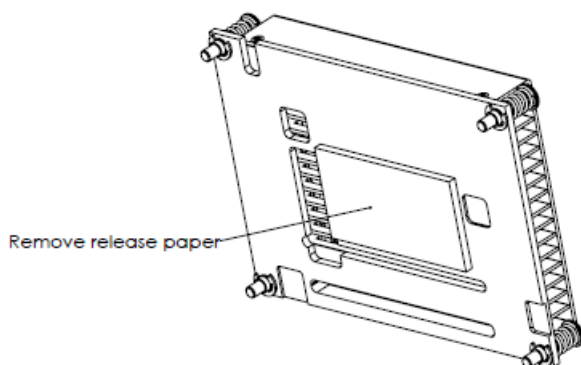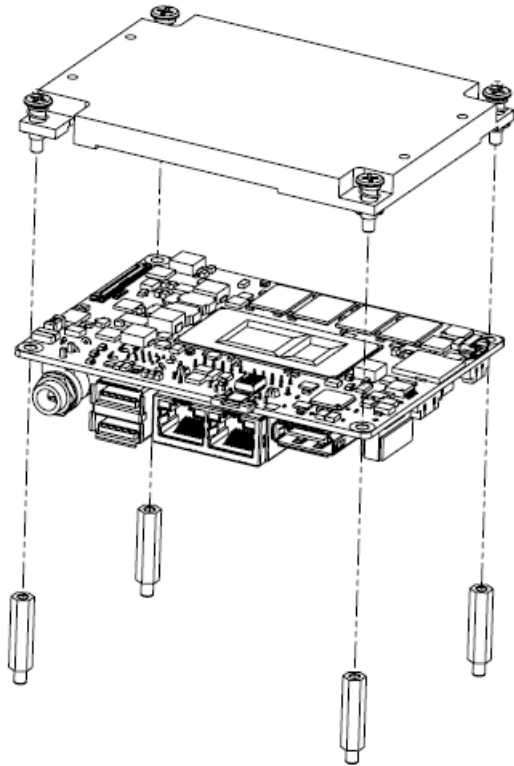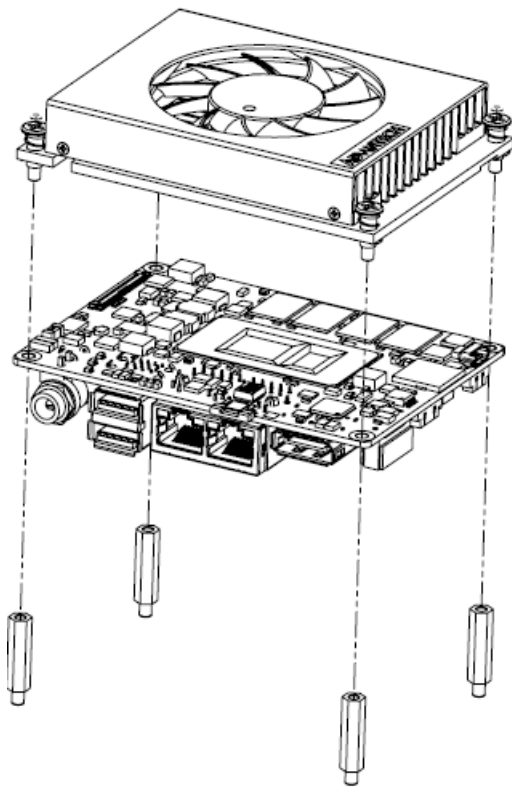*Figure 8. Mechanical Diagram (with Heat Spreader)*

Quick Installation Guide

Retreive the cooler/heatspreader from the accessory box. Remove the release paper from the thermal pads.

Retreive the 4 x standoffs from the accessory box. Install the cooler/heatspreader according to the illustrations provided below.

Documents / Resources

ADVANTECH MIO-2375 Board Computers [pdf] User Manual
MIO-2375 Board Computers, MIO-2375, Board Computers, Computers

References

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