

MSD-SRF2XM Multi-port RS-232 to Ethernet Data Gateway User Manual

The MSD-SRF2X Dual port RS-232 to Ethernet data gateway will address the need to add 2 RS-232C devices to an IP-based Ethernet LAN on your system, has built-in watch dog function for hardware hangs.

The MSD-SRF2XM Dual-Port RS-232 to Ethernet Data Gateway addresses the need to connect individual RS-232C devices, such as PLCs, meters, sensors, to an IP-based Ethernet LAN. It enables your application software to access serial devices anywhere on a local area network or the Internet. This RS-232 to Ethernet adapter is a ruggedly constructed metal chassis with its RJ45 connection, 12VDC power jack, and LED indicators conveniently located on the back panel, out of the way of any serial cable connection.

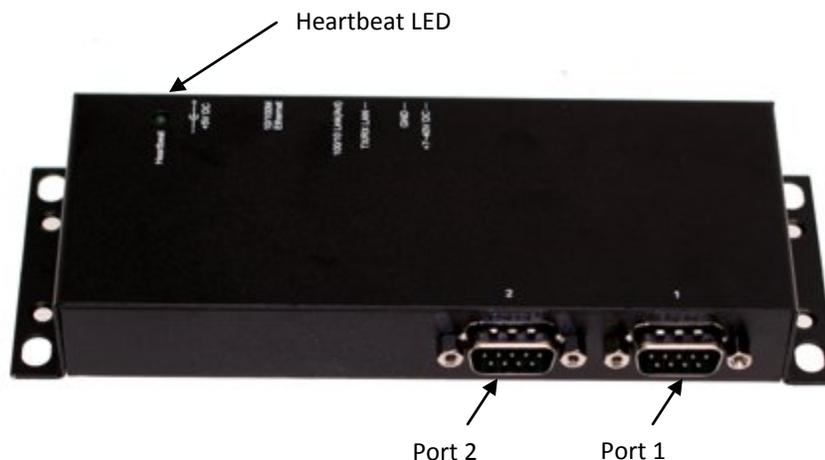


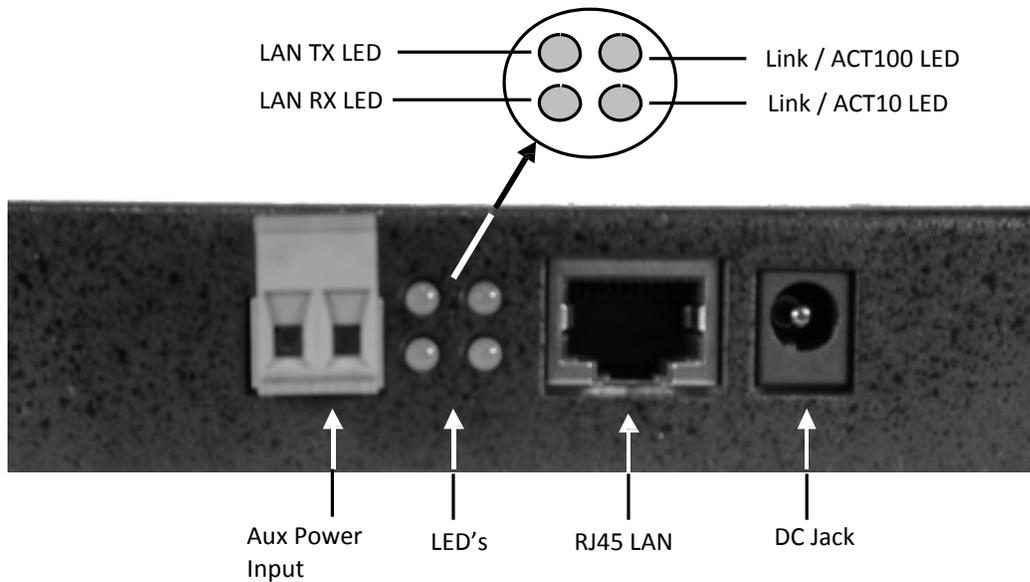
The Dual-Port RS-232 to Ethernet Data Gateway is easy to install and remotely connect through a variety IP addressing methods (UDP, IP, TCP, ICMP, HTTP, DHCP, ARP-Ping). Its rugged industrial-grade construction provides the ideal solution for applications requiring serial port environments and network device management.

Features

- Provides 2 RS-232 Ports over Ethernet
- Provides 2 DB9 RS-232 Male Connectors
- RS-232 Speed from 300bps to 115.2Kbps
- Provides one 10/100Mbps, RJ45 LAN Port
- LAN Supports Auto Cross Over Feature
- Supports Setup and Connect Passwords
- Supports Standard Windows Socket Protocol
- Provides TCP Server, TCP Client, and UDP
- Equipped with Wall Mounting Holes
- Provides a Built-in watch dog function designed to reset the unit when the hardware/software encounters an error

Connector Layout





- **DC Jack Power connector:** A DC5V / 2A AC adapter is supplied with this product.
- **RJ Ethernet Connector:** 10 / 100Mbps Ethernet port. It supports auto cross-over feature. You can use the same cable to connect to a Hub, Switch or a host computer.
- **Led Indicators:** The data gateway's top panel has a heartbeat LED and its rear panel has 4 LAN LED's. They are described as the following table:

| LED Name | Color | LED Function |
|--------------|-------|---|
| Heartbeat | Green | Blinking: Normal operation Else: Malfunction |
| Link/Act 100 | Green | Steady on: Linked in 100Mbps mode. Blinking: Transferring data |
| Link/Act 10 | Green | Steady on: Linked in 10Mbps mode. Blinking: Transferring data |
| LAN TX | Green | Blinking: Sending data out to LAN port |
| LAN RX | Green | Blinking: Receiving data from LAN port |

Hardware Installation

1. **Use static electricity discharge precautions.** Remove possible static discharge potential from any objects that the data gateway may come in contact with before installation. This can be accomplished by touching a bare metal chassis rail after you have turned off the power.
2. **Attached the power adapter.**



3. **Connecting LAN cable:** Use a standard straight-through Ethernet cable to connect to a Hub or Switch. If you connect the data gateway to your computer's Ethernet port instead, you don't need to change to a cross-over type cable since the data gateway provides auto cross-over feature.
4. **Connect the data gateway's serial ports to your serial devices.**
5. **Use the wall mounting Kit if you to place the data gateway on the wall.**

Data Gateway Setup

Setting IP Address

Please consult your Network Administrator to determine the appropriate IP address. The IP address can be set in any of the following ways:

- Automatically from a DHCP Server
- Web Browser
- Ethernet managing utility (Em.exe supplied by this product)

The data gateway comes with factory installed IP address **192.168.1.254**. It is ready to accept a new IP address from a DHCP Server. If your network has a DHCP server, it will automatically assign an IP address to the data gateway the first time it is connected and powered up.

1. Setting the IP address from a DHCP Server

A DHCP server will automatically assign an IP address (dynamic address) as well as Subnet Mask and Gateway to this product. If you power up the data gateway without a fixed (static) IP address, the DHCP server will be able to assign an IP address (this is the default setting, **Enable DHCP**).

If you will set the IP address using another method, the address becomes static. This was done when you **Disable** the DHCP setting in the Setup Menu of the data gateway.

2. Setting the IP address using Web Browser

Run your browser and access the data gateway by entering the default (**192.168.1.254**) or current IP address into your browser's address window. Enter the password (default has no password). Then go to change your IP address as well other parameters if required.

3. Setting the IP address using Em.exe Utility

The Em.exe is a Microsoft Windows based utility to find all the data gateways connected on the same subnet and network segment. To run the Em.exe utility, please insert the driver CD supplied with the data gateway. Open (double click) the program at the following location (assume the CD-ROM drive is at E)

E:\Utility\82500\Em.exe





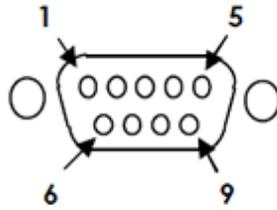
Data Gateway Setup

When you entered Setup Menu of the data gateway, the following page will be available for your access. Please click Update button after you changing your settings. Please also remember you password because you need it when you are going to enter this setup menu next time.

| Controller Setup | |
|---|----------------|
| IP address | 169.254.95.79 |
| Subnet mask | 255.255.255.0 |
| Gateway address | 10.0.0.254 |
| Network link speed | Auto |
| DHCP client | Enable |
| Socket port of HTTP setup | 80 |
| Destination IP address / socket port (TCP client and UDP) | 0.0.0.0 0 |
| Packet mode of serial input | Disable |
| Device ID | 1 |
| Report device ID when connected | Disable |
| Setup password | |
| Access password | |
| Serial Port 1 | |
| Socket port | 100 TCP Server |
| Interface | RS 232 |
| Baud rate, parity, data and stop bits | 9600 None 8 1 |
| Serial Port 2 | |
| Socket port | 101 TCP Server |
| Interface | RS 232 |
| Baud rate, parity, data and stop bits | 9600 None 8 1 |
| Serial Port 3 | |
| Socket port | 102 TCP Server |
| Interface | RS 232 |
| Baud rate, parity, data and stop bits | 9600 None 8 1 |
| Serial Port 4 | |
| Socket port | 103 TCP Server |
| Interface | RS 232 |
| Baud rate, parity, data and stop bits | 9600 None 8 1 |
| Keyboard Input | |
| Socket port | 104 TCP Server |



Male DB9 Pin Assignments and Cable Wiring



| <u>9 Pins</u> | <u>Signal</u> |
|---------------|---------------|
| 1 | DCD |
| 2 | RXD |
| 3 | TXD |
| 4 | DTR |
| 5 | GND |
| 6 | DSR |
| 7 | RTS |
| 8 | CTS |
| 9 | NC |

DB9(Male) to DB9(Male) Wiring

| <u>DB9 (Gateway)</u> | <u>DB9 (Serial Device)</u> |
|----------------------|----------------------------|
| 1 DCD | 1 DCD |
| 2 RXD | 2 RXD |
| 3 TXD | 3 TXD |
| 4 DTR | 4 DTR |
| 5 GND | 5 GND |
| 6 DSR | 6 DSR |
| 7 RTS | 7 RTS |
| 8 CTS | 8 CTS |

Environmental Information

- Power Requirements: 5V DC, 250mA (max)
- Operating Temp.: 0 to 55°C (32 to 131°F)
- Operating Humidity: 5 to 95% RH
- Dimensions (LxWxH): 5.90"(L)x2.61"(W)x1.02"(H) (15.00 x 6.65 x 2.60 cm)

