

## XM1202

### 433 / 868 / 915 MHz Transceiver board

#### GENERAL DESCRIPTION

The XM1202 transceiver module is designed for cost efficiency and low power consumption. Based on the highly integrated XE1202 chip, the RF module has a direct digital interface for data, a RSSI output, FEI (Frequency Error Indicator) output and antenna Rx/Tx switch control.

As with the XE1202, the transceiver module XM1202 offers the advantage of narrow band and wide band communication, without the need to modify the number or the value of the external components. The XM1202 transceiver module requires no tuning or external components (except antenna), allowing for straightforward evaluation or application.

- Single-antenna-ready (No Rx/Tx switch required)
- Narrow band operation: down to 25kHz channels for data rate of 4.8kbps, NRZ coding
- Wide band operation: 400kHz channels for data rate: up to 76.8kbps, NRZ coding
- Frequency synthesizer step: 500Hz
- Output power is programmable: up to 15dBm
- Supply voltage down to 2.7V
- Incoming data pattern recognition
- Synchronized clock output
- RSSI (Received Signal Strength Indicator) and FEI (Frequency Error Indicator)
- Low Power consumption: typ RX=15mA; TX=49mA @15dBm output power with a ¼ wave whip 50Ω antenna
- High reception sensitivity: down to -109dBm with a ¼ wave whip 50Ω antenna

#### ORDERING INFORMATION

Part	Pin-package
XM1202-E915	Board
XM1202-E868	Board
XM1202-E433	Board

#### KEY PRODUCT FEATURES

- Direct digital interface

#### I/O LINES

The XM1202 can be connected to the main application board, test equipment or XEMICS' development tools via a 20 pin connector shown in the figure below.

**Pin #1**

"SCK": (Input), Serial Clock line, used to set-up configuration of the XE1202 transceiver IC.

**Pin #2**

"VDD": Connect to a 3.3V power supply.

**Pin #3**

"SI": (Input), Serial Input, used to set-up configuration of the XE1202 transceiver IC.

**Pin #4**

"GND": Connect to Ground

**Pin #5**

"SO": (Output), Serial Output, used to read configuration register of the XE1202 transceiver IC.

**Pin #6**

"TX": (Input), Transmit, used to set-up the antenna switch in transmitter.

**Pin #7**

"EN": (Input), Chip Enable.

**Pin #8**

"RX": (Input), Receive, used to set-up the antenna switch in Receiver.

**Pin #9**

"Mode (0)": (Input), Transmit / Receive / Sleep mode select.

**Pin #10**

"CLKOUT": (Output), Output clock at reference frequency divided by 4,8,16,32.

**Pin #11**

"Mode (1)": (Input), Transmit / Receive / Sleep mode select.

**Pin #12**

"PATTERN": (Output), Output of the pattern recognition block.

**Pin #13**

"Mode (2)": (Input), Transmit / Receive / Sleep mode select.

**Pin #14**

NC

**Pin #15**

"DCLK": (Output), Recovered received Data Clock.

**Pin #16**

NC

**Pin #17**

"DATAOUT": (Output), Received Data.

**Pin #18**

NC

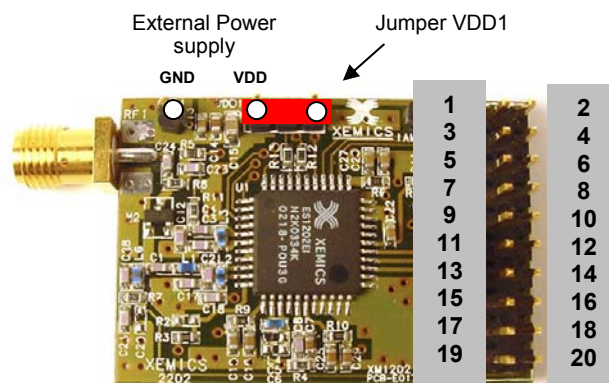
**Pin #19**

"DATAIN": (Input), Transmit Data.

**Pin #20**

NC

For convenience, the XM1202 can be supplied through separate VDD and GND pins. In this case, the two supply lines of the 20-pin connector should not be used, instead remove the jumper "VDD1"



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