# TITAN

# Rack-Mountable USB to Octal RS-232 Serial & Industrial Hub User Guide

**Model : HubCOM-880i-RM**

# Content

# Introduction & Features

## Rack-Mountable USB to Octal RS-232 Serial & Industrial 8-Port USB 2.0 Hub

### Introduction of HubCOM-880i-RM

The TITAN HubCOM-880i-RM is a rugged, industrial-grade rack-mountable USB 16-Port combo hub consisting of 8 USB to RS-232 serial ports plus 8 ports industrial USB 2.0 hub. This industrial USB 16-port HubCOM provides 8 USB 2.0 downstream ports and 8 USB to RS-232 serial ports. This USB serial combo hub is compliant with USB 2.0 specification, and it expands one USB host port into 8 high-speed RS-232 serial ports and 8 high-efficient USB 2.0 ports by connecting to a USB host port.

The HubCOM-880i-RM USB Hub is designed to make RS-232 serial ports expansion quick and simple, in addition to add 8 USB 2.0 downstream ports for easy USB ports expansion. Connecting to a USB host port on your computer, the HubCOM-880i-RM is automatically detected and installed to the system. There are no IRQ & COM port conflicts, since the port doesn't require any additional IRQ, DMA, memory as resources on the system. All RS-232 ports function as native Windows COM ports, and they are all compatible with Windows serial communication applications. Each of the 8 serial ports is individually configurable with different serial port speeds, serial communication parameters of data bits, stop bits, parity and RTS/CTS, XON/XOFF flow control, transmit and receive FIFO size, etc.

The HubCOM-880i-RM USB Hub is designed for the use in industrial application under tough working environments. It is housed in a DIN-rail as well as rack-mountable metal case with screw holes on each USB port for lockable USB and power cables. Next to each USB downstream port connector are two screw holes for lockable USB cables to add extra reliability of connection. The terminal power input connector has two screw holes securely locking the power wires to prevent them from accidental disconnection.

This industrial-grade HubCOM supports USB 2.0 high speed of 480 Mbps, USB 1.1 full speed of 12 Mbps, and low speed of 1.5 Mbps. It is powered by a quality industrial-grade switching power supply, and it incorporates the USB hub chips specifically for industrial usage. Each downstream port provides full 500mA power to the connected USB devices. This HubCOM is featured with normal operation in wide ambient temperature from -40°C to 70°C (-40°F to 158°F) operation in a harsh environment. All the USB data lines and RS-232 signals are protected by 15KV ESD protection.

# Features of HubCOM-880i-RM

- Adds eight industrial RS-232 serial ports and eight USB 2.0 ports by connecting to a USB 2.0 or USB 3.0 port
- Industrial-grade USB 2.0 hub with rack-mountable SECC metal case
- Suitable for DIN-rail and rack mounting. DIN-rail ears and rack brackets provided
- Industrial RS-232 serial port supports:
  - Full RS-232 modem control signals (TxD, RxD, RTS, CTS, DSR, DTR, DCD) and hardware/software flow control
  - Baud rate up to 921.6 Kbps
  - 2K bytes transmit FIFO & 2K bytes receive FIFO

- USB 2.0 port supports:
  - Over-current detection and protection circuit design for USB hub
  - Each downstream USB port supplies 5V 500mA power for external high-power USB devices.
  - Supports USB 1.1 and USB 2.0 transfer speeds (1.5 ~ 480 Mbps), automatic link and speed detection
  - All USB connectors with screw holes to lock the USB cable for extended security

- Provides a terminal block connector to supply 5V 3A power for external devices
- 15KV ESD immunity for all USB data lines and all RS-232 signals for protection
- LEDs for power, USB status of each hub port, TxD and RxD of each serial port for easy monitoring of port activity and status
- Supports wide ambient temperature operation -40°C to 70°C (-40°F to 158°F)
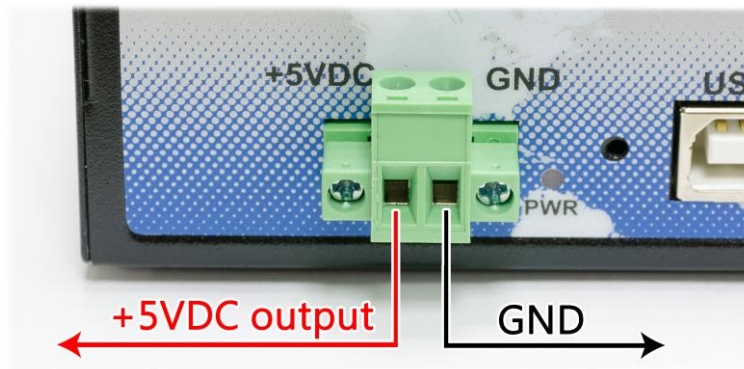- CE, FCC approval

# System Requirements

Any PC with an available USB port and USB compliant operating system
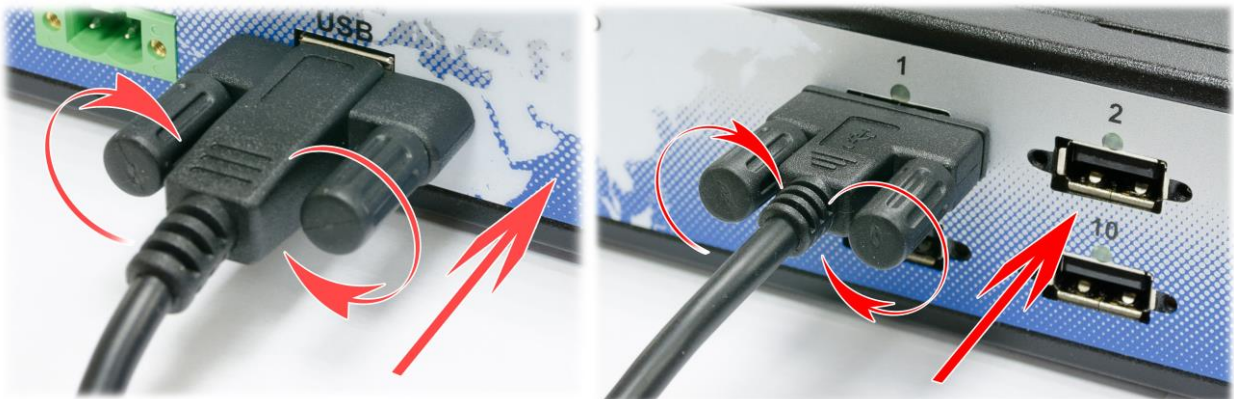- Windows 8, 7, Vista, XP, 2000, ME and above

# Diagram of HubCOM-880i-RM



The HubCOM-880i-RM provides a lockable terminal power connector to supply 5V, 3A power to external device.



All USB connectors with screw holes to lock the USB cable for extended security.

# Specifications

**The table below shows the specifications of HubCOM-880i-RM**

| Serial Port | |
|---|---|
| **Serial Ports Number** | 8-Port |
| **RS-232 Signals** | DCD, RxD, TxD, DTR, GND, DSR, RTS, CTS |
| **Max. Bitrates** | 921600 bps |
| **Serial Configuration** | Data bits : 7 , 8<br>Parity      : None, Odd, Even, Mark , Space<br>Stop bits : 1 , 2 |
| **UART FIFO Buffer size** | Each port with 2K Bytes FIFO for transmit and receive |
| **LEDs** | **TxD Status** | 8 |
| | **RxD Status** | 8 |

| USB2.0 Port | | |
|---|---|---|
| **Ports** | **USB Downstream** | 8 |
| | **USB Upstream** | 1 |
| **LEDs** | **Power** | 1 |
| | **USB Port Status** | 8 |
| **Speed** | | High Speed  :     480 Mbps<br>Full Speed   :      12 Mbps<br>Low Speed   :     1.5 Mbps |
| **Output Voltage (per port)** | | +5V DC |
| **Output Current (per port)** | | 500mA (max) |

| Mechanical & Power | |
|---|---|
| Housing | Rack-mountable Metal Case |
| Weight | 1070  g |
| Dimensions | 333 mm X 144 mm X 44 mm (W x L x H)<br>483 mm X 144 mm X 44 mm (W x L x H) with ears |
| Input Power Range | 90V AC to 264V AC |
| Terminal Block Connector Output Power | +5V DC 3A |

| Environmental | |
|---|---|
| Operating Temperature | -40 °C  to 70°C |
| Storage Temperature | -40 °C  to 85°C |
| Humidity | 0 to 90% RH. Noncondensing |
| Safety Approvals | CE, FCC |

# Installation

In most cases, the driver of HubCOM-880i-RM will be installed automatically.

## Install in Windows 8, 7, Server 2008 R2

Connect your computer to Internet, and plug HubCOM-880i-RM to the USB host port. The driver will be installed automatically via Internet.

## Install in Windows XP, Vista, Server 2003 and 2008

When asked to install the drivers, allow your computer to search the Internet to load and install the drivers automatically.

## Install in Windows 2000, 98, SE and ME

Download drivers from http://www.titan.tw/download/driver.html

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