

MOD-RS485 development board

Users Manual



All boards produced by Olimex are ROHS compliant

Revision Initial, April 2011
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INTRODUCTION:

MOD-RS485 is a small module board realized with ADM3483ARZ - low power, differential line transceiver designed to operate using a single 3.3 V power supply, for half-duplex communication. This module can be used to convert RS232 signals into RS485 signals. The board comes with 10 pin cable for the UEXT, via which it can be connected to each of our development boards with UEXT on it.

This module is an excellent choice for conveying information over long distances, allowing error-free data transmission at data rates up to 250 kbps.

BOARD FEATURES:

- Half-duplex transceiver ADM3483ARZ from Analog Devices
- UEXT connector
- RS485 connector
- FR-4, 1.5 mm, soldermask, component print
- Dimensions: 30.99x20.32mm (1.22 x 0.80")

ELECTROSTATIC WARNING:

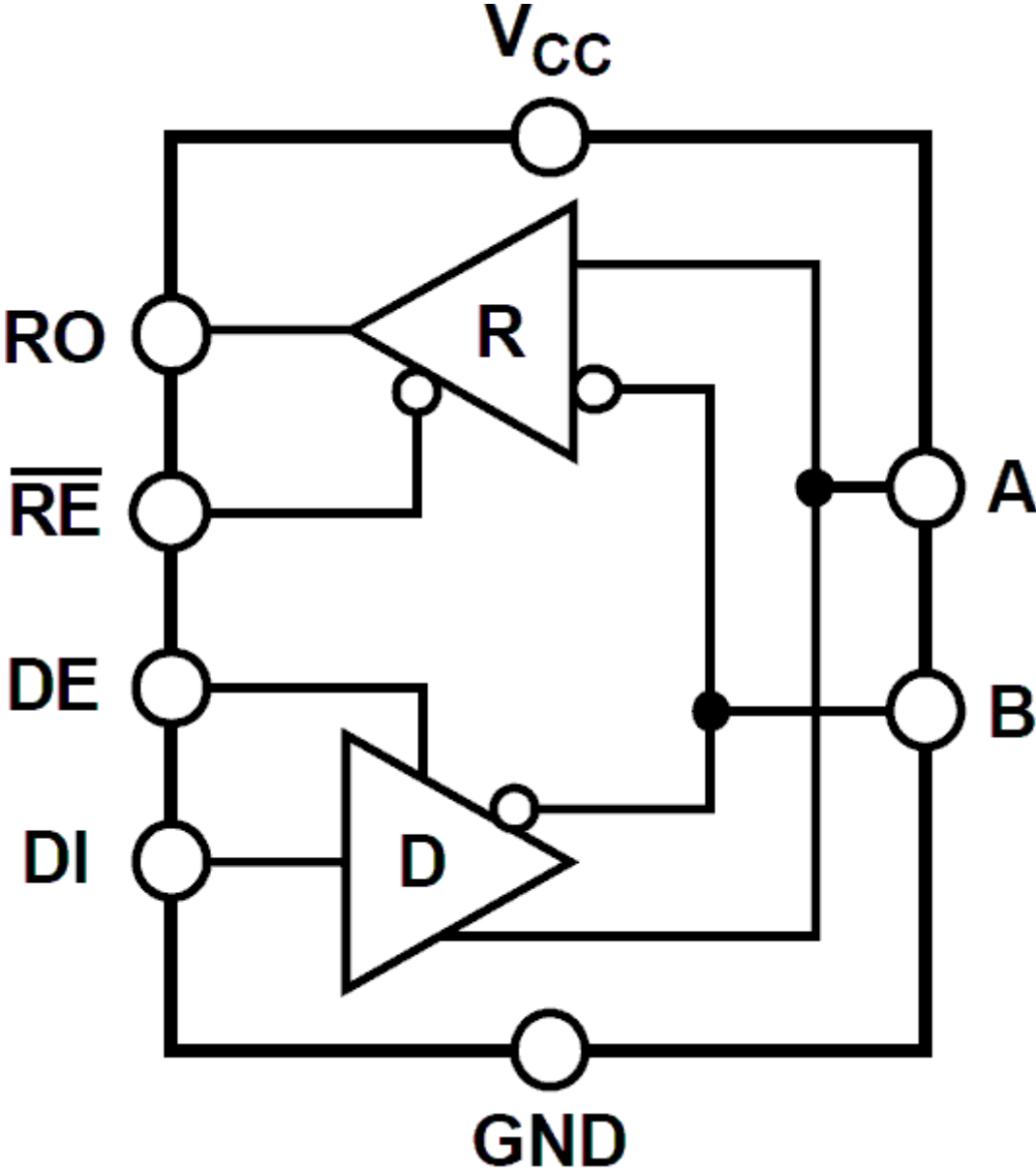
The **MOD-RS485** board is shipped in protective anti-static packaging. The board must not be subject to high electrostatic potentials. General practice for working with static sensitive devices should be applied when working with this board.

BOARD USE REQUIREMENTS:

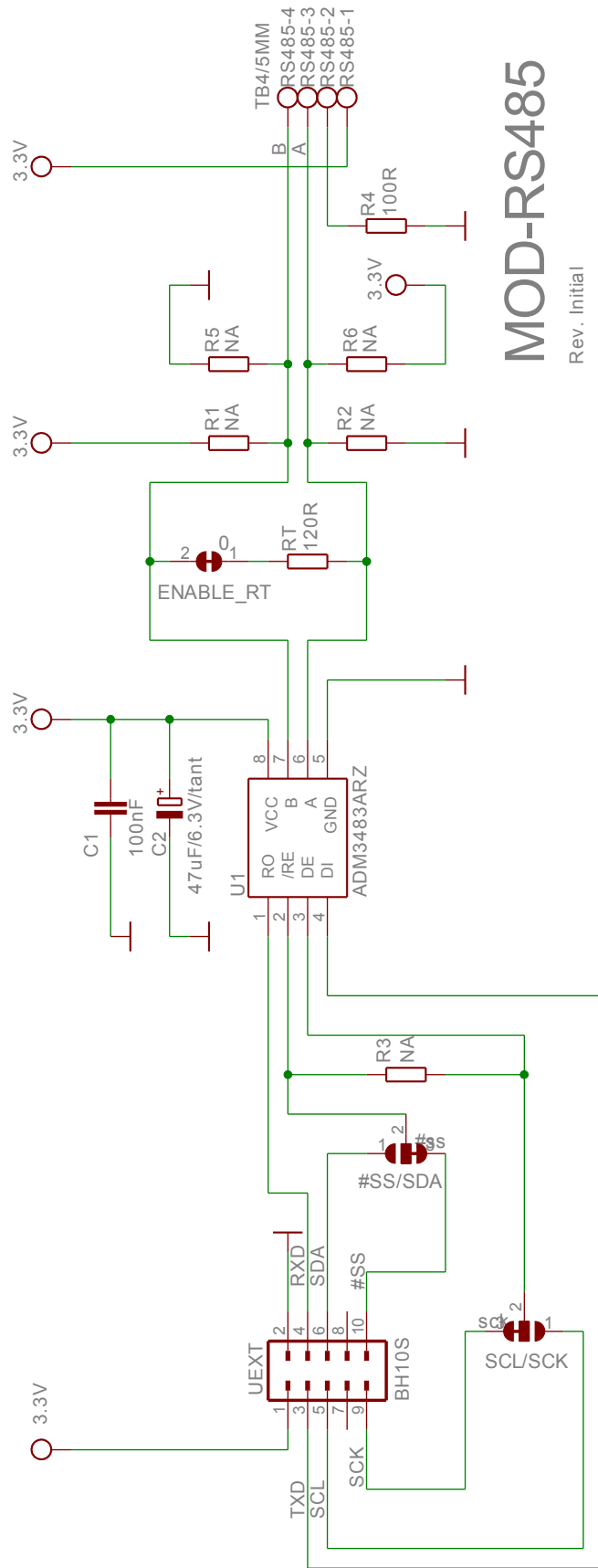
Cables: The board comes with 10 pin cable for the UEXT connector.

Hardware: Any of our development boards with UEXT connector on it.

FUNCTIONAL BLOCK DIAGRAM:



SCHEMATIC:



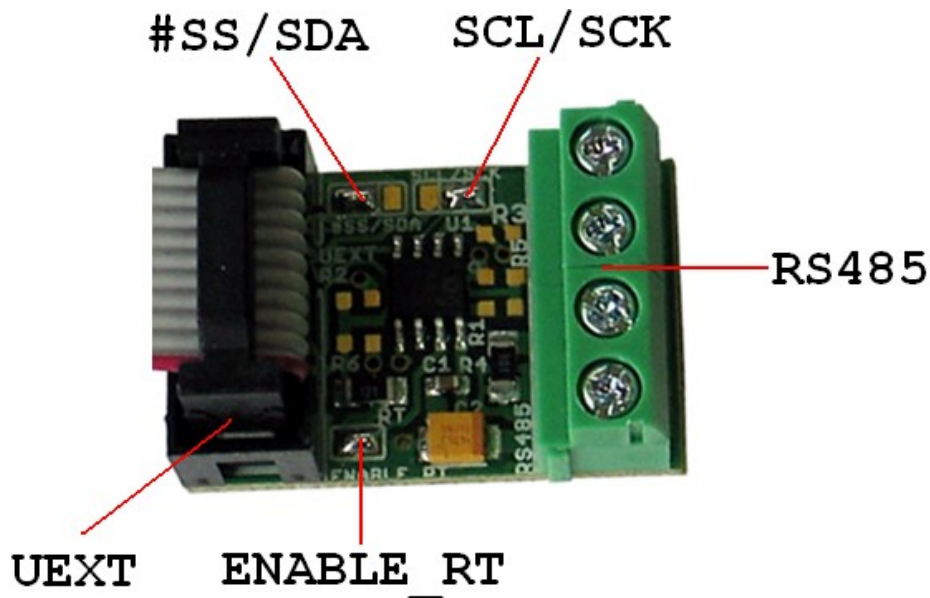
MOD-RS485

Rev. Initial

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BOARD LAYOUT:



POWER SUPPLY CIRCUIT:

MOD-RS485 is power supplied via UEXT connector pin 1 (3.3V) and pin 2 (GND).

JUMPER DESCRIPTION:

ENABLE_RT



This jumper, when closed, enables 120 Ohm termination on the RS485 bus.

Default state is closed.

SCL/SCK



This jumper, when is in position SCL - connects UEXT pin 5 (SCL) to ADM3483ARZ pin 3 (DE) and when is in position SCK - connects UEXT pin 9 (SCK) to ADM3483ARZ pin 3 (DE).

Default state is in position SCK.

#SS/SDA



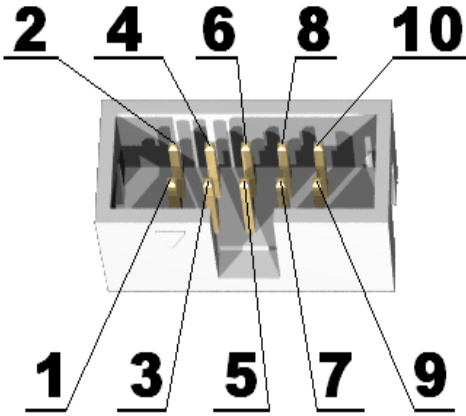
This jumper, when is in position #SS - connects UEXT pin 10 (#SS) to ADM3483ARZ pin 2 (/RE) and when is in position SDA - connects UEXT pin 6 (SDA) to ADM3483ARZ pin 2 (/RE).

Default state is in position #SS.

EXTERNAL CONNECTORS DESCRIPTION:

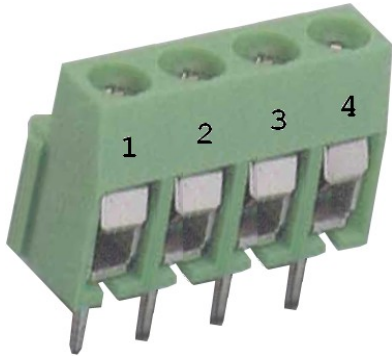
UEXT:

Pin #	Signal Name
1	VCC
2	GND
3	TXD
4	RXD
5	SCL
6	SDA
7	Not connected
8	Not connected
9	SCK
10	#SS

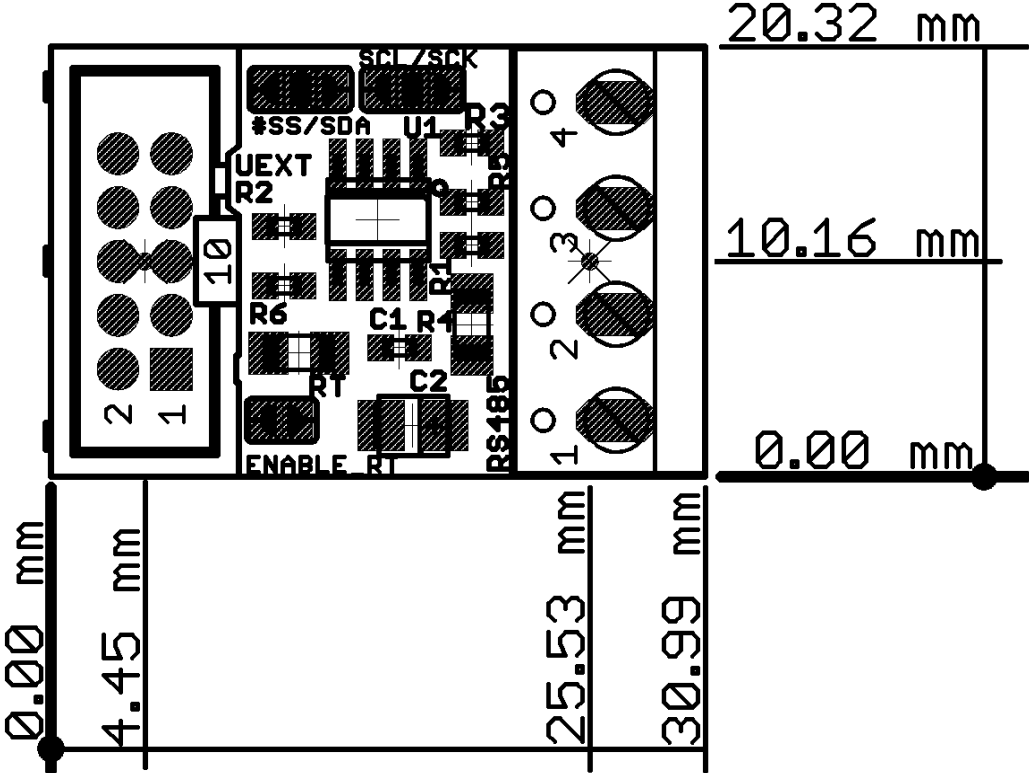


RS485:

Pin #	Signal Name
1	VCC
2	100 Ohm pull-down resistor
3	A
4	B



MECHANICAL DIMENSIONS:



AVAILABLE DEMO SOFTWARE:

- Coming soon at our web page: <http://www.olimex.com/dev>

ORDER CODE:

MOD-RS485 - assembled and tested board

How to order?

You can order to us directly or by any of our distributors.
Check our web www.olimex.com/dev for more info.

Revision history:

Board's revision:

Revision Initial, June 2010

Manual's revision:

Revision Initial, April 2011

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