

MIO-5375 3.5" MI/O-Compact SBC, 11th Gen. Intel® Core™ U-series (i7/i5/i3/Celeron®) Startup Manual

Packing List

Before you begin installing your board, please make sure that the following items have been shipped:

- 1 x MIO-5375 SBC
- 1 x SATA cable 30cm (P/N: 1700006291)
- 1 x SATA power cable 35cm (P/N: 1700031583-01)
- 1 x USB2.0 cable 20cm (P/N: 1700030406-01)
- 1 x Audio cable 20cm (P/N: 1700019584-01)
- 2 x COM RS-232/422/485 cable 20cm (P/N: 1700030404-01)
- 2 x COM RS-232 cable 20cm (P/N: 1700031582-01)
- 1 x Cooler (heatsink) (P/N:1970004884T001/1970004794T001)
- 1 x Startup manual (P/N: 2046537500)
- 1 x Mini jumper (10pcs package)
- 1 x Screw kit (2 x sets screws and post for M.2 device & 4 sets of screws and stand-off)
- 1 x DeviceOn package

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

Specifications

General

- **CPU:**
 - Intel® Core™ i7-1185G7E (Quad-Core, 4.40 GHz)
 - Intel® Core™ i5-1145G7E (Quad-Core, 4.10 GHz)
 - Intel® Core™ i3-1115G4E (Quad-Core, 3.90 GHz)
- **System memory:** Dual Channel/SODIMM DDR4-3200 MT/s, up to 64 GB
- **BIOS:** AMI EFI 256Mbit
- **Watchdog timer:** 65536 level, 0~65535 sec

For more information on this and other Advantech products, please visit our website at:

<http://www.advantech.com>

<http://www.advantech.com/eplatform>

For technical support and service, please visit our support website at:

<http://support.advantech.com.tw/>

This manual is for MIO-5375.

Part No. 2046537501
Printed in China

2nd Edition
Feb. 2024

Specifications (Cont.)

- **TPM 2.0**
- **iManager 3.0:** Yes
- **Expansion interface:**
 - M.2:
 - 1 x E-Key 2230 (PCIe x1, USB2.0)
 - 1 x B-Key 3042 (USB2.0) w/Nano-SIM
 - 1 x M-Key 2280 (PCIe x4 Gen.4 for PCIe SSD), optional SATA
 - MI/O Extension connector: 4 x PCIe x1, 1 x PCIe x4, 1 x USB 2.0, LPC, SMBus, Line-out, and 12V/5V Power supply
- **Battery:** Lithium 3 V/210 mAh
- **Audio:** Supports High Definition Audio (HD), line-in, line-out, and Mic-in

Display

- **Controller:**
 - Intel® SoC integrated for HDMI/DP/Type-C display output
 - 48-bit LVDS display output
- **Maximum resolution:**
 - LCD:
 - LVDS dual channel 48-bit up to 1920x1200
 - Optional: eDP 1.4 up to 4096x2304@60 Hz
 - HDMI/DP:
 - 1 x Port HDMI 2.0 up to 4096x2160@60 Hz
 - 1 x Port DP 1.4a up to 4096x2160@60 Hz
 - USB Type-C:
 - 1 x USB3.2 Gen. 2x2 20 Gbps, supports DP1.4a via alt. mode
- **Multiple display:** Four simultaneous displays via 48-bit LVDS/eDP+HDMI+DP+Type-C

Ethernet Interface

- **Speed:** 10/100/1000 Mbps
- **Controller:** GbE1 - Intel i219, GbE2 - Intel i210-AT
- **Connector:** RJ45 x 2

I/O

- **Internal I/O:** 1 x SATA 6 Gb/s, 2 x USB 2.0, 2 x RS232/422/485, 8-bit GPIO, Inverter, SMBus, CANBus I2C*, HD audio, LVDS, and system fan.
- **Rear I/O:** 4 x USB 3.2, HDMI, DP, USB type-C, 2 x RJ-45, 1 x DC-Jack (*optional).
- **MI/O expansion:** 4 x PCIe x1, 1 x PCIe x4, USB 2.0, LPC, SMBus, line-out, and 12 V/5 V power supply.
- **Power connector type:** Default support 2 x 2 pin ATX power connector, DC jack is supported upon request.

Mechanical and Environmental

- **Dimensions (L x W):** 146 x 102 mm (5.7 x 4 in)
- **Power supply type:** ACPI support for ATX only
- **Power requirements:** Vin: 12 V-24 V +/- 5%

Specifications (Cont.)

- **Power consumption:**
 - Max: i7-1185G7E: 43.31 W (12 V)/46.78W (24 V)
 - Typical: Idle mode in Windows 10.
 - i7-1185G7E: 16.56W (12 V)/19.2W (24 V)
- **Operating temperature:** 0 ~ 60 °C (32 ~ 140 °F)
- **Weight:** 0.67 kg/1.47 lb (reference weight of total package)

Jumpers and Connectors

The board has a number of connectors and jumpers that allow you to configure your system to suit your application.

The table below lists the function of each of the jumpers and connectors.

Jumpers	
Label	Function
J3	AT mode /Load BIOS default
VDD1	LCD Power

Connector	
Label	Function
CN11	Power Input
DIMM1	SO-DIMM 9.2mm
DIMM2	SO-DIMM 5.2mm
Battery1	RTC Battery
CN4	CAN BUS
CN5	Front Panel
AUDIO1	Audio
CN8	I2C
COM1	COM1
COM2	COM2
COM3	COM3
COM4	COM4
CN7	GPIO
LAN1	RJ45_2x1_W/XFMR&LED
BL1	Inverter Power output
LVDS1	48 bit LVDS
EDP1	eDP/MIPI DSI
HDMI1	HDMI
DP1	DP
TYPEC1	TYPEC
M2_1	M.2 E-key
M2_2	M.2 M-key

Jumpers and Connectors (Cont.)

M2_3	M.2 B-key
SIM	NANO SIM

J3: AT mode/Load BIOS default

Function	Jumper Setting
Auto Power On	(1-2) 
Reserve	(3-4) 
Short: Load BIOS default Open: Normal	(5-6) 

To load factory defaults, do this:

Step 1 : Power off

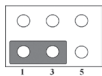
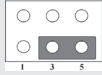
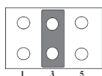
Step 2 : Remove the Jumper (3-4) and add to (5-6), then power on.

BIOS will load factory defaults (does not clear time or clear CMOS), a message will remind user to shut down system and restore Jumper (3-4)

Step 3 : Power on again.

If you want to Clear CMOS, remove battery (battery 1). System will pop up a message...wait for 3 seconds. RTC time will clear but keep the BIOS settings.

VDD1: LCD Power

Function	Jumper Setting
+3.3V	(1-3) 
+5V	(3-5) 
+12V	(3-4) 

Caution! The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to manufacturer's instructions.



Connectors Locations

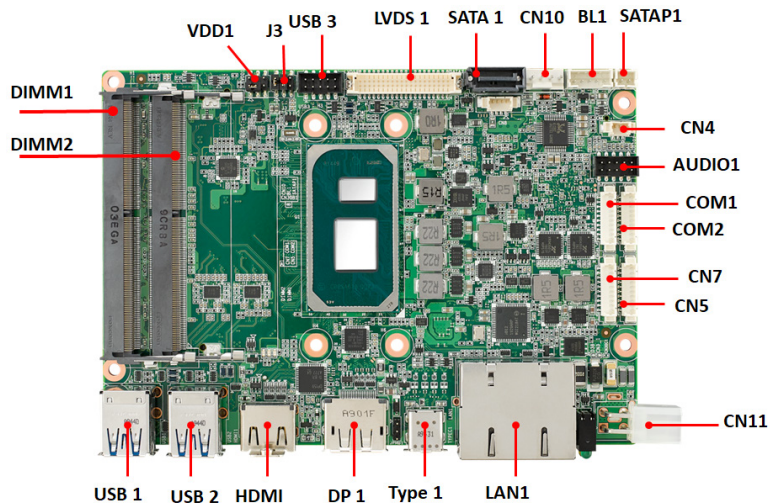


Figure 1: MIO-5375 Connector Locations (Top Side)

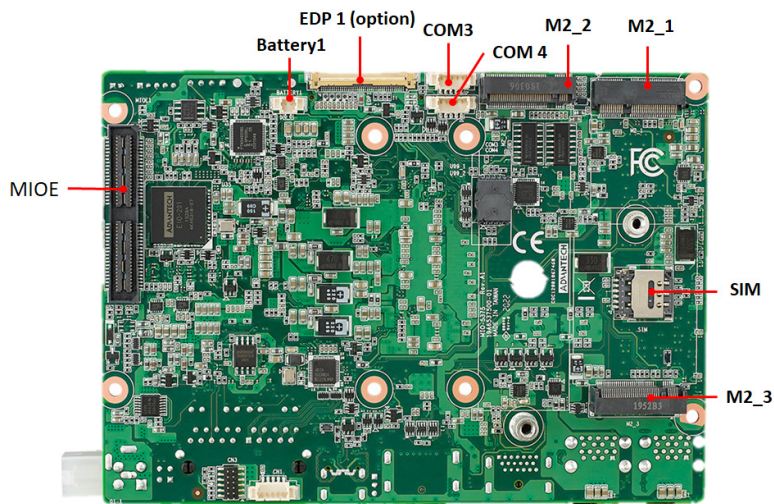


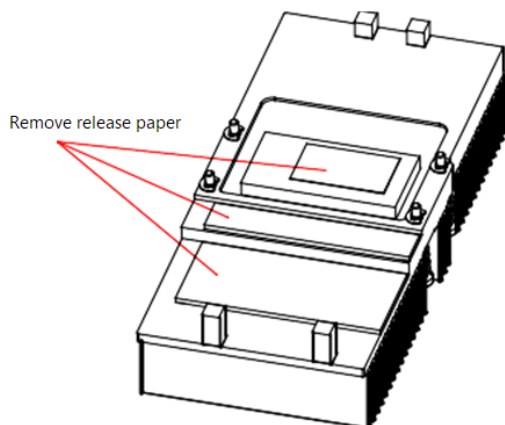
Figure 2: MIO-5375 Connector Locations (Bottom Side)



Figure 3: MIO-5375 Connector Locations (Coastline)

Quick Installation Guide

1. There is a Cooler/Heatsink in the white box, please take it out and remove the release paper from the thermal pads.



2. There are four screws inside the white box, follow the installation sequence demonstrated below to secure the cooler/ heatsink:

