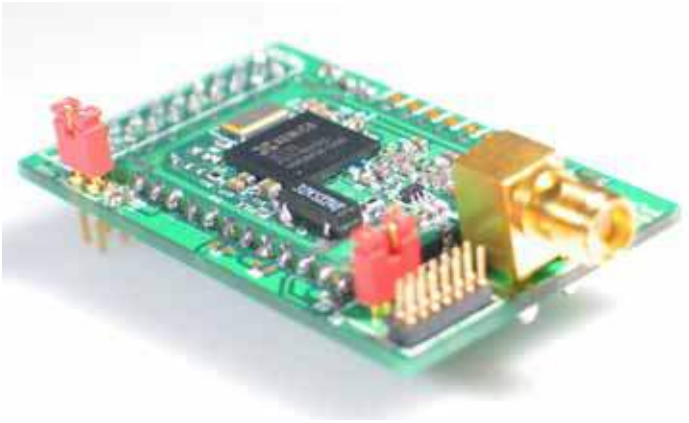
XEMICS

**Product Brief**
**XM1283 – RFMicrocontroller**
**433/868/915 MHz module**



# XM1283 – 433 / 868 / 915 MHz

## Transceiver board with low power 8-bit microcontroller

### GENERAL DESCRIPTION

The XM1283 is a radio module based on the highly integrated XE1283 combining an ISM-band radio transceiver and a low power microcontroller on one chip. The XM1283 consists of a DP1283 Drop –In Module soldered onto a DP to XM adapter.

The XM1283 transceiver module enables high data rate communication up to 152.3 kbit/s. The module is optimized for low power consumption. In transmit mode maximum output power is +15 dBm without any external power amplifier. Three frequency ranges are available to satisfy either the European (ETSI-300 220-1) or the North American (FCC part 15.231) standards.

XM modules may also be ordered as part of a Starter Kit, which includes a microcontroller interface and a PC-based graphical user interface to enable range testing and more detailed product evaluation.

### ORDERING INFORMATION

| Part | Version | Pin-package |
|---|---|---|
| XM1283-C433XEM-1 | TrueRF™ | Board with Antenna |
| XM1283-C868XEM-1 | TrueRF™ | Board with Antenna |
| XM1283-C915XEM-1 | TrueRF™ | Board with Antenna |

### KEY PRODUCT FEATURES

- Direct digital interface
- Supply voltage down to 2.4V
- Minimum external component count
- Frequency synthesizer step: 500 Hz
- Output power programmable: up to 15 dBm
- High reception sensitivity: down to -113 dBm
- Data rate from 1.2 kbit/s to 153.2 kbit/s
- Low Power consumption
- 8-bits microcontroller, RISC core
- Up to 6 MIPS, 300 uA at 1 MIPS operation
- Up to 22 kByte (8kW) MTP, 512 Byte RAM

## APPLICATION CONNECTOR

The XM1283 TrueRF™ can be connected to test equipment or XEMICS' development tools via a 20 pins connector.

**Pin #1**
"SCK": (Output), Clock of the 3-wire interface

**Pin #2**
"VDD": Connect to a 3.3V power supply.

**Pin #3**
"SI": (Output), Data of the 3-wire interface

**Pin #4**
"GND": Connect to Ground

**Pin #5**
"SO": (Input), Data of the 3-wire interface

**Pin #6**
"TX": (Input), Transmitter selection of the antenna switch; not connected by default

**Pin #7**
NC

**Pin #8**
"RX": (Input), Receiver selection of the antenna switch; not connected by default

**Pin #9**
"SWITCH": (Input / Output), RF mode selection / indication

**Pin #10**
"CLKOUT": (Output), Output clock at 9.75, 4.875, 2.4375 or 1.21875 MHz

**Pin #11**
NC, grounded

**Pin #12**
"PB(0)" (Input / Output) port B pin

**Pin #13**
NC, grounded

**Pin #14**
"PB(1)" (Input / Output) port B pin

**Pin #15**
"PB(5)" (Input / Output) port B pin

**Pin #16**
"PB(2)" (Input / Output) port B pin

**Pin #17**
"PB(6)" (Input / Output) port B pin

**Pin #18**
"PB(3)" (Input / Output) port B pin

**Pin #19**
"PB(7)" (Input / Output) port B pin

**Pin #20**
"PB(4)" (Input / Output) port B pin

The microcontroller can be programmed via the "programming connector" using a XE8000MP.