MIO-2263 Intel® Atom™ SoC J1900/ E3825 Pico-ITX SBC, DDR3L, 18/24-bit LVDS, VGA or HDMI, 1 GbE, Half-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. 1 MIO-2263 SBC
2. 1 Startup Manual
3. 1 SATA cable — p/n: 1700006291
4. 1 Audio cable — p/n: 1700022444-01
5. 1 COM cable — p/n: 1701200220
6. 1 SATA Power cable — p/n: 1700019656
7. 1 USB cable — p/n: 1700002172
8. AT power cable — p/n : 1700019705
9. 1 Heatsink — p/n: 1960063455T001
10. 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-2263, please refer to 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)

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-2263 Series Rev. A1

Specifications

General

- **CPU:** Intel® Atom™ SoC Quad core J1900 2.0 GHz/ Dual core E3825 1.33 GHz
- **System Memory:** 1 x 204-pin SODIMM socket DDR3L 1333 MHz (J1900) / 1066 MHz (E3825), up to 8 GB
- **L2 Cache:** 2 MB (J1900) / 1 MB (E3825)
- **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):

1. Turn off system power.
2. Unplug CR2032 battery cable on BH1.
3. Waiting for 15 sec or short BH1 pin1-2.
4. Connect battery cable on BH1.
5. Turn on system power.

- **Serial ATA:** Two SATA II interface, one supports 2.5" HDD and another for mSATA devices, up to 300 MB/s
- **USB:** One USB 3.0 and three USB 2.0 ports
- **Audio:** High definition audio (HD), line-in, line-out
- **GPIO:** 8-bit general purpose input/output
- **Expansion Interface:** Half size Mini PCIe

MIOe Expansion Slot

- **Interface:** 2 x USB 2.0, 2 x PCIe x1, LPC, HD Audio line-out, SMBus, DP or HDMI supported by request, 5 Vsb/12 Vsb
- **Total peripheral power supply output:** 5 V @ 3 A for CPU board and MI/O Extension module totally, 12 V @ 2 A for MI/O Extension module

VGA/HDMI Interface

- **Controller:** Intel® SoC J1900 / E3825, DirectX 11 and OpenGL3.0 support for VGA and HDMI display output Chrontel CH7511 for 18/24 bit LVDS display output
- **Output Interfaces:**
  - VGA: Up to 1920 x 1200
  - HDMI: 1920 x 1080
  - LVDS: Single channel 18/24-bit LVDS, up to 1440 x 900
  - Dual Display: VGA + LVDS or HDMI + LVDS

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 DC power input
- **Power Consumption (with 8 GB memory):**
  - Typical in Window 8:
    J1900: 0.86 A @ 12 V (10.59 W)
    E3825: 0.59 A @12 V (7.08 W)
  - Max in HCT:
    J1900: 1.04 A @ 12 V (12.48 W)
    E3825: 0.76 A @12 V (9.12 W)
- **Operating Temperature:** 0 ~ 60° C (32 ~ 140° F)
- **Weight:** 0.42 kg (0.93 lb) (reference total weight)

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 (support by request)
CN3	12 V Power Input (2 x 3 pin support by request)
CN6	DDR3L SO-DIMM
CN9	GPIO
CN11	VGA
CN12	HDMI
CN13	Front Panel
CN14	SATA
CN15	mSATA
CN16	Mini PCIe
CN18	Internal USB
CN19	External USB3.0 + USB2.0
CN20	COM1/ COM2
CN24	Gigabit Ethernet
CN27	HD Audio
CN29	MIOe
CN30	Inverter Power/Internal SATA Power

Jumpers and Connectors

CN31	18/24 bits LVDS Panel
CN33	SMBus
BH1	Battery

Jumper Settings

J1	LCD Power / Auto Power On
Part Number	1653003260
Footprint	HD_3x2P_79
Description	PIN HEADER 3*2P 180D(M) 2.0 mm SMD 21N22050
Setting	Function
(1-2)	+5 V
(3-4)*	+3.3 V
(5-6)*	Auto Power On

* default
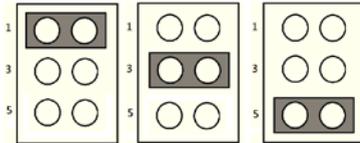
Caution! The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to manufacturer's instructions**.**
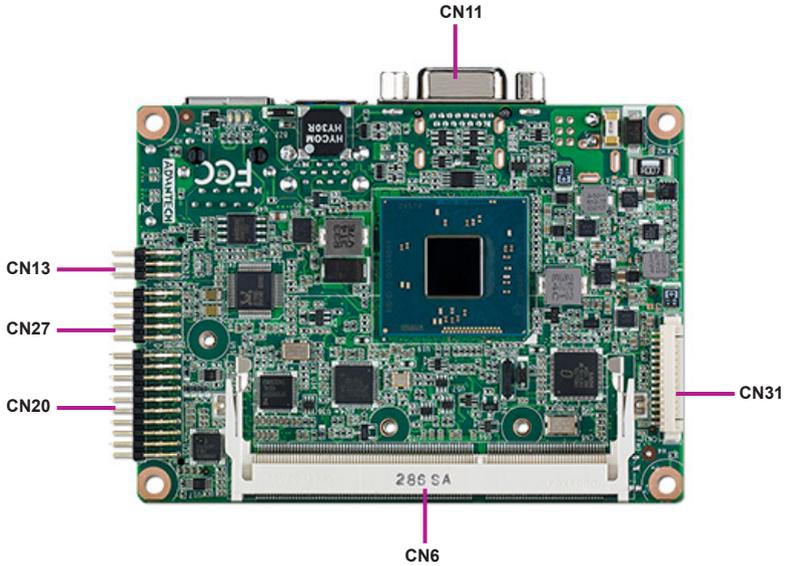
CN11

CN13

CN27

CN20

CN31

CN6

Figure 1: MIO-2263 Connecter Location (Top Side)
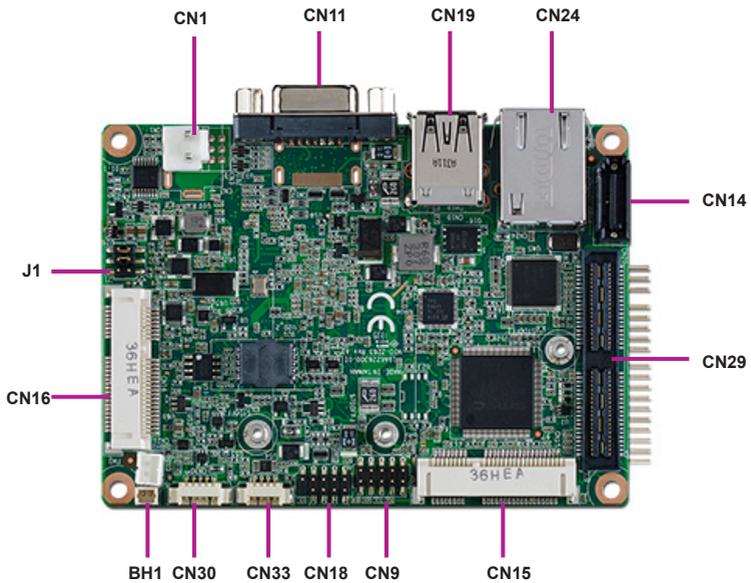
CN1

CN11

CN19

CN24

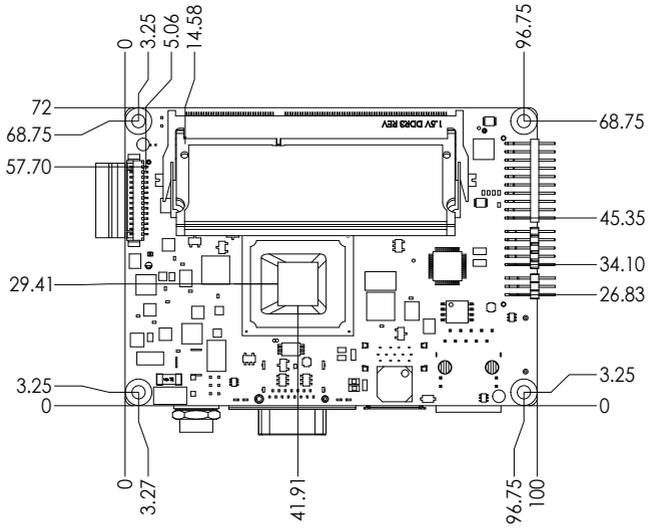CN14

J1

CN29

CN16

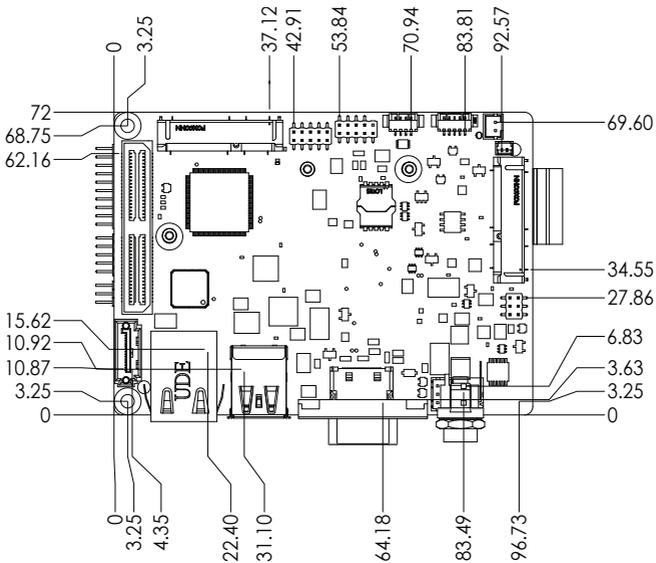BH1 CN30 CN33 CN18 CN9 CN15

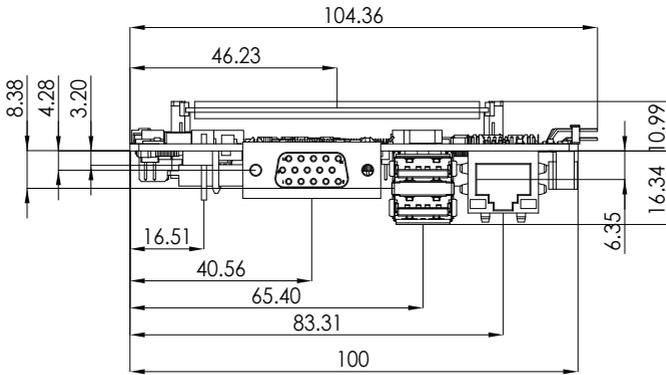*Figure 2: MIO-2263 Connecter Location (Bottom Side)*

Unit: mm

Figure 3: MIO-2263 Mechanical Drawing (Top Side)
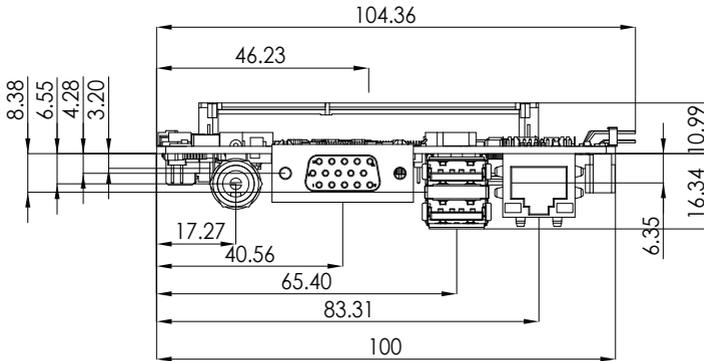

Unit: mm

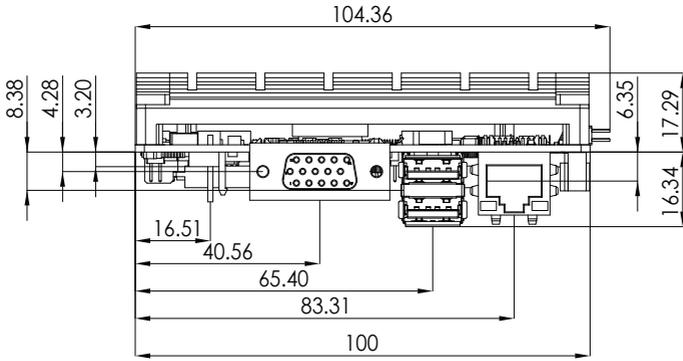*Figure 4: MIO-2263 Mechanical Drawing (Bottom Side)*

Unit: mm

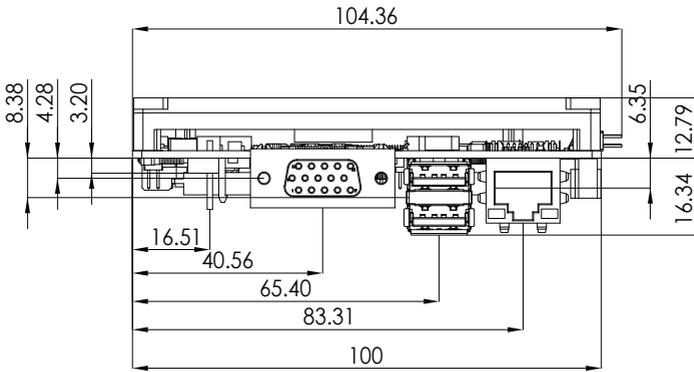*Figure 5: MIO-2263 Mechanical Drawing (Side View)*

Unit: mm

Figure 6: MIO-2263 Mechanical Drawing (Side View with Optional DC/Jack)

104.36

8.38 4.28 3.20

6.35 17.29

16.34

16.51

40.56

65.40

83.31

100

Unit: mm

Figure 7: MIO-2263 Mechanical Drawing (Side vew with Heatsink)

104.36

8.38 4.28 3.20

6.35 12.79

16.34

16.51

40.56

65.40

83.31

100

Unit: mm

Figure 8: MIO-2263 Mechanical Drawing (Side View with Optional Heatspreader)