

## MOD-RS485 development board

## Users Manual



All boards produced by Olimex are ROHS compliant

Revision Initial, April 2011  
Copyright(c) 2011, OLIMEX Ltd, All rights reserved

## **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:**

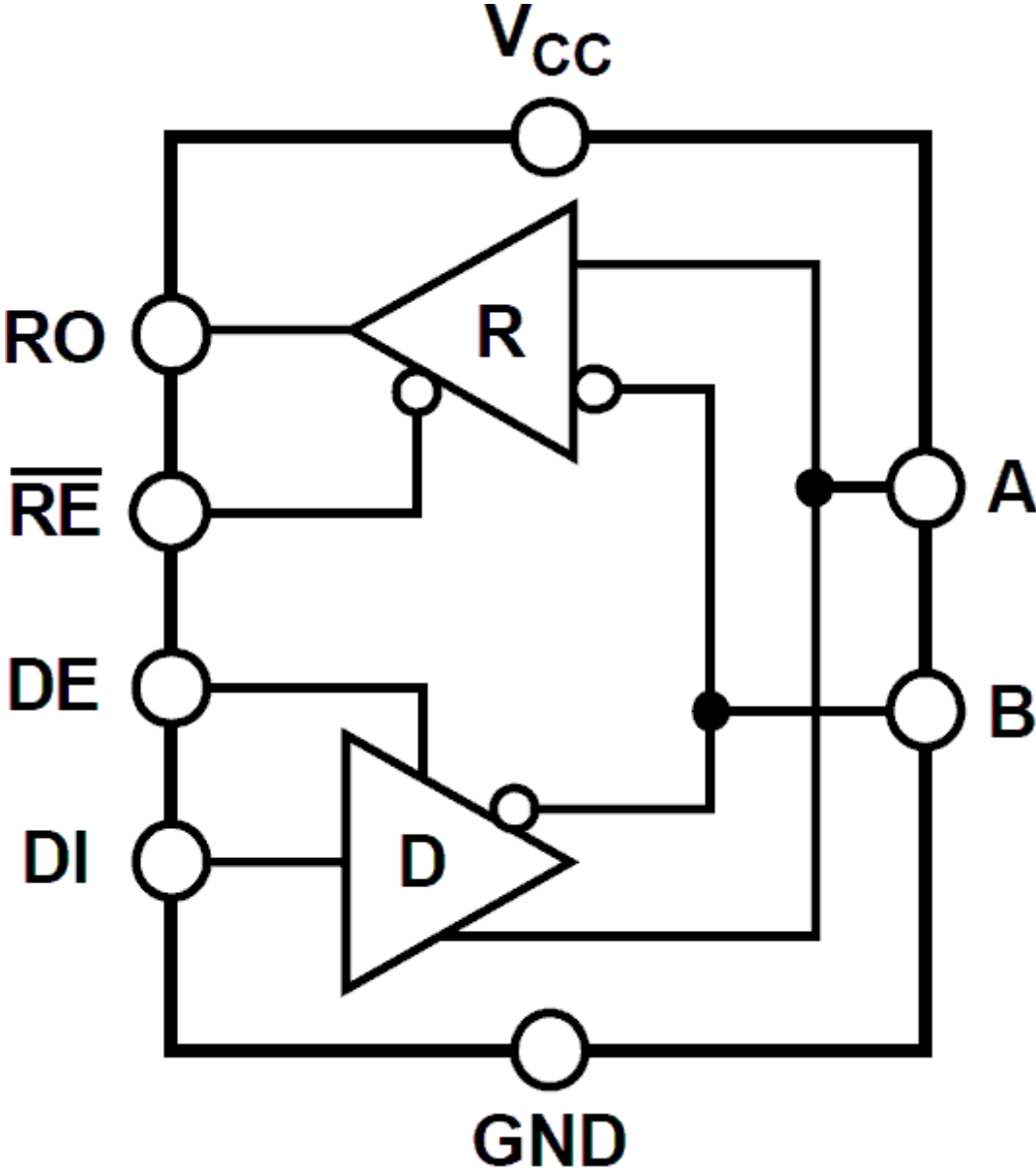
The **MOD-RS485** board is shipped in protective anti-static packaging. The board must not be subject to high electrostatic potentials. General practice for working with static sensitive devices should be applied when working with this board.

## **BOARD USE REQUIREMENTS:**

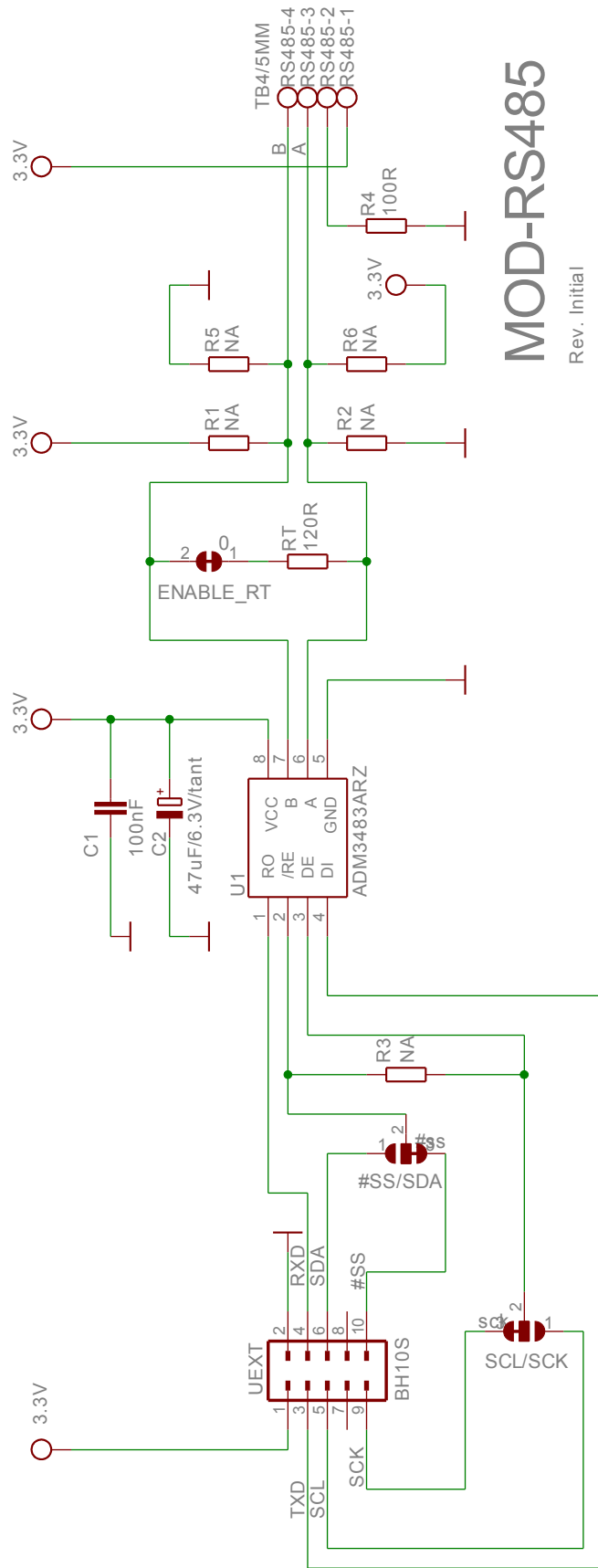
**Cables:** The board comes with 10 pin cable for the UEXT connector.

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

FUNCTIONAL BLOCK DIAGRAM:



**SCHEMATIC:**



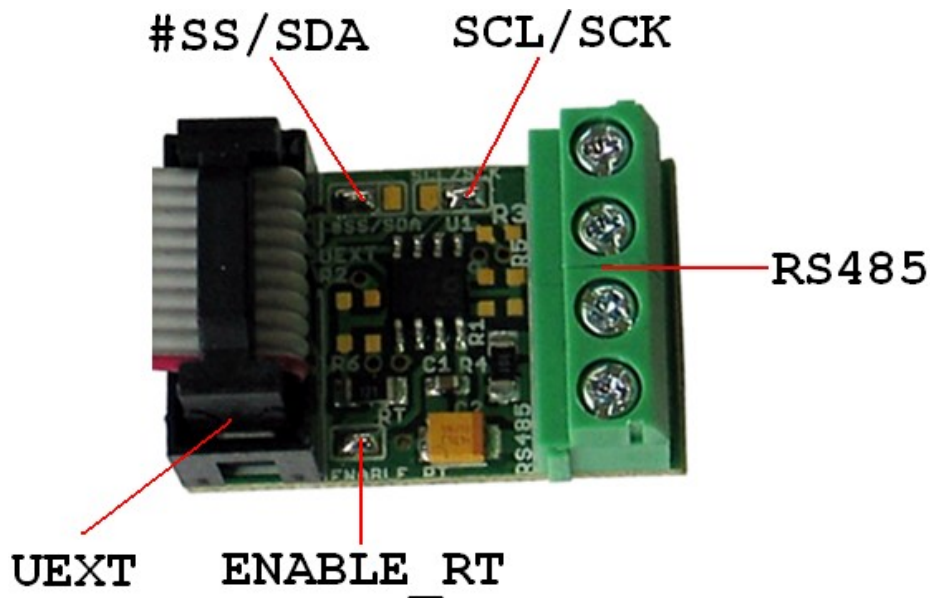
**MOD-RS485**

Rev. Initial

COPYRIGHT(C) 2010, OLIMEX Ltd.

<http://www.olimex.com/dev>

## 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



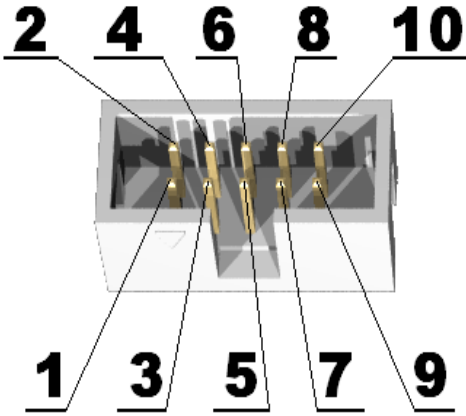
This jumper, when is in position #SS - connects UEXT pin 10 (#SS) to ADM3483ARZ pin 2 (/RE) and when is in position SDA - connects UEXT pin 6 (SDA) to ADM3483ARZ pin 2 (/RE).

Default state is in position #SS.

**EXTERNAL CONNECTORS DESCRIPTION:**

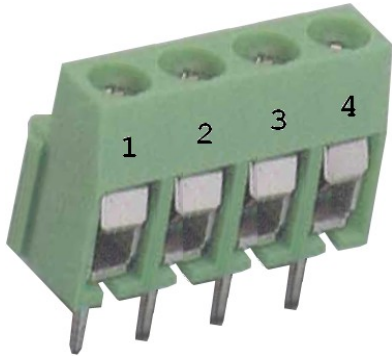
**UEXT:**

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

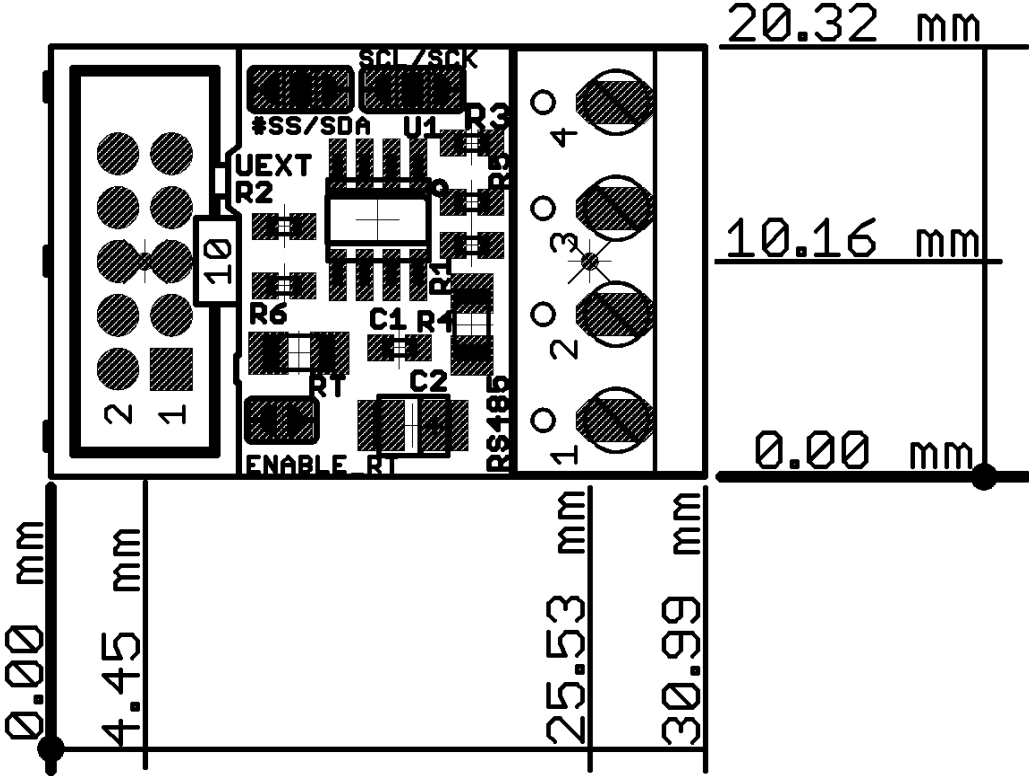


**RS485:**

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](http://www.olimex.com/dev) for more info.

**Revision history:**

Board's revision:

Revision Initial, June 2010

Manual's revision:

Revision Initial, April 2011

**Disclaimer:**

© 2011 Olimex Ltd. All rights reserved. Olimex®, logo and combinations thereof, are registered trademarks of Olimex Ltd. Other terms and product names may be trademarks of others.

The information in this document is provided in connection with Olimex products. No license, express or implied or otherwise, to any intellectual property right is granted by this document or in connection with the sale of Olimex products.

Neither the whole nor any part of the information contained in or the product described in this document may be adapted or reproduced in any material from except with the prior written permission of the copyright holder.

The product described in this document is subject to continuous development and improvements. All particulars of the product and its use contained in this document are given by OLIMEX in good faith. However all warranties implied or expressed including but not limited to implied warranties of merchantability or fitness for purpose are excluded.

This document is intended only to assist the reader in the use of the product. OLIMEX Ltd. shall not be liable for any loss or damage arising from the use of any information in this document or any error or omission in such information or any incorrect use of the product.