

# Digilent Pmod RS232 Converter Module Board Reference Manual

Revision: 04/12/05



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## Overview

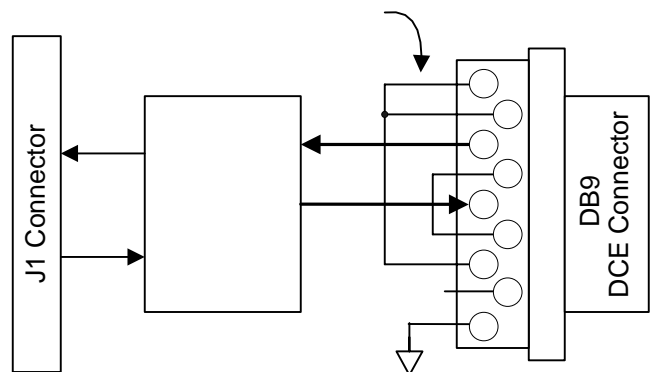
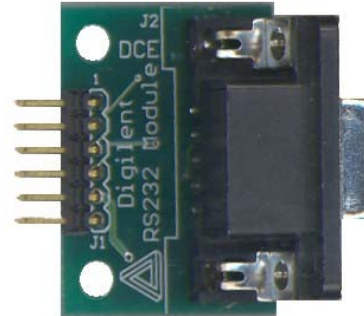
The RS232 Converter Module PMOD translates voltage from the logic levels used by Digilent system boards to the RS232 voltage used for serial communications.

The RS232 module creates a two-way I/O exchange by converting RS232 voltage to logic level voltage and converting logic voltage to RS232 voltage. RS-232 voltage levels are -3 to -12V for a logic '1', and +3 to +12 for a logic '0'.

The RS232 module is configured as a data communications equipment (DCE) device. It connects to data terminal equipment (DTE) devices, such as the serial port on a PC, using a straight-through cable.

Features include:

- Max3223 integrated circuit
- a DB9 connector and 6-pin header
- transmit and receive functions
- small form factor (1.00" x 1.30").



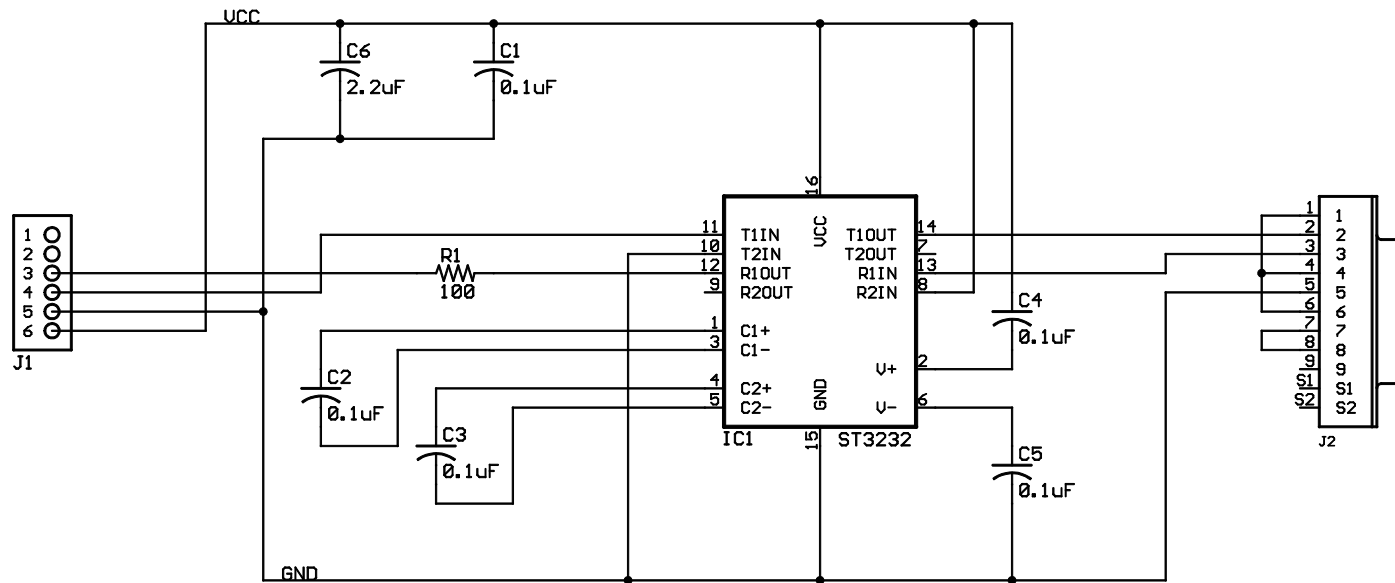
**RS232 Circuit Diagram**

## Functional Description

The RS232 module is configured as a 3-wire DTE serial port, with one wire carrying transmit data, one receive data, and the third signal-ground. The module converts logic signals arriving on J1 pin 4 to RS-232 voltage, and RS-232 voltage signals arriving on the DB-9 pin 2 to logic levels.

The RS232 module has a 6-pin header for easy connection to a Digilent system board. Some system boards, like the Digilent Pegasus board, have a 6-pin header that can connect to the RS232 module with a 6-pin cable. To connect the RS232 module to other Digilent system boards, a Digilent Modular Interface Board (MIB) and a 6-pin cable may be needed.

The MIB plugs into the system board, and the cable connects the MIB to the RS232 module.



|                               |               |
|-------------------------------|---------------|
| <b>RS232 Header Module</b>    |               |
| Copyright 2004, Digilent Inc. | Engineer: NEA |
| TITLE: HmodRs232              | Author: NEA   |
| Document Number: 500-068      | Rev: A        |
| Release Date: 08/03/2004      | Sheet:1/1     |