

## LP-SDS/LP-SDS2 Serial Device Server



### Features

- DIN rail or Panel mount.
- Supports 10/100 Mbps Ethernet.
- Supports RS-232, RS-422, and RS-485 serial interface.
- Supports LAN and WAN communications.
- In Server mode supports individual client sessions for security.
- Management access password protected.
- Virtual COM drivers for Windows NT/98/ME/2000/XP/Vista/Win7.
- Supports socket connection, TCP server, TCP client, and UDP.
- Supports up to 8 TCP connection in TCP server mode.
- Heart beat connection ensures reliable TCP connection against power failure or network disruption.
- Supports loop back mode. Data is echoed back for easily testing the connection.
- Support SNMP Get and Set function.

### Overview

The LP-SDS Ethernet serial server connects RS-232, 422, 485 serial devices to an Ethernet LAN/WAN providing a reliable communication connection. The LP-SDS Windows driver installs virtual COM ports in the Device Manager of the operating system. The virtual COM port is designed to establish a connection with the LP-SDS. This in turn will allow communications with the connected serial device in the same manner as a device connected to the COM port in a PC. The LAN becomes transparent to the serial device and the software running on the PC. LP-SDS also offers a Heart Beat feature to insure a reliable communications connection.

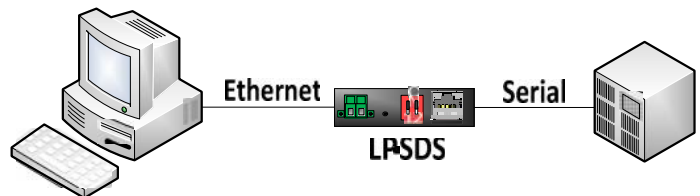
The LP-SDS can be configured as a TCP Client/Server or UDP. The LP-SDS operates in “Direct IP Mode”, “Virtual COM Mode”, and “Paired Mode”.

#### Direct IP Mode

Direct IP connections allow applications using TCP/IP or UDP/IP network socket programs to communicate with the asynchronous serial port on the LP-SDS. In this type of application the LP-SDS is configured to TCP or UDP server. The socket program running on the PC establishes a communication connection with the LP-SDS. The raw data is sent directly to and from the serial port.

#### Virtual COM Mode

The Virtual COM mode requires the installation of a virtual COM port device driver. In this mode, the LP-SDS must be set to either TCP/server or UDP/server in the menu with a designated communication port number.

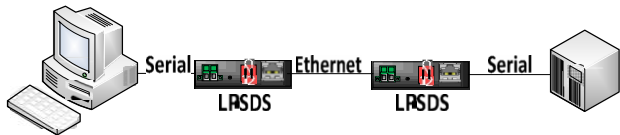


The virtual COM driver is a TCP or UDP client. Once the connection is made, the LAN is transparent to the serial device. Applications work just as if the serial device is connected a host's physical COM port. The virtual COM port converts the application's data into IP packet destined for the LP-SDS, which in turn converts the IP packet back to serial data.

#### Paired Mode

Paired mode is also called serial tunneling. When this type of configuration is selected, No additional software is needed to install in a host PC. In fact a PC is not required to make the connection. Any two dumb serial devices that can communicate with each other through a serial link will be able to communicate using two LP-SDS units and the LAN.

# LAN-POWER



Two LP-SDS units are configured with one setup as a TCP or UDP client and the other to TCP/UDP server. When setting up the Server, the Remote IP address section must contain the address of the Client. This will allow the Client's IP address to pass the IP address-filtering feature of the Server. Conversely, the Remote IP

## Specifications

### Serial Buffer:

**Output:** 64K bytes for LP-SDS/LP-SDS2

**Input:** 8K bytes per port

### Serial Connection:

DTE – BD-9 male

### LAN:

10/100 Mbps Auto-detecting – 10 Base T,  
100 Base TX

### Serial Interfaces:

**RS-232** - TX, RX, RTS, CTS, DTR,  
DSR, DCD, GND

**RS-422** – TX+, TX-, RX+, RX-, RTS+, RTS-,  
CTS+, CTS-, GND

**RS-485** - Data +, Data -, GND

### Data Rate:

110 bps to 230.4 k bps

### Parity:

none, even, odd, mark, space

### Data Bits:

5, 6, 7 or 8

### Stop Bits:

1, 1.5 or 2

## Pin Assignments

DB9 M Pin	RS232	RS422	RS485
1	DCD	RX-	--
2	RXD	RX+	--
3	TXD	TX+	DATA+
4	DTR	TX-	DATA-
5	GND	GND	GND
6	DSR	CTS-	--
7	RTS	CTS+	--
8	CTS	RTS+	--
9	RI	RTS-	--

### Heart Beat

The LP-SDS provides a convenient way to establish reliable communications between two devices. Communication port 5300 is reserved for the Heartbeat Protocol. If a loss connection occurs the Heart Beat feature will try to reconnect the TCP data connection every 5 seconds until communications is established again.

### Loop Back

LP-SDS/LP-SDS2 will work at Loop back Mode, all data is sent back immediately. This feature makes the connection testing easy.

### Protocol:

TCP, IP, ARP, DHCP, Telnet, HTTP, UDP, SNMP, ICMP

### Management:

Manager software, Serial Console, Telnet, Web server Firmware upgradeable, SNMP.

### Dimensions:

3.35 x 4.5 x 0.90 in (8.5 x 11.5 x 2.3 cm)

### Power Requirements:

7 ~30 VDC  
500 mA LP-SDS,  
500 mA LP-SDS2

### Operating Temperature:

0 to 50 °C (32 to 122 °F)

### Storage Temperature:

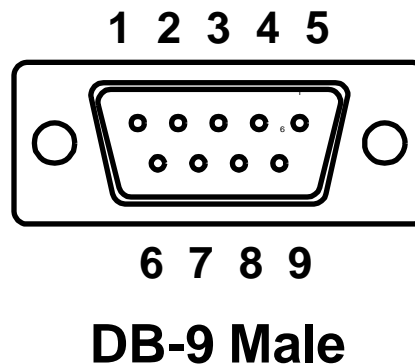
-20 to 60 °C (-4 to 140 °F)

### Humidity:

0 – 90% Non-Condensing

### Approvals:

CE, FCC



**DB-9 Male**