

# MIO-6260 MIO/160 Module with 1xLAN, 4xUSB, 2xCOM Startup Manual

FCC CE

## Introduction

### The most flexible interface for Embedded Applications

Today is an embedded world, but many standard embedded single board computers cannot meet 100% of application specifications because they are not flexible enough to expand and develop the system.

### A system design short cut

MIO/160 (Module I/O 160) is an open pin definition interface from Advantech. The MIO/160 interface integrates the most popular bus signals together into a high-density 160-pin connector. These popular interfaces include PCI, USB, DVO, SMBus, LPC, and AC97. With MIO/160, board engineers can speed up system project design and expand the system easily.

## Packing list

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

- 1 MIO-6260
  - 1 Startup manual
  - 1 CD ROM for MIO-6260 Driver/Utility
  - 1 screw kit  
copper stud x 6 pcs  
screw x 6 pcs
- p/n: 9660250000  
p/n: 1930000058  
p/n: 1935030500

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

Note 1: Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded at: <http://www.adobe.com/products/acrobat/readstep2.html> (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://www.advantech.com/support>

This manual is for the MIO-6260 series Rev. A1.

Part No. 2006626000

1st Edition  
May, 2006

## Features

- 1 Fast Ethernet port (Optional)
- 4 USB 2.0 ports
- 2 RS-232/422/485 interfaces
- Cableless

## Specifications

- **Ethernet (Optional)**  
**Chipset:** Intel 82551ER  
**Speed:** 10/100 Mbps  
**Interface:** one RJ-45 connector  
**Standard:** IEEE802.3u 100 Base-T Fast Ethernet Compatible
- **USB**  
**Chipset:** NEC uD720101 PCI USB 2.0 controller  
2 ports by USB connector, 2 ports by box header
- **COM**  
**Chipset:** SMSC SCH3114 Serial Ports Controller  
2 RS-232/422/485 in one D-Sub connector  
Auto Flow control  
Jumperless, select RS-232/422/485 by BIOS

## Mechanical and Environmental

- **Dimensions (L x W):** 102mm x 146mm
- **Operating Temperature:** 0 ~ 60°C
- **Operating Humidity:** 10% ~ 90% relative humidity, non-condensing
- **Power Supply Voltage:** 5V
- **Power Requirements:** 5V @ 100 mA

## Jumpers & Connectors

Connectors on the board link it to external devices, such as hard disk drives, and keyboard or expansion bus connectors. In addition, 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.

### Connectors

| Label | Function            |
|-------|---------------------|
| CN1   | MIO/160 Connector   |
| CN2   | USB1 Connector      |
| CN3   | USB2 Connector      |
| CN4   | USB3-4 Connector    |
| CN5   | RJ45+1G Transformer |
| COM1  | COM Port1           |
| COM2  | COM Port2           |

#### CN1 MIO/160 Connector

**Part Number** 1654000073

**Description** B/B CONN. 80P SMD 0.8mm 180D QSE-080-01-F-D-A

#### CN2 USB1 Connector

**Part Number** 1654904100

**Description** USB Connector. Single port with rear Cover 90D(M)

| Pin | Pin name | Pin | Pin name |
|-----|----------|-----|----------|
| 1   | VCC      | 2   | P-       |
| 3   | P+       | 4-6 | GND      |

#### CN3 USB2 Connector

**Part Number** 1654904100

**Description** USB Con. SINGLE Port Typewith REAR Cover 90D(M)

| Pin | Pin name | Pin | Pin name |
|-----|----------|-----|----------|
| 1   | VCC      | 2   | P-       |
| 3   | P+       | 4-6 | GND      |

#### CN4 USB3-4 Connector

**Part Number** 1653000066

**Description** Pin Header, 5x2P 180D(M) 2.54 mm W/O PIN10 USB

| Pin | Pin name | Pin | Pin name |
|-----|----------|-----|----------|
| 1   | VCC      | 2   | VCC      |
| 3   | P0-      | 4   | P1-      |
| 5   | P0+      | 6   | P1+      |
| 7   | GND      | 8   | GND      |
| 9   | GND      | 10  | NC       |

#### CN5 RJ45+1G Transformer

**Part Number** 1652000102

**Description** RJ-45 phone jack 14P 90D(F) W/Xfam P26-107-1AX9

| Pin | Pin name | Pin | Pin name |
|-----|----------|-----|----------|
| 1   | TX+      | 2   | TX-      |
| 3   | RX+      | 4   | GND      |
| 5   | GND      | 6   | RX-      |
| 7   | GND      | 8   | GND      |
| 9   | GND      | 10  | GND      |
| 11  | VCC_LAN  | 12  | ACTLED   |
| 13  | VCC_LAN  | 14  | LILED    |

#### COM1 COM Port1

**Part Number** 1654000056

**Description** D-SUB CON. 9P 90D(M) DIP

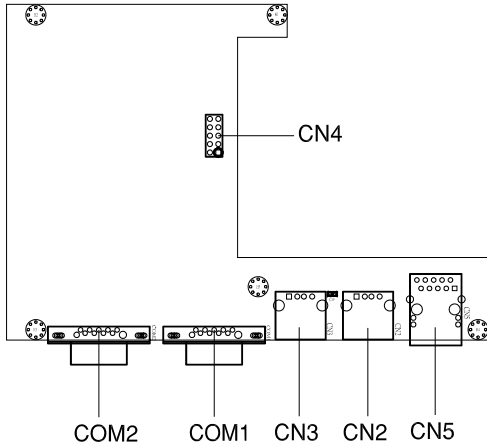
| Pin | Pin name | Pin | Pin name |
|-----|----------|-----|----------|
| 1   | DCD      | 2   | RXD      |
| 3   | TXD      | 4   | DTR      |
| 5   | GND      | 6   | DSR      |
| 7   | RTS      | 8   | CTS      |
| 9   | RI       |     |          |

#### COM2 COM Port2

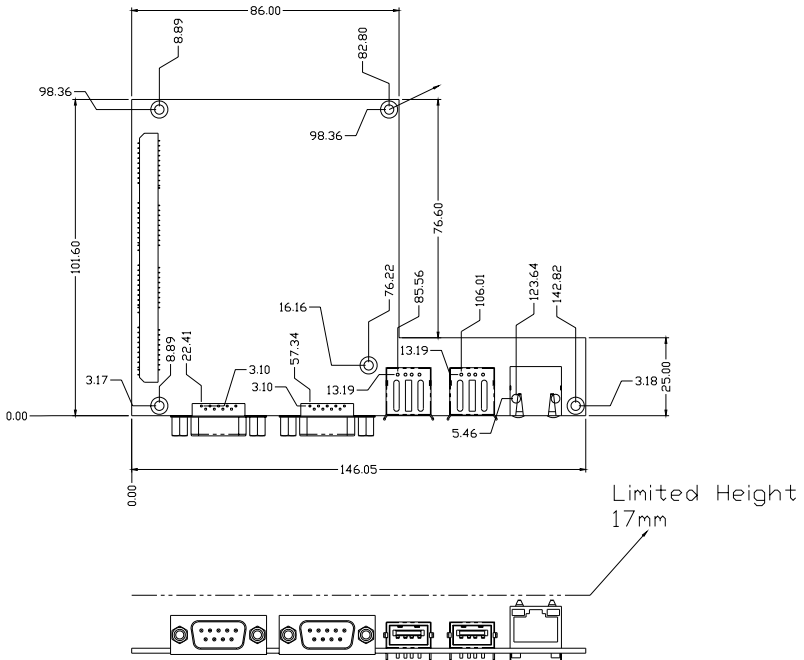
**Part Number** 1654000056

**Description** D-SUB Connector 9P 90D(M) DIP

| Pin | Pin name | Pin | Pin name |
|-----|----------|-----|----------|
| 1   | DCD      | 2   | RXD      |
| 3   | TXD      | 4   | DTR      |
| 5   | GND      | 6   | DSR      |
| 7   | RTS      | 8   | CTS      |
| 9   | RI       |     |          |



*Component Placement*



*Dimensions*

## FCC

*This device complies with the requirements in part 15 of the FCC rules: Operation is subject to the following two conditions:*

*1. This device may not cause harmful interference, and*

*2. This device must accept any interference received, including interference that may cause undesired operation.*

*This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this device in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense. The user is advised that any equipment changes or modifications not expressly approved by the party responsible for compliance would void the compliance to FCC regulations and therefore, the user's authority to operate the equipment.*

### Caution!



*There is a danger of a new battery exploding if it is incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.*

**Achtung!**