

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
- compact dimensions: 15.0 mm x 40.0 mm
- on board AES 128-Bit Encryption Accelerator
- easy to integrate into your products
- interfaces: serial, GPIO, analog input
- 0-QPSK modulation

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 pre-conformity requirements for 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	RF PERFORMANCE
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2.7 - 3.6 V	Over-Air Data Rate	Data transfer speed for sub-GHz	
Current Consumption TX on: 78 mA @ +14 dBm RF Output Power RX on: 41 mA,	100 kb/s for EU / Japan 250 kb/s for India & US		
Sleep Mode: < 6 µ		Data transfer speed for 2.4 GHz	
15 mm x 40 mm		250 kb/s	
-40°C to +85°C (Operating)	Receiver Sensitivity	-117 dBm (sub GHz) -103 dBm (2.4 GHz)	
< 1.7 g & 4.0 g incl. shielding	RF Output Power	Up to +14 dBm (50 Ohm Load)	
2 x U.FL Coaxial Connector	Bands 868MHz (EU), 924MHz (JP), 914MHz (U		
IEEE 802.15.4-2006		66 (India) 2.4 GHz (World)	
UART, GPIO, ADC	World-Wide ISM Band	2400-2483.5 MHz	
	TX on: 78 mA @ +14 dBm RF Output Power RX on: 41 mA, Sleep Mode: < 6 µ 15 mm x 40 mm -40°C to +85°C (Operating) < 1.7 g & 4.0 g incl. shielding 2 x U.FL Coaxial Connector IEEE 802.15.4-2006	TX on: 78 mA @ +14 dBm RF Output Power RX on: 41 mA, Sleep Mode: < 6 µ 15 mm x 40 mm -40°C to +85°C (Operating) <1.7 g & 4.0 g incl. shielding 2 x U.FL Coaxial Connector IEEE 802.15.4-2006 World-Wide ISM Band	

PROCESSOR / MODULE

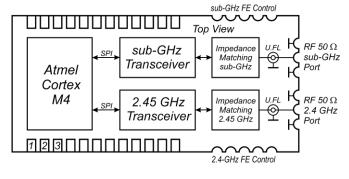
Microprocessor	Atmel Cortex M4, Pico Power Technology	
Memories	Flash 512 kByte, RAM 64 kByte	
Modulation	IEEE 802.15.4-2006	
Hardware Accelerators	AES-128 Encryption Engine, CRC Unit	

IP500® Protocol Stack

Module Application Ap	plication Layer	
BACnet Pres	sentation Layer	
UDP T	ransport Layer	
CMP Routing IPv6	Network Layer	
6LowPAN		
Forwarding 802.15.4 MAC	Link Layer	
802.15.4 PHY	Physical Layer	

simultaneous operation at sub-GHz AND 2.4 GHz possible (receiving)

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



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