

EDAM-8530

Isolated USB to RS-232 / RS-422 / RS-485 Converter

Introduction

The EDAM-8530 is a stackable USB to RS-232/RS-422/RS-485 converter that provides an easy way to connect serial devices to personal computer via USB port. The RS-232 interface supports full-duplex communication and provides CTS and RTS for hardware handshaking. The RS-485 control is transparent to application softwares written for half-duplex COM port communications. The EDAM-8530's Opto-isolators provide 3000 Vdc of isolation to protect the host computer from ground loops and destructive voltage spikes on the RS-232/RS-422 and RS-485 data lines. The EDAM-8530 has built in surge-protection on each data line that protect the module from destructive voltage spikes. The EDAM-8530 module is USB bus powered and no external power is needed.

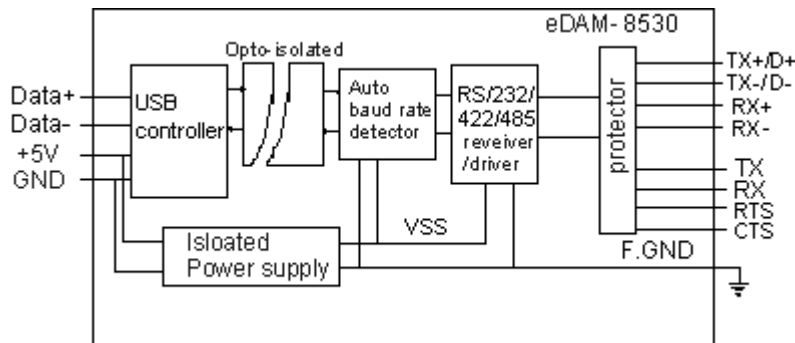
Features

- USB 1.1 Compliant
- Auto data flow direction detection on RS-485
- Full-duplex RS-232/RS-422 support
- RS-232 RTS & CTS signals support
- Minimum 3000 VDC isolation protection
- Transient suppression on RS-485 data lines
- Automatically switch USB signal to RS-232/RS-422 or RS-485 (jumperless)
- Auto baud rate detection up to 115.2 Kbps
- Reserved space for termination resistors R1(TX/DATA), R2(RX)
- Power and activity indicator for troubleshooting
- Driver support for Windows 95/98/ME/2000/XP, Linux
- Power requirement: USB bus power
- Mounts easily on DIN-rail or panel

Specifications:

- USB Controller: USB 1.1
- USB interface connector: USB type B
- Isolation Side: RS-232/ 422/485
- Converted signals: RS-232/RS-422 or RS-485 Auto switching (jumperless)
- Handshake: RS-232 RTS & CTS
- Auto Baud rate (bps): 300 ~115.2 K BPS
- Data activity LED indicator
- Isolation voltage: 3000 V DC
- RS-232/RS-422/RS-485 connector: plug-in screw terminal
- Accessories (Supplied): NYLON DIN-rail Mounting Adapter SECC Panel Mounting Bracket
- Plug-in screw terminal wiring: Accepts AWG 1-#12 to #22 (0.5 to 2.5 mm) wires
- Power requirement: USB bus power
- Case: ABS with captive mounting hardware
- Power consumption: 0.65 W
- Operating temperature: 0 ~ 70 °C (32 ~ 158 °F)
- Storage temperature: -25 ~ 85 °C (13 ~ 185 °F)
- Humidity: 5 ~ 95%, non-condensing

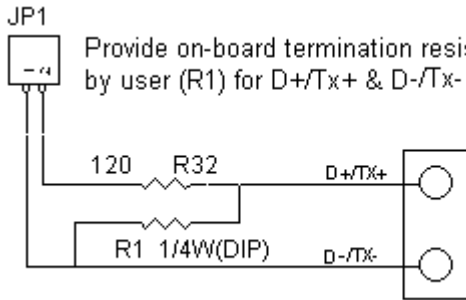
Block diagram



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RS-422 / 485 Termination Resistor

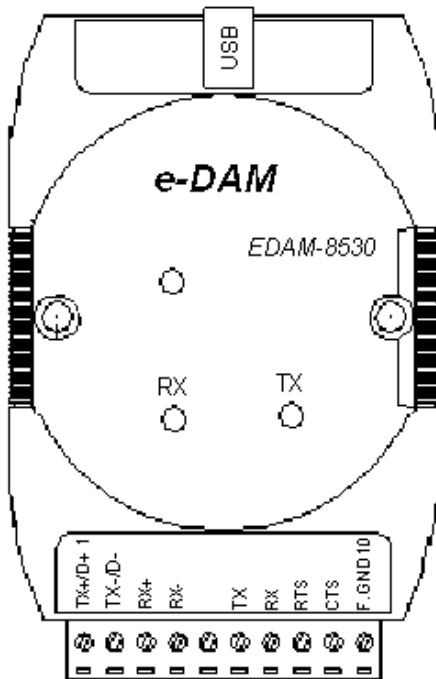


Termination Resistor

- * Termination resistor "R1" for D+/Tx+ & D-/Tx-
- * Termination resistor "R2" for RX+/RX-

If the length of RS-485 is about 1.2KM,try 120 ohm first.
If the length of RS-485 is about 600M,try 220 ohm first.
If the length of RS-485 is about 300M,try 330 ohm first.

Connection



Pin Definitions

Pin No.	Name	Description
1	TX+/D+	RS-422 or RS-485 transmission line, positive
2	TX-/D-	RS-422 or RS-485 transmission line, negative
3	RX+	RS-422 receive line, positive
4	RX-	RS-422 receive line, negative
5	NC.	
6	TX	RS-232 transmission line
7	RX	RS-232 receive line
8	RTS	RS-232 Request to send line
9	CTS	RS-232 Clear to send line
10	F.GND	Ground

USB Type B connector

1	+5V	USB +5VDC bus power
2	Data-	USB Data line, Negative
3	Data+	USB Data line, Positive
4	GND	USB bus power ground

Windows 98 USB Driver Installation

- Plug the EDAM-8530 into the computer USB port or a USB Hub
- Open Control Panel.
- Select Add New Hardware Wizard icon.
 - . The 'Add New Hardware Wizard' appears, Press 'Next' button.
 - . In the dialog box that comes up, leave the default choice, (Search for the best drivers for your device), Press 'Next' button.
 - . In the dialog box that comes up, leave the default choice, (Floppy disk drivers), Press 'Next' button.
 - . In the dialog box that comes up, leave the default choice, (The update driver), Press 'Next' button.
 - . In the dialog box that comes up, Press 'Next' button. (Window driver file search for the device)
 - . Dialog box appears to tell you that the installation has finished, Press 'Finish' button.
- Now you have installed EDAM-8530 on your system, you can see a new USB serial device in 'Control->Device Manager'. The EDAM-8530 acts as a standard COM port and is transparent to any UART application softwares.

Dimensions

