

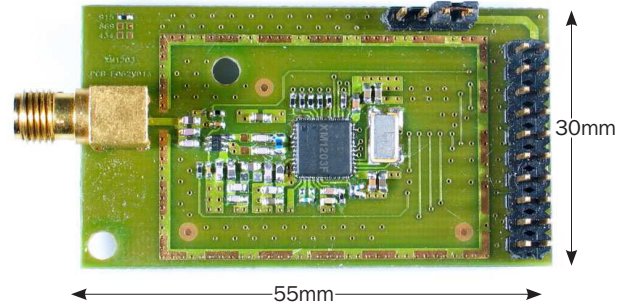
Product Brief



SEMTECH ADVANCED COMMUNICATIONS & SENSING

XM1203F

True RF™ 433/868/915 MHz
Transceiver Module



Industry's Leading Low Power Wideband Transceiver

General Description:

The XE1203F TrueRF transceiver module is a complete radio solution based on the highly integrated XE1203F integrated ISM-band radio transceiver. Designed for performance evaluation purposes, the RF module has a direct digital interface for data, RSSI output, FEI (Frequency Error Indicator) output and antenna Rx/Tx switch control.

The XM1203F transceiver module enables high data rate communication at rates up to 152.3 kbit/s. The module is optimized for low power consumption in receive and standby modes. In transmit mode typical 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 parts 15.247 and 15.249) 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.

Key Product Features:

- Direct digital interface
- Minimum external component count
- Elimination of high-cost external components (e.g. SAW-filter)
- Frequency synthesizer minimum resolution: 500Hz
- Output power programmable: up to 15dBm (typ.)
- High reception sensitivity: down to -114dBm (typ.)
- Data rate up to 153.2 kbit/s
- Low Power consumption: RX=14mA; TX=65mA @15dBm (typ.)
- 11-bit Barker encoder/decoder for robust transmission in the presence of interference
- Incoming data pattern recognition for receive-only with microcontroller wake up
- Synchronized clock output
- Bit Synchronizer (data recovery)
- RSSI (Received Signal Strength Indicator)
- FEI (Frequency Error Indicator)

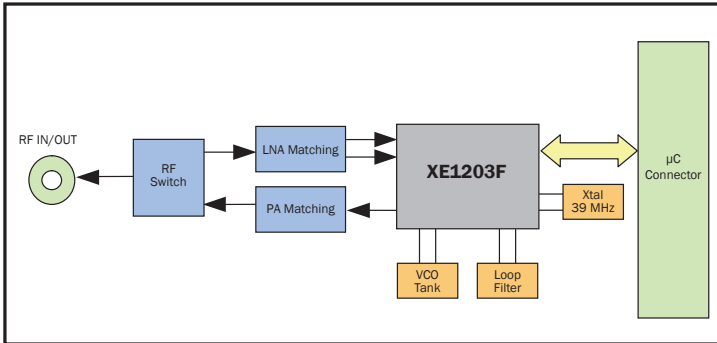
Ordering Information:

Part	Pin-package
XM1203FC915	20 Pin DIL Header
XM1203FC868	20 Pin DIL Header
XM1203FC433	20 Pin DIL Header

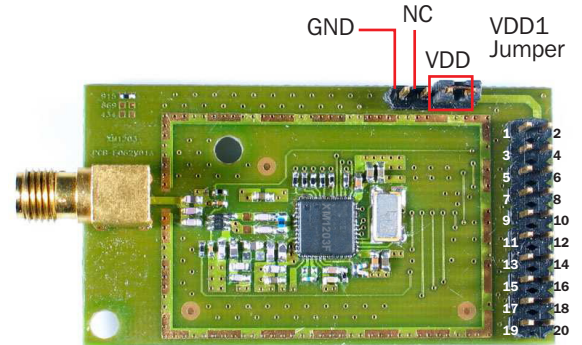
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XM1203F True RF™ Module

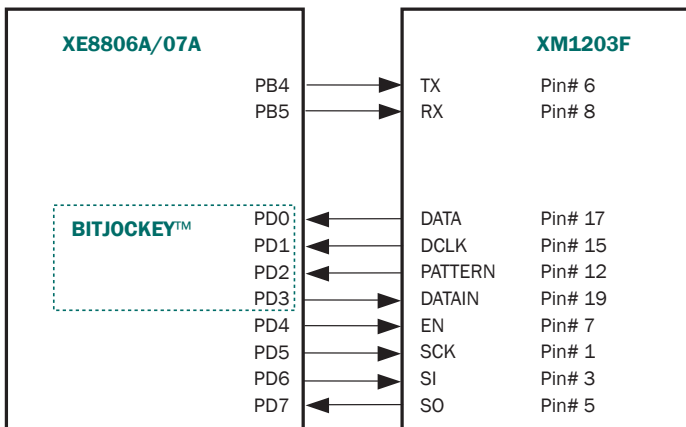
XM1203F Block Diagram



Pin Configurations:



Typical Application / Connection Example



I/O Pin	Description
1	SCK: Serial Data Clock (Input)
2	VDD*
3	SI: Serial Data Input (Input)
4	GND*
5	SO: Serial Data Output (Output)
6	TX: Antenna Switch Control (Input: TX = /RX)
7	EN: Serial Data Enable (Input)
8	RX: Antenna Switch Control (Input: RX = /TX)
9	SWITCH: XE1203F Mode Control (Input)
10	CLKOUT: Reference Output Clock (Output)
12	PATTERN: Pattern Recognition (Output)
15	DCLK: RX Data Clock /TX Barker Clock (Output)
17	DATA: TX Input Data / RX Output Data (Output / Input)
19	DATAIN: TX Data Input (Input)
11, 13, 14, 16, 18, 20	GND

* For convenience, the XM1203F can be supplied through the separate VDD and GND pins. In this case, the two supply lines of the 20-pin connector should not be used, and the VDD1 jumper should be removed.

Visit our website to locate the most current product specifications, datasheets and contact information for your local Semtech Field Applications Engineer.

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