RS232-ADP™ Serial RS-232 Adapter User Manual

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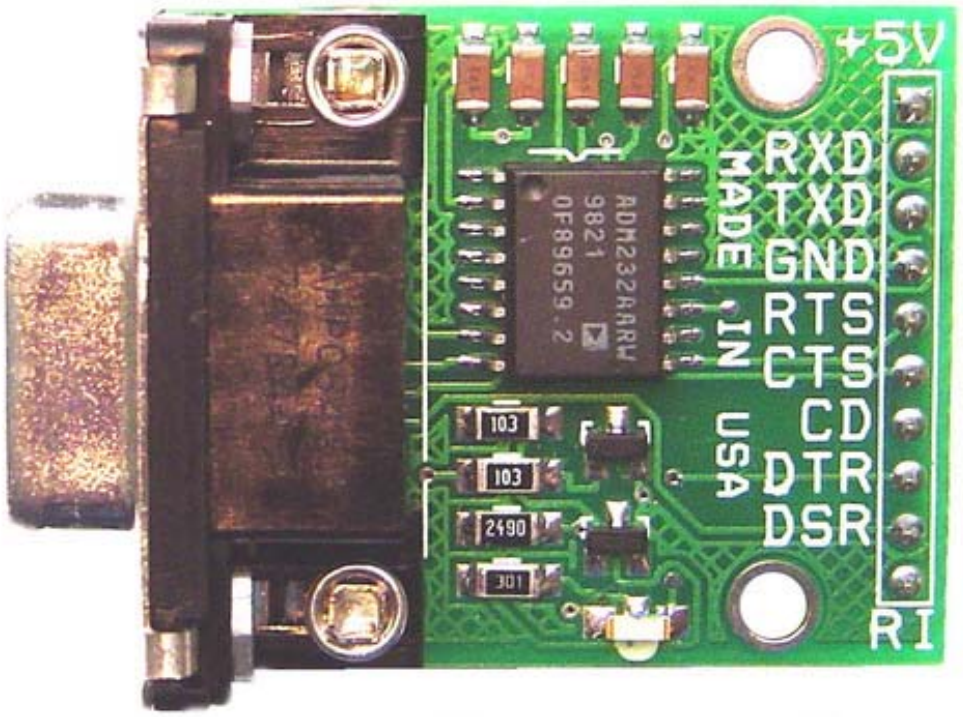

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Description

This RS232-ADP board is a high-speed RS232 Serial UART to TTL level converter module. It is allow you to connect the serial COM port on your computer directly to the module. The module then translates RS232 level to TTL level on the TXD and RTS lines. Also, translate TTL level back to RS232 level on RXD and CTS lines.

This board features innovations that set it apart from other RS232 Adapter boards. Innovations feature like RXD and TXD status LEDs. Quick and easy connect that you can plug directly on to the breadboard. The board is small and compact in size 1.50 x 1.25 inches.

The TX and RX pins from the RS232-ADP can be connected directly to RX and TX pins of your preferred 5V logic microcontroller. You only need to supply 5VDC to the board.

The RS232-ADP board is perfect for embedded systems that require a serial connection to a computer. The board attaches directly to the computer COM port via a serial DB9 cable. The PC serial port transmits and receives signals at +/-12V while TTL devices including microcontroller operate at +5V and GROUND. In order for you to interface between the two, you'll need this interfacing circuit.

Features

- True RS232 level conversion
- Meets all EIA-232-E and V.28 specifications
- High speed up to 200 KB/S transmission rate
- Operate from a single 5V supply
- TXD and RXD status LEDs
- Decoupling supply voltage
- Design easy for breadboard
- High quality double sided PCB
- Full hardware handshaking
- All SMT components.
- -40 to +85 °C operating range
- Small and compact in size 1.50 x 1.25 inches.
- Straight 0.1" header pins
- Full access to all DB9 interface pins

Applications

- RS232 communication with your favorite microcontroller or project board.
- Data collection from external measurement instrument.
- Cell phone, PDA, MP3 player and laptop data transfer.
- Control system from your PC to electronic board.
- And much more…

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Interfaces

TTL:

All TTL interface pins are 5V logic level

- **TXD:** Transmit Data *from* the RS232-ADP board. It is a Serial Output and normally connected to the RX pin on any microcontroller or equivalent UART.
- **RXD:** Receive Data *into* the RS232-ADP board. It is a Serial Input and normally connected to the TX pin on any microcontroller or equivalent UART.
- **RTS:** Request to Send *from* the RS232-ADP board. It is an output.
- **CTS:** Clear to Send *into* the RS232-ADP board. It is an input.

RS232:

All RS232 interface pins are connected directly to the computer. They are NOT converted.

- **CD:** Data Carrier Detect – connected directly to PIN1 on DB9 connector.
- **DTR:** Data Terminal Ready – connected directly to PIN4 on DB9 connector.
- **DSR:** Data Set Ready – connected directly to PIN6 on DB9 connector.
- **RI:** Ring Indicator – connected directly to PIN9 on DB9 connector.

Power:

The RS232-ADP board needs an external 5VDC +/-10% supply.

- **+5V:** is input 5VDC +/-10% to RS232-ADP board.
- **GND:** is a common ground for every pin. This pin MUST be connected to ground of the external power supply.

Pin Function Description Summary Table

10-PIN Header	Name	DB9	Voltage Converted
1	+5V	N/A	
2	RXD	2	YES
3	TXD	3	YES
4	GND	5	
5	RTS	7	YES
6	CTS	8	YES
7	CD	1	NO
8	DTR	4	NO
9	DSR	6	NO
10	RI	9	NO

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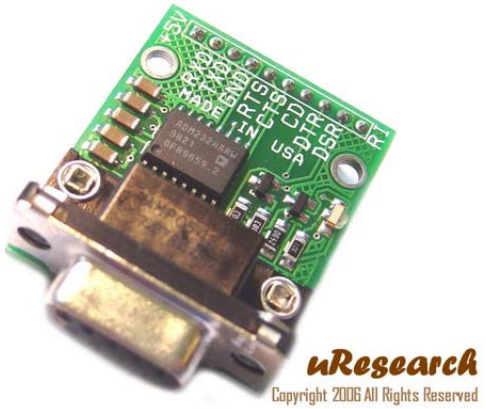
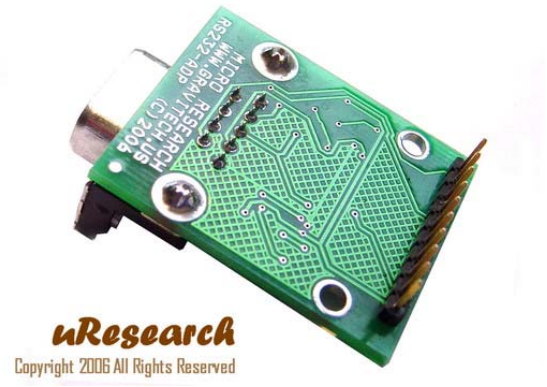
Accessories

All of the accessories are available for purchase via our website. If you don't see the item you need, please contract our sales department at sales@gravitech.us

- SERIAL6-CB
  Straight Through 6Ft 9 pin male to female DSUB connector. 28 Awg conductors with Tin-plated shell. PVC wire insulation and Aluminum Mylar foil shielded. Current rating for up to 1Amp with dielectric withstanding of 500V AC (for 1 minute).





Specifications

Circuit Board Size	1.50" x 1.25"
Mounting Holes Size	Φ 0.121"
Supply Voltage	5 VDC +/-10%

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