

MIO-5377 3.5" MI/O-Compact SBC, 12th Gen. Intel® Core™ P/U-series (i7/i5/i3/Celeron®) Startup Manual

Packing List

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

- 1 x MIO-5377 SBC
- 1 x SATA cable 30 cm (p/n: 1700006291)
- 1 x SATA power cable 35 cm (p/n: 1700031583-01)
- 1 x USB 2.0 cable 20 cm (p/n: 1700030406-01)
- 1 x Audio cable 20 cm (p/n: 1700019584-01)
- 2 x COM RS-232/422/485 Cable 20 cm (p/n: 1700030404-01)
- 2 x COM RS-232 cable 20 cm (p/n: 1700031582-01)
- 1 x Cooler (p/n: 1970005512T001) or 1 x heatsink (1970005548T001)
- 1 x Startup manual (p/n: 2046537700)
- 1 x Screw kit (3 x screws for M.2 device & 4 x screws and stand-offs for heatsink/cooler)
- 1 x DeviceOn Package

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

- Note1: For detailed contents regarding MIO-5377, please refer to information on the support website: <http://support.advantech.com.tw/>.
- Note2: Adobe Reader is required to view any PDF file. Adobe Reader can be downloaded at: <http://get.adobe.com/tw/reader/otherversions/>. (Adobe is the trademark of Adobe Systems Incorporated.)

For more information about this and other Advantech products, visit our website at

<http://www.advantech.com>

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

For technical support and customer service, visit our support website at

<http://support.advantech.com>

This manual is for the MIO-5377 Series.

Part No. 2046537700
Printed in China

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General

- **CPU:**
 - Intel® i7-1270PE (4P+8E Core, 1.80 GHz)
 - Intel® i7-1265UE (2P+8ECore, 1.70 GHz)
 - Intel® i5-1245UE (2P+8ECore, 1.50 GHz)
 - Intel® i3-1215UE (2P+4ECore, 1.20 GHz)
 - Intel® 7305E (1P+4ECore, 1.00 GHz)
- **System Memory:** Dual Channel DDR5-4800 up to 64GB
- **BIOS:** AMI EFI 256 Mbit
- **Watchdog timer:** 65536 level, 0~65535 sec
- **TPM2.0**
- **iManager 3.0:** Yes
- **Battery:** Lithium 3V/210mAh
- **Audio:** Supports high definition audio (HD), line-in, lineout, and mic-in
- **Expansion Interface:**
 - 1 x M.2 E-Key 2230 (PCIe x1, USB 2.0 to support wireless module)
 - 1 x M.2 B-Key 3042/3052 (PCIex1, SATA, USB2.0); default with 3042 module length
 - 1 x M.2 M-Key 2280 (PCIe x4 Gen.4 for PCIe SSD)

Display

- **Controller:** Intel® SoC integrated Iris® Xe graphics
- **Maximum resolution:**
 - LCD: Dual channel 18/24-bit, up to 1920 x 1200
 - HDMI: 1 x HDMI 2.0b, up to 4096 x 2160 @60Hz
 - DP: 1 x DP1.4a, up to 4096 x 2304 @60Hz
- **Multiple display:** Four simultaneous displays via LVDS, HDMI, DP, Type-C Alt.DP

Ethernet Interface

- **Speed:** 10/100/1000/2500 Mbps
- **Controller:** LAN1: Intel i219LM, LAN2: Intel i226

I/O

- **Internal I/O:** 1 x SATA, 2 x USB 2.0, 2 x RS-232/422/485, 2 x RS-232 (4-wire), 3 x I2C, 8-bit GPIO, Inverter, HD Audio, LVDS, 2x CAN, 1 x FAN, 1 x USB4
- **Rear I/O:** 2 x RJ-45, 1 x HDMI, 1 x DP, 1 x USB Type-C, 4 x USB3.2, 1 x DC-Jack (optional)
- **Power connector type:** Default supports 2 x 2-pin ATX power connector (90D), DC Jack is supported by request
- **Optional:** DC-IN Jack

Mechanical and Environmental

- **Dimensions (L x W):** 146 x 102 mm (5.7" x 4")
- **Power supply type:** ACPI supports for ATX only
- **Power requirement:** Vin: 12V-24V +/- 10%
- **Operating temperature:** Standard: 0 ~ 60°C (32 ~ 140°F)
- **Net Weight:** 0.67 kg/1.47 lb (reference weight of total package)

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	LVDS Panel Voltage Selection Jumper
J1	AT mode /Load BIOS default

Jumper Setting

VDD1	Panel Voltage Selection Jumper
Setting	Function
Jumper Short	Panel Voltage
1-3	+3.3V (Default) 
3-5	+5V 
3-4	+12V 

J1	AT mode /Load BIOS default
Setting	Function
Jumper Short	Panel Functional
1-2	1-2 open: ATX mode 1-2 short: AT mode(default) 
3-4	Normal_BIOS (default) 
5-6	5-6 open: Normal (default) 5-6 short: Load BIOS default 

Jumpers and Connectors (Cont.)

To load factory defaults, follow this:

1. Power off
BIOS will load factory defaults (does not clear time or clear CMOS), a message will remind the user to shut down system and restore Jumper (3-4).
3. Power on again.
If you want to Clear CMOS, remove battery (battery 1). System will pop up a message, then wait for 3 seconds. RTC time will clear but keep the BIOS settings

Caution: The computer is provided with a battery-power 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

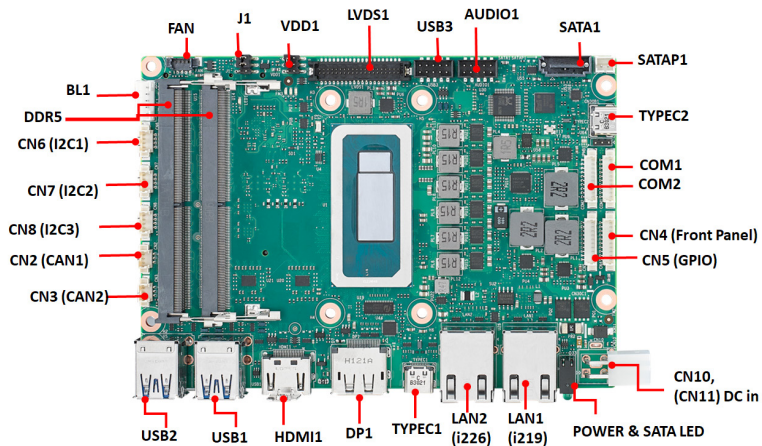


Figure 1: MIO-5377 Connector Locations (Top Side)

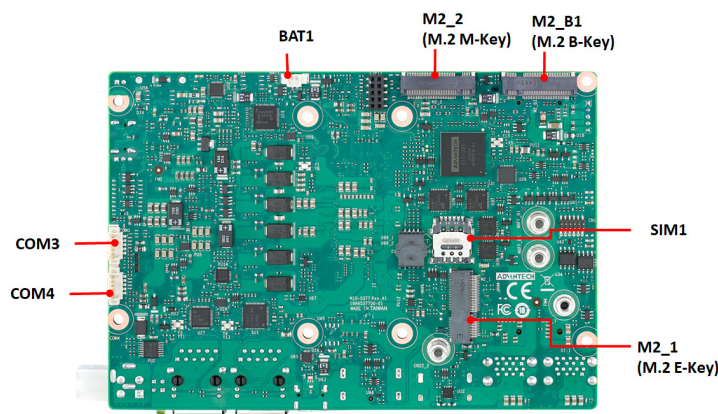


Figure 2: MIO-5377 Connector Locations (Bottom Side)

Connectors Locations (Cont.)

Connectors	
Label	Function
CN10	DC Power Input Connector (90D)
CN10_1	DC Power Input Connector (180D)
CN11	DC Jack
D33	Power & SATA LED
LAN1	i219 RJ45 LAN Ports
LAN2	i226 RJ45 LAN Ports
TYPEC1	TypeC Port (USB3.2/DP)
DP1	Display Port Connector
HDMI1	HDMI Connector
USB1	USB3.2 Connector
USB2	USB3.2 Connector
CN3	CAN Bus Port 1
CN2	CAN Bus Port 0
CN8	SOC_I2C Port1
CN7	SOC_I2C Port0
CN6	EC_I2C Port
BL1	Panel Inverter Connector
FAN	Smart FAN
J1	AT mode /Load BIOS default

Connectors Locations (Cont.)

VDD1	Panel Voltage Selection Jumper
LVDS1	LVDS Connector
USB3	USB2.0 Internal Connector
AUDIO1	Audio Internal Connector
SATA1	SATA Connector
SATAP1	SATA Power Connector
TYPEC2	TypeC Port (TBT4)
COM1	COM Port Internal Connector 1
CN4	Front Panel Internal Connector
COM2	COM Port Internal Connector 2
CN5	GPIO Internal Connector
U14	DDR5 SO-DIMM slot #1
U15	DDR5 SO-DIMM slot #2
M2_1	M.2 Key-E Connector
COM4	COM Port Internal Connector 4
COM3	COM Port Internal Connector 3
BAT1	RTC Battery Connector
M2_2	M.2 Key-M Connector
M2_B1	M.2 Key-B Connector
SIM1	NANO SIM

Quick Installation Guide

Retrieve the heatsink from the accessory box. Remove the release paper from the thermal pads.

