CNX200 – IP500® Module

Low Power Wireless Networking Dual-Band Module

CoreNetiX offers wireless communication technologies and solutions for low-power smart sensor networks.

KEY FEATURES

- Simultaneous Dual-Band Operation
- Cost-Optimized Multi-Standard Module for IoT
- Conform to IEEE 802.15.4-2006
- EN54-25, VdS compliant hardware/IP500® Stack
- On Board AES 128-Bit Encryption Accelerator
- Easy to Integrate into your Products
- Interfaces: Serial, GPIO, Analog Input/ Output
- Support for Capacitive Touch Interface
- Compact Dimensions: 15.0 mm x 40.0 mm

DESCRIPTION

The CNX200 is worldwide the first TRUE dual-band module supporting simultaneous communication in the sub-GHz and 2.4GHz frequency bands addressing the increasing performance needs of customers looking for cost effective multi-protocol stack connectivity solutions.

CNX200 complies with the latest IEE802.15.4-2006. The CNX200 offers O-QPSK modulation in the European, American, India, Japanese bands up to the worldwide ISM bands.

CNX200 is designed to address the challenging demands of the IP500® standard for secured and fail-safe communication.

Dedicated CNX200 solutions can also support the EN54-25 and VdS requirements for fire and safety.

The CNX200 dual band module is the ideal platform for OEM's looking for a versatile platform, enabling them to design-in wireless capabilities into their products for Smart Metering, Smart Lighting, Smart Home, Smart Energy, Automation and Industrial Solutions. The CNX200 is worldwide the only module offering simultaneous operation in the sub-GHz and 2,4 GHz bands for IP500® and other industrial / security/ access control standards.

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SPECIFICATION

GENERAL

Power Supply Voltage	2.7 – 3.6 V
Current Consumption	TX on: 78 mA @ +14 dBm RF Output Power RX on: 41 mA, Sleep Mode: < 5 µ
Dimensions	15 mm x 40 mm
Temperature Range	-40°C to +85 °C (Operating)
Weight	< 1.7 g
Antenna	2 x U.FL Coaxial Connector
Supported Standards	IEEE 802.15.4-2006
Interfaces	UART, GPIO, Audio Bit Stream, ADC

PROCESSOR / MODULE

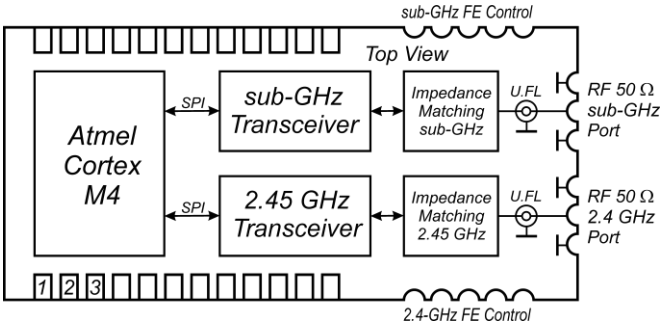
Microprocessor	Atmel Cortex M4, Pico Power Technology
Memories	Flash 512 kByte, RAM 64 kByte
Modulation	IEEE 802.15.4-2006
Hardware Accelerators	AES-128 Encryption Engine, CRC Unit

RF PERFORMANCE

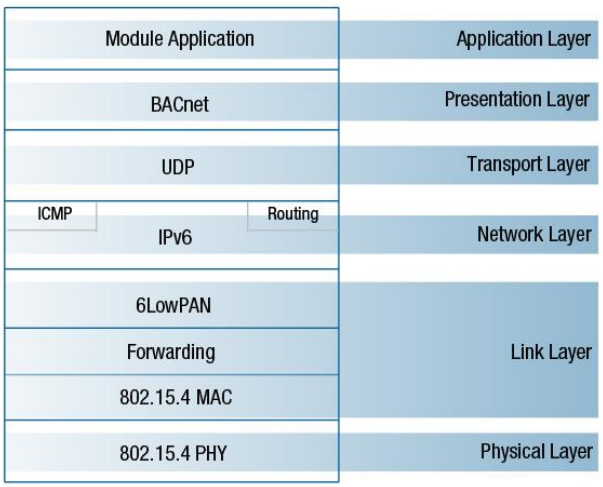
Receiver Sensitivity	Down to -115 dBm at 100kbps
Over-Air Data Rate	100kbps, 1.2Mbps
RF Output Power	Up to +14 dBm (50 Ohm Load)
Bands	868MHz (EU), 920MHz (JP), 915MHz (US), 2.4GHz World
World-Wide ISM Band	2400-2483.5 MHz

SIMULTANEOUS OPERATION AT sub-GHz AND 2.4 GHz

Note: All data are preliminary data and subject to change during development phase



IP500® Protocol Stack



PIN LIST

Pin	Description	Pin	Description	Pin	Description
1	GROUND	15	RF GROUND	29	GROUND
2	VCC	16	ANT24_1	30	GPIO 08
3	GROUND	17	RF GROUND	31	GPIO 09
4	ADC_REF	18	RF GROUND	32	GPIO 10
5	GPIO 01	19	ANT24_2	33	TxD/TWCK
6	GPIO 02	20	RF GROUND	34	RxD/TWD
7	GPIO 03	21	RF GROUND	35	GROUND
8	GPIO 04	22	ANT09_2	36	SWCLK
9	GPIO 05	23	RF GROUND	37	SWDIO
10	GPIO 06	24	RF GROUND	38	/RESET
11	GPIO 07	25	ANT09_1	39	TRACESWO
12	GROUND	26	RF GROUND	40	GROUND
13	FEB24	27	FEA09		
14	FEA24	28	FEB09		

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