**CNX100**

Low Power Wireless Networking Module

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**DESCRIPTION**

The CNX100 was designed towards the requirements of a secure open wireless standard solution for building automation, smart home and wireless security.

Together with the integrated microcontroller and a wide range of peripherals, the CNX100 uses the best-in-class Sub-GHz RF technology to meet the long distance reach requirements, high data rate throughput and security expectations.

The CNX100 complies with latest IEEE802.15.4g-2011 and ETSI EN300 220-1 and FCC 47 CFR Section 15.247.

An IP500 protocol stack and the BACnet application interface allow an easy integration into the customers systems by using a standard API interfacing.

**APPLICATIONS**

Smart commercial buildings and homes, wireless automation, smart metering, low power sensor networks, intelligent eco energy management and wireless security.

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**KEY FEATURES**

- BACnet application support
- IPv6 support
- Ultra low power design
- IEEE 802.15.4, 6LoWPAN
- Easy to integrate and deploy
- Compact dimensions: 15 mm x 34 mm
- Mesh Network
- Connections: UART, Antenna
- IP500® Stack available

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**CNX100**
Low Power Wireless Networking Module

**SPECIFICATION**

**GENERAL**
- **Power supply**: 1.8 – 3.6 V
- **Current consumption**: Sleep Mode: < 5µA
- **Dimensions**: 15.0 mm x 34 mm
- **Operating temp.**: -40 to +85 °C
- **Weight**: approx. < 1.7g
- **Antenna**: U.FL
- **Supported Standards**: IEEE 802.15.4-2011, IEEE 802.15.4-2006 and proprietary modes

**RF PERFORMANCE SUB-GHz**
- **Receiver Sensitivity**: down to -110 dBm
- **RF Data Rate**: up to 1000 kbps (proprietary)
- **RF Output Power**: up to +11 dBm
- **Frequency Bands**: 863-870 MHz, 870-876 MHz and 915-921 MHz, 902-928 MHz
- **Current consumption**:
  - < 5 µA in Sleep mode
  - 33 mA in RX mode
  - 70 mA in TX mode@14 dBm out power

**PROCESSOR / MODULE**
- **Microprocessor**: Atmel ATXmega
- **Memories**: Flash 256 KB, RAM 16 KB
- **Speed**: up to 32 MHz
- **Hardware Accelerators**: AES-128 Encryption
- **Designed for**: IP500®, IEEE 802.15.4, 6LoWPAN

**INTERFACES**
- **GPIO**: 2 x Digital, 1 x Analog ADC
- **UART**: Baud 9600-115200

**MODULE BLOCK DIAGRAM**

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