

MIO-2360 Intel® Celeron N3350/Atom™ E3940/ Atom™ E3930 Pico-ITX SBC, DDR3L, 24-bit LVDS, VGA/HDMI, 1 GbE, Full-size Mini PCIe, 4 USB, 2 COM, SMBus, mSATA & MIOe Startup Manual

Packing List

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

- 1 MIO-2360 SBC
- 1 Startup Manual
- 1 SATA cable p/n: 1700006291
- 1 Audio cable p/n: 1700022444-01
- 1 COM cable p/n: 1701200220
- 1 SATA Power cable p/n: 1700019656
- 1 USB cable p/n: 1700002172
- AT power cable p/n: 1700019705
- 1 Heatsink p/n: 1960078695T001
- Screw and stud pack (2 screws for Mini PCIe, 4 M3 studs and screws for heatsink) p/n: 9666226300E

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

- Note 1:** For detailed contents of MIO-2360, please refer to Advantech website.
- 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)
- Note 3:** Default BIOS is supported for 64 bit OS installation, BIOS for 32 bit OS is supported by project, please contact with sales representative for details.

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://service.advantech.com.tw/support/>

This manual is for the MIO-2360 Series Rev. A1

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Specifications

General

- CPU:** Intel® Celeron SoC N3350, 1.10 GHz, Dual core/Atom™ E3940, 1.60 GHz, Quad Core/Atom™ E3930, 1.30 GHz, Dual core
 - System Memory:** 1 x 204-pin SODIMM socket DDR3L 1866 MHz, up to 8 GB
 - L2 Cache:** 2 MB
 - BIOS:** AMI EFI 64 Mbit Flash ROM
 - Watchdog Timer:** 255 level interval timer
 - Battery:** Lithium 3 V/210 mAh
- Note:** How to clear CMOS (Must follow steps below):
- Turn off system power.
 - Unplug CR2032 battery cable on BH1.
 - Waiting for 15 sec or short BH1 pin1-2.
 - Connect battery cable on BH1.
 - Turn on system power.
- Serial ATA:** One SATA III & one SATA II interface, up to 600 MB/s
 - USB:** Two USB 3.0 and two USB 2.0 ports
 - Audio:** High definition audio (HD), line-in, line-out
 - GPIO:** 8-bit general purpose input/output
 - Expansion Interface:** Full size Mini PCIe

MIOe Expansion Slot

- Interface:** SMBus, 2 x USB3.0, LPC, 2 x PCIe x1, line out, DisplayPort/HDMI*, +5 Vsb/+12 Vsb power, Power On, Reset, SATA*
- Total peripheral power supply output:** 5V @ 3A for CPU board and MIOe module totally, 12V @ 2A for MIOe module

VGA/HDMI Interface

- Controller:** Intel® SoC N3350/E3940/E3930, DirectX 11 and OpenGL3.0 support for VGA and HDMI display output Chrontel CH7511 for 24 bit LVDS display output
- Output Interfaces:**
 - VGA: Up to 1920 X 1200 at 60 Hz
 - HDMI: Up to 3840 x 2160 at 30Hz
 - LVDS: Single channel 24-bit LVDS, up to 1920 x 1200 at 60Hz
 - Dual Display: VGA+LVDS+MIOe or HDMI+LVDS+MIOe

Ethernet Interface

- Supports single 10/100/1000 Mbps Ethernet interface
- Controller:** Intel® i210

Specifications Cont.

Mechanical and Environmental

- **Dimensions:** 100 x 72 mm (3.9" x 2.8")
Mechanical Drawings are on page 4 - 6.
- **Power Requirement:** Single 12 V \pm 10% DC power input
- **Power Consumption (with 8 GB memory):**
 - Typical in Window 10:
Idle mode
N3350: 0.41 @ 12V (4.89 W)
E3940: TBD
E3930: TBD
 - Max in HCT:
Max. load
N3350: 1.09 A @ 12 V (12.90 W)
E3940: TBD
E3930: TBD
- **Operating Temperature:** 0 ~ 60° C (32 ~ 140° F)
- **Weight:** 0.47 kg (1.04 lb), 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
J1	LCD Power / Auto Power on

Connectors

Label	Function
CN1	12V Power Input
CN2	DC JACK (by request)
CN3	12 V Power Input (2 x 3 pin support by request)
CN5	DDR3L SO-DIMM
CN7	GPIO
CN8	HD Audio
CN9	Gigabit Ethernet
CN10	Mini PCIe
CN11	SATA
CN12	mSATA
CN13	COM1/COM2
CN14	Inverter Power/Internal SATA Power
CN15	18/24 bits LVDS Panel
CN16	VGA
CN17	HDMI
CN18	MIOe

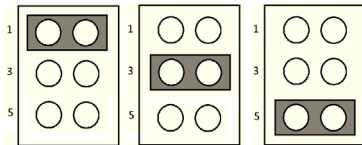
Jumpers and Connectors

CN19	Internal USB 2.0
CN20	External USB 3.0
CN21	SMBus
CN22	Front Panel
CN26	Battery

Jumper Settings

J1	LCD Power Selection
Setting	Function
(1-2)	+5 V
(3-4)*	+3.3 V
(5-6)*	Auto Power On

* default



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.



MIO-2360 Connector Locations

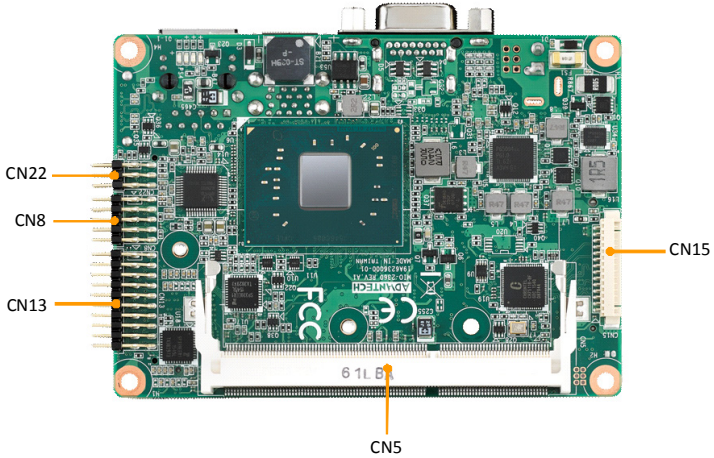


Figure 1: MIO-2360 Connector Locations (Top Side)

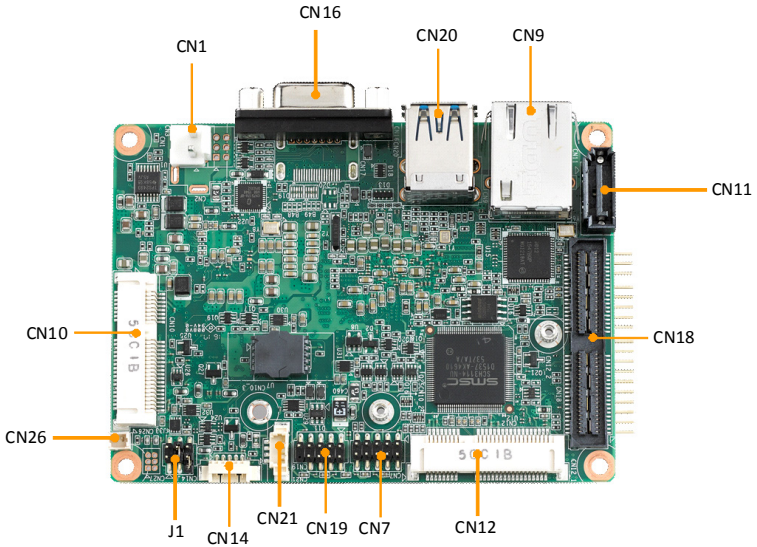


Figure 2: MIO-2360 Connector Locations (Bottom Side)

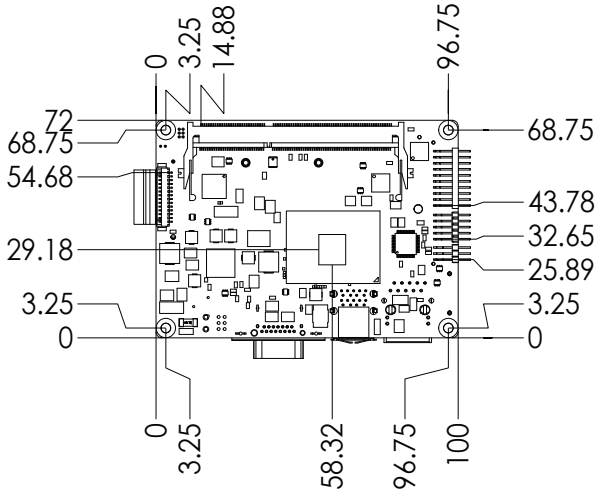


Figure 3: MIO-2360 Mechanical Drawing (Top Side)

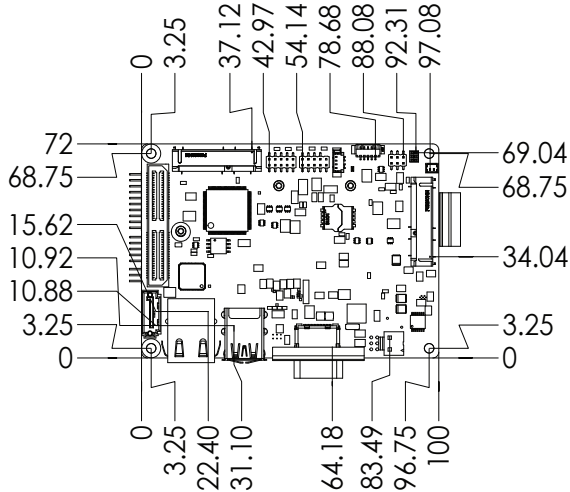
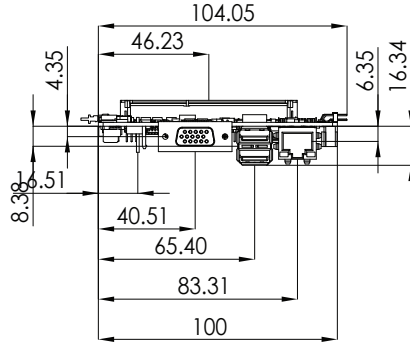
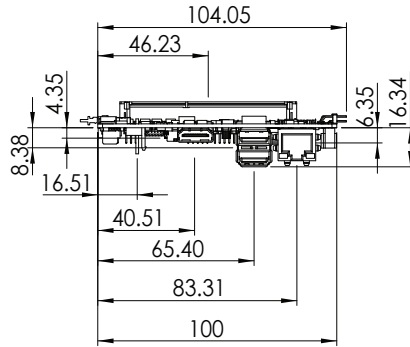


Figure 4: MIO-2360 Mechanical Drawing (Bottom Side)



Unit: mm

Figure 5: MIO-2360 Mechanical Drawing (Side View)



Unit: mm

Figure 6: MIO-2360 Mechanical Drawing (Side View with Optional HDMI)

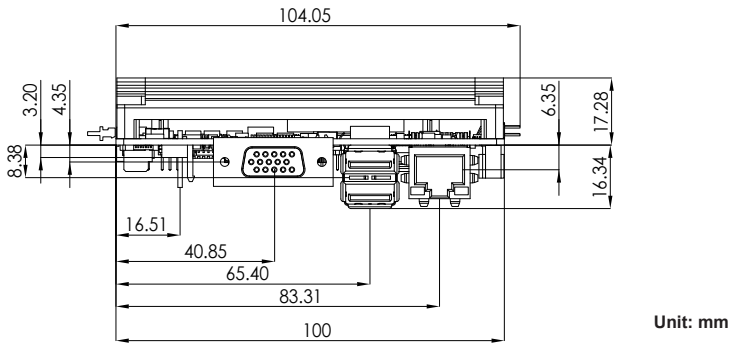


Figure 7: MIO-2360 Mechanical Drawing (Side View with Heatsink)

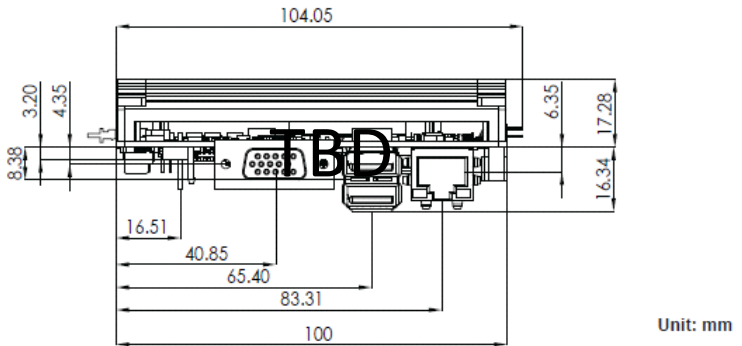


Figure 8: MIO-2360 Mechanical Drawing (Side View with Optional Heat Spreader)