

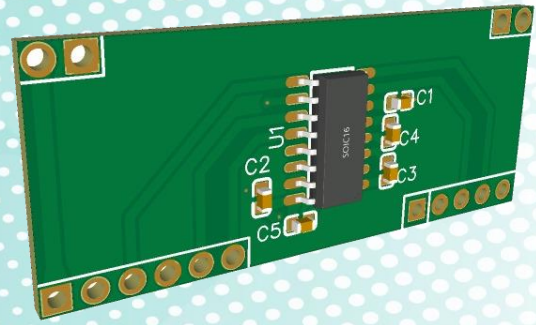


Power Meter Monitor

Model: PMM0915

Document version: 1.2

Date: October 2020

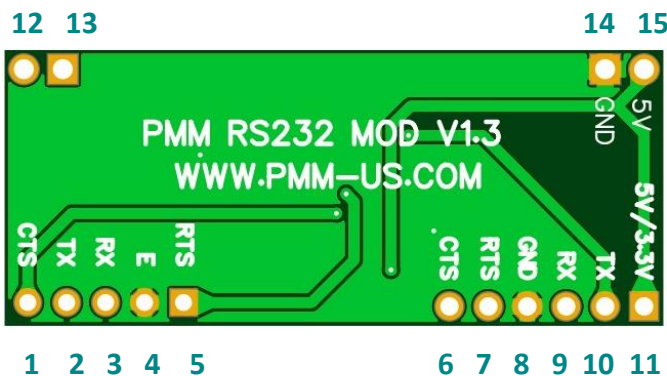


# UART/TTL to RS232 Converter Module

## KEY FEATURES AND SPECIFICATIONS

- Compatible with 3.3V and 5.0V power supply and signals
- Operates up to 250 Kbits/s
- Operating temperature: -40 to 80°C
- Very high EMC and EMI performance
- Electrical interference and noise is greatly reduced by the presence of a large copper area
- Low Supply Current: 300  $\mu$ A (Typical)
- ESD Protection for RS-232 Bus Pins  $\pm$ 15-kV IEC ESD
- Module size: 43mm X 18mm X 3mm
- Vertical and horizontal mounting options, compatible with standard DIP/SIP pinout
- RoHS Compliant
- Proven PCB Layout
- Fully Assembled and Tested

## BOARD PINOUT



## DESCRIPTION

PMM0915 is a TTL to RS232 converter module via MAX232 TTL to RS-232 Interface chipset which allows ICs to use RS-232 differential signaling for robust long-distance serial communications. This module allows for data transmission and communication of a CPU/MCU with any RS232 device either using full mode (full duplex) or null mode (half duplex).

PMM0915 has  $\pm$ 15-kV IEC ESD protection pin to pin and operate at data signaling rates up to 250 Kbit/s and a maximum of 30-V/ $\mu$ s driver output slew rate. Moreover, it has the ability to work under difficult environmental conditions.

## WIRING RS-232 MODULE

The wiring is done through two options:

From the RS232 device

- 3 wires (null mode (half duplex)): TX, RX and Ground.
- 5 wires (full mode (full duplex)): TX, RX, CTS, RTS and Ground

From the UART device

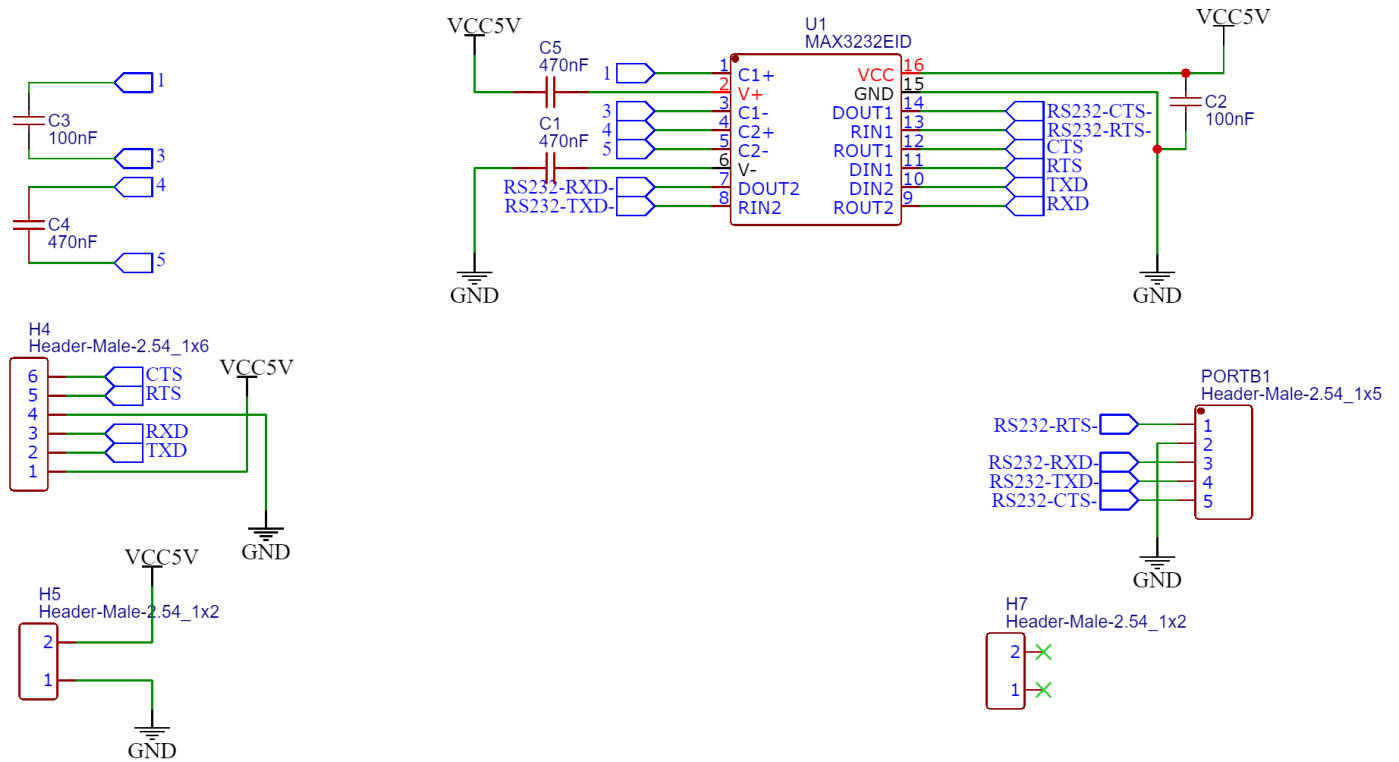
- 3 wires (null mode (half duplex)): TX, RX and Ground.
- 5 wires (full mode (full duplex)): TX, RX, CTS, RTS and Ground

The wires should ideally be twisted and shielded within one cable, this method is important as it runs for longer where there is a lot of electrical noise. The shield or the common ground is labeled as E in output side of the module.

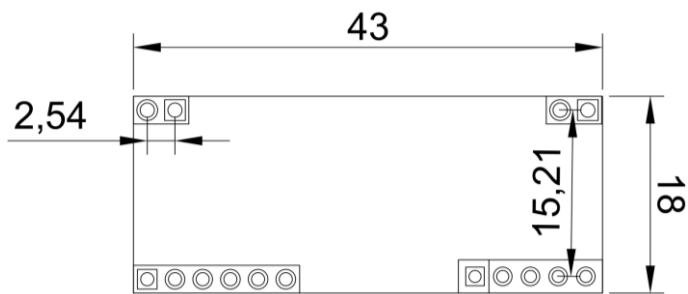
## BOARD PINOUT DESCRIPTION

PINS	DESCRIPTION
1	CTS OUTPUT
2	TX OUTPUT
3	RX OUTPUT
4	SHIELD/COMMON GROUND
5	RTS OUTPUT
6	TTL/UART CTS
7	TTL/UART RTS
8	TTL/UART GND
9	TTL/UART RX
10	TTL/UART TX
11,15	(VCC) POWER SUPPLY: 5VDC OR 3.3VDC
12,13	NOT CONNECTED
14	COMMON GROUND

## SCHEMATIC DIAGRAM



## DIMENSIONS (mm)



## ORDERING INFORMATION

Part Number	Description
PMM0915	UART/TTL to RS232 Converter Module

## CUSTOMIZED REQUIREMENT

For any customized inquiries and orders, contact us  
on [info@Pmm-usa.us](mailto:info@Pmm-usa.us)