

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/output
- › O-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 IEEE 802.15.4-2006. 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

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, 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

Over-Air Data Rate	Data transfer speed for sub-GHz 100 kb/s for EU / Japan 250 kb/s for India & US
	Data transfer speed for 2.4-GHz 250 kb/s
Receiver Sensitivity	Down to -115 dBm at 100kbps
RF Output Power	Up to +14 dBm (50 Ohm Load)
Bands	868MHz (EU), 924MHz (JP), 914MHz (US), 866 (India) 2.4GHz (World)
World-Wide ISM Band	2400-2483.5 MHz

IP500® Protocol Stack

Module Application	Application Layer
BACnet	Presentation Layer
UDP	Transport Layer
ICMP	Network Layer
IPv6	
Routing	
6LowPAN	Link Layer
Forwarding	
802.15.4 MAC	
802.15.4 PHY	Physical Layer

SIMULTANEOUS OPERATION AT sub-GHz AND 2.4 GHz

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

