ADVANTECH

Intel® Core™ i3-N305, Intel® N-Series, and Intel® Atom® x7000E Series Processor Pico-ITX SBC (Code name: Alder Lake N)
Startup Manual

Packing List

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

1.	1 x MIO-2364 SBC	
2.	1 x Startup Manual	P/N: 2046236400
3.	1 x SATA Cable	P/N: 1700006291
4.	1 x Audio Cable	P/N: 1700019584-01
5.	2 x COM Cable	P/N: 1700030404-01
6.	1 x USB 2.0 Cable	P/N: 1700030406-01
7.	1 x SATA Power Cable	P/N: 1700027546-01
8.	1 x AT Power Cable	P/N: 1700019705-01
9.	1 x Cooler for 15W CPU	P/N: 1970005708T001
10.	1 x Heatsink for 12/6W CPU	P/N: 1970005779T001

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

Note 1: For detailed contents of MIO-5154, please refer to the Advantech website for detailed information.

Note 2: Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded at: http://get.adobe.com/reader (Acrobat is a trademark of Adobe).

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://advantech.com/support

This manual is for the MIO-2364.

Specifications

General

- **CPU:**
  - Intel® Core™ i3-N305 Processor, 8 cores
  - Max Frequency 3.8GHz
  - Intel® N-Series Processor N97, 4 cores
  - Max Frequency 3.6GHz
  - Intel® x7000E Series Processor x7211E, 2 cores
  - Max Frequency 3.2GHz
- **System Memory:** Single Channel, SODIMM DDR5-4800 MT/s, up to 16GB
- **CPU TDP:**
  - Core™ i3-N305: 15W
  - N-Series N97: 12W
  - x7000E Series x7211E: 6W
- **BIOS:** AMI uEFI 256 Mbit
- **Watchdog Timer:** 0~6553 sec
- **Battery:** Lithium 3 V/210 mAH
- **Audio:** High-definition audio (HD), Line-in, Line-out, Mic-in

Expansion Interface

- 1 x M.2 E-Key 2230
- 1 x M.2 B-Key 2242/3042/3052

Display

- **Controller:** Intel® UHD Graphics (SoC integrated)
- **Maximum Resolution:**
  - LCD:
    LVDS dual channel 12-/24-bit up to 1920 x 1200
  - HDMI:
    HDMI 1.4b, up to 3840 x 2160 x 24bpp@20-30Hz
- **Multiple Displays:**
  Dual Simultaneous Display: LVDS + HDMI

Ethernet Interface

- **Speed:** 10/100/1000/2500 Mbps
- **Controller:** 1x Intel® i226LM

Mechanical and Environmental

- **Dimensions:** 100 x 72 mm (3.9″ x 2.8″)
- **Power Supply Type:** ACPI support
- **Power Requirement:** +12 V ± 10% (Default supports ATX 2x2-pin 90D, DC Jack by T-P/N)
- **Operating Temperature:** 0 ~ 60°C (32 ~ 140°F)

Jumpers and Connectors

The board has a number of 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**
VDD1	Panel Voltage Selection
J1	AT Mode / Load BIOS Default

Connectors	
Label	**Function**
U17	DDR5 SODIMM Slot
FAN1	Smart FAN
M2_1	M.2 E-Key Connector
CN3	EC_I2C Port
BAT1	RTC Battery Connector
COM1	COM Port Internal Connector 1
COM2	COM Port Internal Connector 2
CN1	Front Panel Internal Connector
CN2	GPIO Internal Connector
VDD1	Panel Voltage Selection Jumper
SIM1	NANO SIM
M2_B1	M.2 B-Key Connector
LVDS1	LVDS Connector
BL1	Panel Inverter Connector
J1	AT Mode / Load BIOS Default
USB2	USB 3.2 Internal Connector
HDMI1	HDMI Connector
LAN1	RJ-45 Connector
POE_PWR1	POE Power Connector
CN4	DC Power Input Connector(180D)
CN5	DC Power Input Connector (90D)
SATA1	SATA Connector
USB1	USB 2.0 Internal Connector
AUDIO1	Audio Internal Connector
ESPI1	ESPI Debug Port

# Jumpers and Connectors (Cont.)

Jumper Settings

VDD1	Panel Voltage Selection
Setting	Function
(1-3)*	Panel Voltage Setting : +V3.3 (Default)
(3-5)	Panel Voltage Setting : +V5
(3-4)	Panel Voltage Setting : +V12
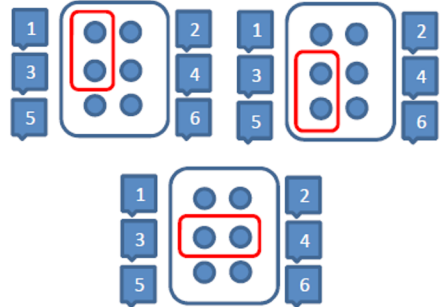
Caution! The computer is provided with a battery-powered real-time clock circuit. There is danger of explosion if the battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

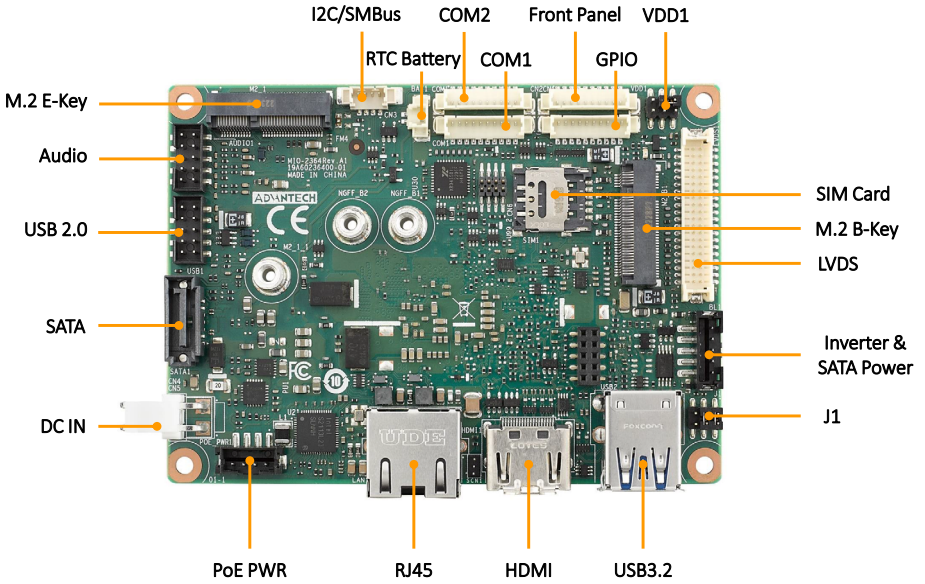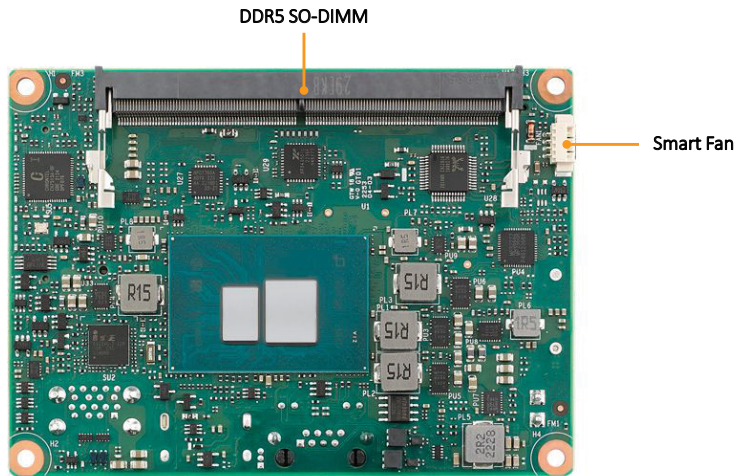| J1	AT Mode / Load BIOS Default
Setting	Function
(1-2)	AT_DET# (Default) 1-2 open: ATX mode 1-2 short: AT mode*
(3-4)	NORMAL_BIOS (Default)
(5-6)	LOAD_BIOS_Default: 5-6 open: Normal* 5-6 short: Load BIOS Default
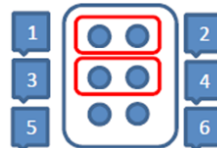
Figure 1: MIO-2364 Mechanical Drawing (Top Side)

Figure 2: MIO-2364 Mechanical Drawing (Bottom Side)

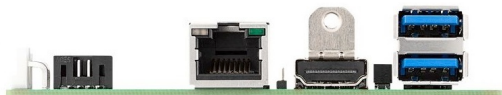*Figure 3: MIO-2364 Mechanical Drawing (Coastline)*
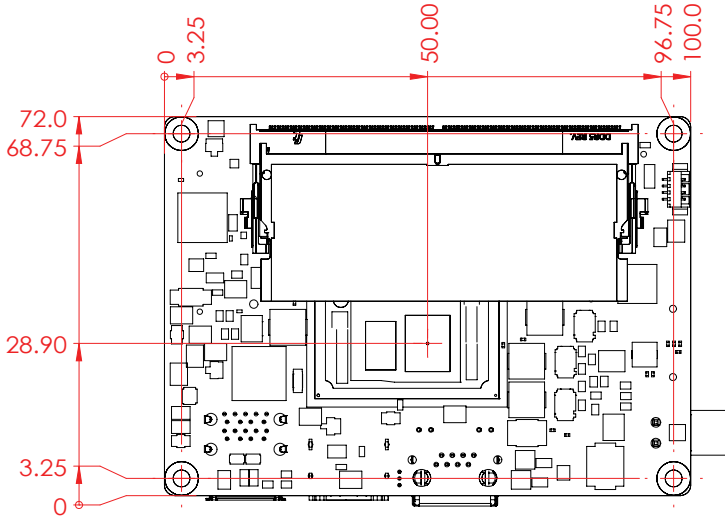
Figure 4: MIO-2364 Mechanical Drawing (Top View)
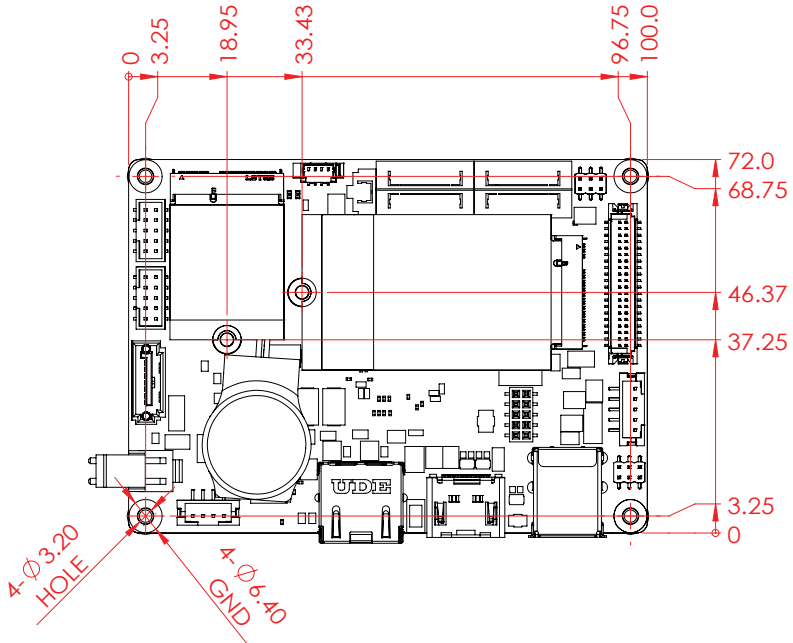
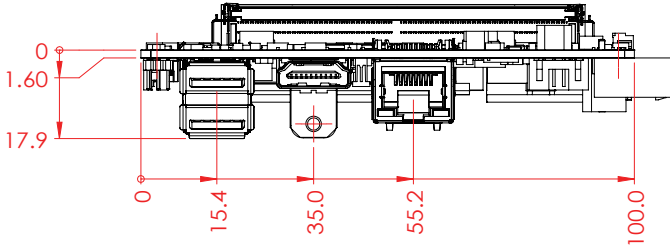*Figure 5: MIO-2364 Mechanical Drawing (Bottom View)*
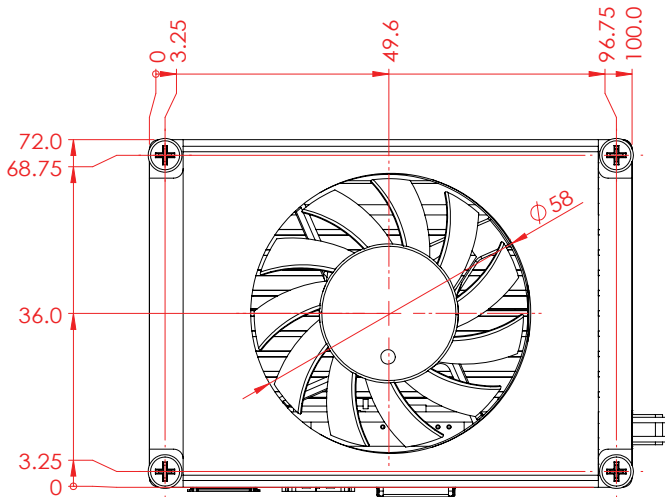
Figure 6: MIO-2364 Mechanical Drawing (Side View)

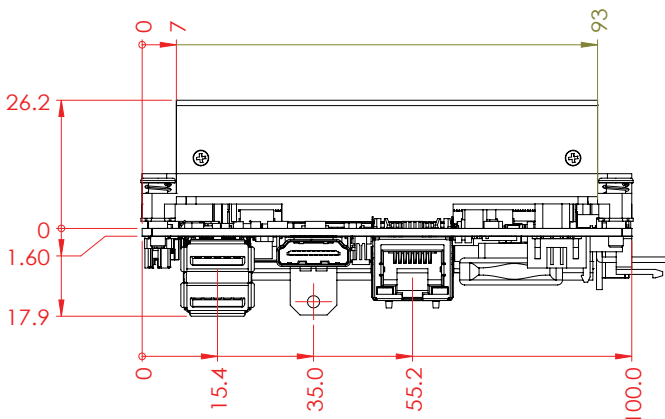*Figure 7: MIO-2364 Mechanical Drawing with Active Cooler (Top View)*

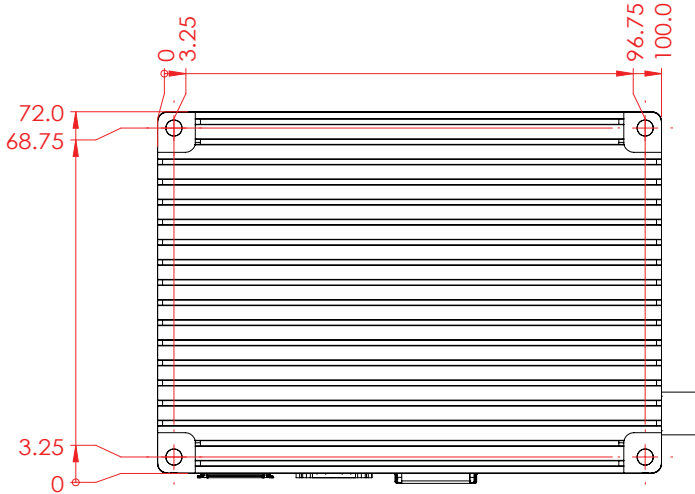*Figure 8: MIO-2364 Mechanical Drawing with Active Cooler (Coastline)*

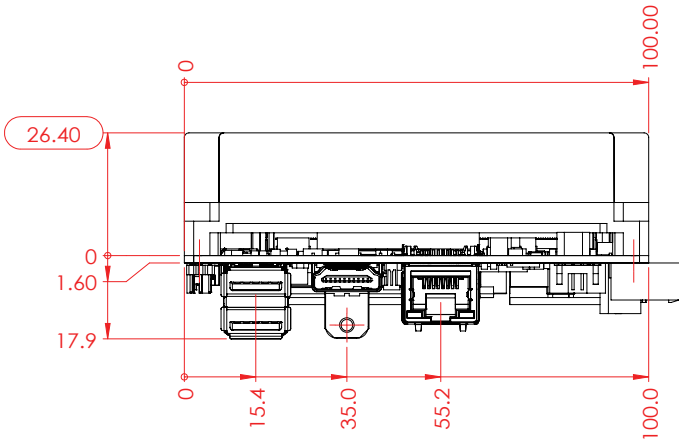*Figure 9: MIO-2364 Mechanical Drawing with Heatsink (Top View)*

Figure 10: MIO-2364 Mechanical Drawing with Heatsink (Coastline)