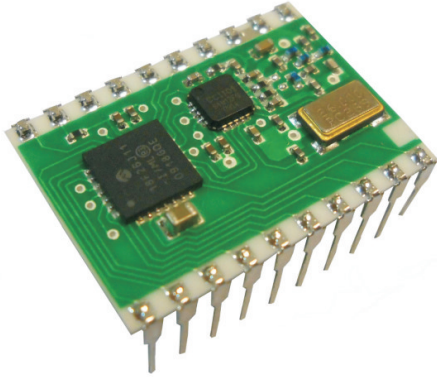


RXQ6-XXX

Sub 1GHz Multichannel Radio Transceiver with microcontroller inside



General description

The RXQ6-XXX is a low-cost sub 1GHz radio transceiver designed for very low-power wireless applications. Is based on CC1101 device (Texas Instrument) and the microcontroller PIC18F26J11 (Microchip). The circuit is mainly intended for the ISM (Industrial, Scientific and Medical) and SRD (Short Range device) frequency bands at 433, 868, and 915 MHz.

The used microprocessor is a new generation component (nano Watt XLP Technology) and it guarantees low consumption levels in all operation mode.

This module is suitable to be used for different types of applications.

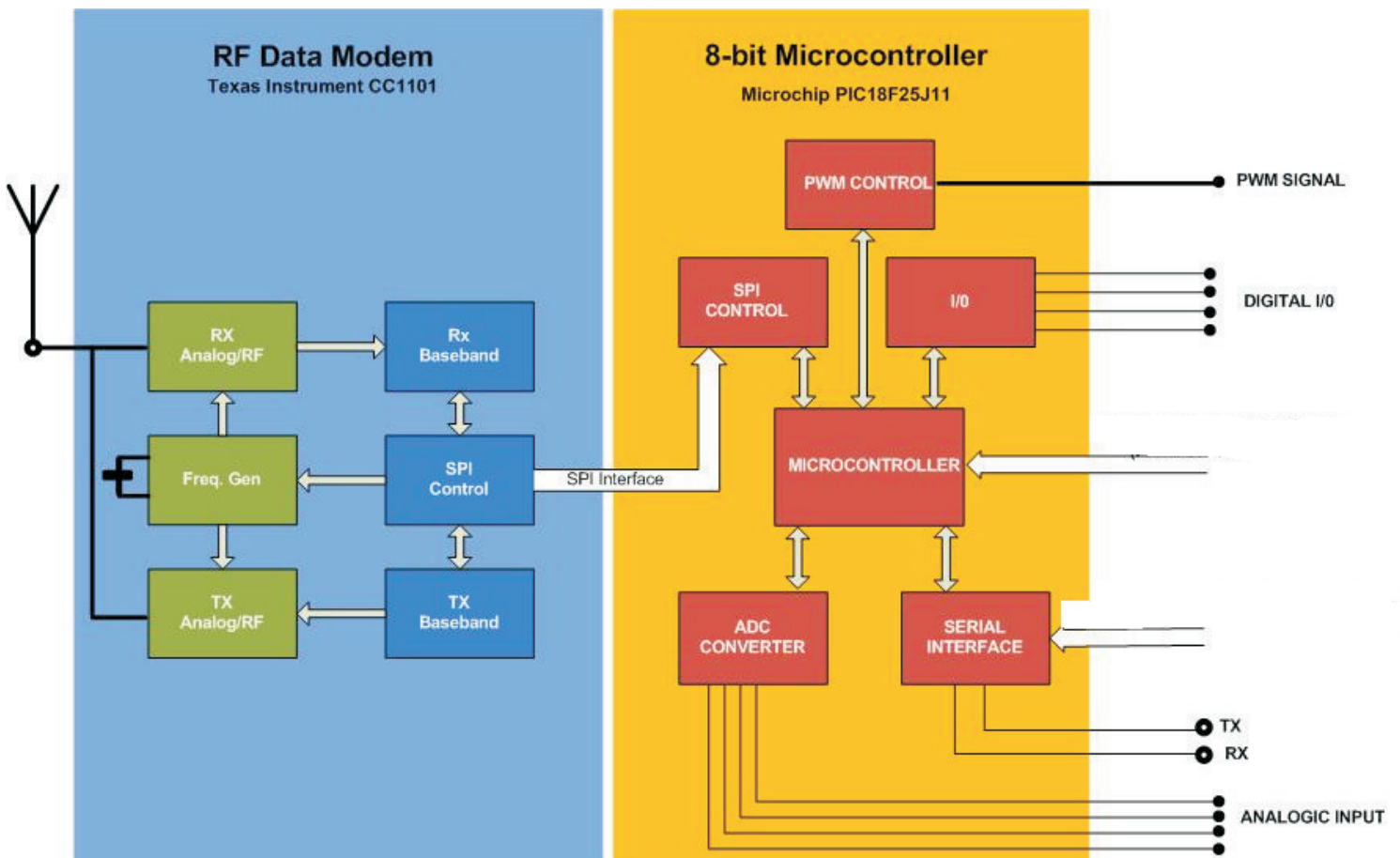
XXX: custom-specified working frequency
 (433 - 868 - 915 Mhz)

Applications

- Wireless alarm and security systems
- Home and building automation
- AMR - Automatic Meter Reading
- Wireless Sensor networks
- Industrial monitoring and control

Features

- High Reliability
- DIL Package



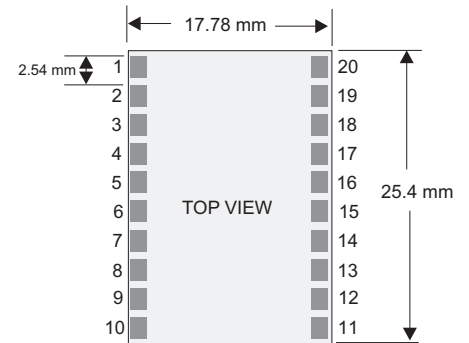
Electrical Characteristics

CHARACTERISTICS		MIN	TYP	MAX	UNIT
V _{CC}	Supply Voltage	2.2	3	3.6	VDC
I _s	Supply Current (RX mode / TX mode)		20/34		mA
I _s	Supply Current (Deep Sleep Mode/Sleep Mode)		0,35/3,5		uA
P _o	RF Output Power into 50Ω		10		dBm
	RF Sensitivity (1.2 Kb/sec Data Rate)		-112		dBm
	Max Data Rate		500		Kbit/s
	StartUp Time (Sleep to RX/TX mode)		250		usec
T _{OP}	Operating Temperature Range	-25		+80	°C

Pin Description

1	Antenna	11	ADC-Digital I/O
2	GND	12	ADC-Digital I/O
3	GND	13	ADC-Digital I/O-IRQ
4	VCC	14	ADC-Digital I/O-IRQ
5	TXOUT	15	ADC-Digital I/O
6	RXIN	16	ADC-Digital I/O
7	Digital I/O-IRQ-PGD	17	ADC-Digital I/O
8	Digital I/O-IRQ-PGC	18	ADC-Digital I/O
9	MCLR-RESET	19	ADC-Digital I/O
10	ADC	20	Digital I/O

Mechanical Dimensions



EXT PIN	Connection between ext pin and components	INT PIN
Pin01	Antenna	
Pin02	GND	
Pin03	GND	
Pin04	Vcc	
Pin05	TXout	Pin14 of PIC
Pin06	RXin	Pin15 of PIC
Pin07	PGD/TXSelect/ I O/IRQ	Pin25 of PIC
Pin08	PGC/RXSelect/ I O/IRQ	Pin24 of PIC
Pin09	MCLR/Reset	Pin26 of PIC
Pin10	CS/ADC/RTCC	Pin19 of PIC
Pin11	I/O ADC CTEDG1 RefCLKout RP5	Pin20 of PIC
Pin12	I/O ADC CTEDG2 RP6	Pin21 of PIC
Pin13	I/O IRQ RP7	Pin22 of PIC
Pin14	I/O IRQ RP8	Pin23 of PIC
Pin15	I/O ADC C1inA ULPWMU RP1	Pin27 of Pic
Pin16	I/O ADC C2inA RP0	Pin28 of PIC
Pin17	I/O ADC Vref- CVref C2inB	Pin01 of PIC
Pin18	I/O ADC Vref+ C1inB	Pin02 of PIC
Pin19	I/O ADC HLVDIN RP2	Pin04 of PIC
Pin20	I/O T1oso T1CKI RP11	Pin08 of PIC

	Internal connections	
Pin11 of PIC	SPI SCLK	Pin01 of CC1101
Pin12 of Pic	SPI SODI	Pin02 of CC1101
Pin13 of PIC	SPI SIDO	Pin20 of CC1101
Pin09 of PIC	SPI CS	Pin07 of CC1101
Pin10 of PIC	Temperature Sensor	Pin06 of CC1101
Pin18 of PIC	RB0/AN12/INT0/RP3	Pin03 of CC1101

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