

# CNX100

## Low Power Wireless Networking Module



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

### 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

### DESCRIPTION

The CNX100 was designed towards the requirements of an 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 IEE802.15.4g-2011 and ETSI EN300 220-1 and FCC47 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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## Low Power Wireless Networking Module

### SPECIFICATION

#### GENERAL

|                            |  |
|----------------------------|--|
| <b>Power supply</b>        | 1.8 – 3.6 V  |
| <b>Current consumption</b> | Sleep Mode: < 5µA  |
| <b>Dimensions</b>          | 15,0 mm x 34 mm  |
| <b>Operating temp.</b>     | -40 to +85 °C  |
| <b>Weight</b>              | approx. < 1.7g   |
| <b>Antenna</b>             | U.FL   |
| <b>Supported Standards</b> | IEEE 802.15.4-2011, IEEE 802.15.4-2006 and proprietary modes |

#### RF PERFORMANCE SUB-GHz

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

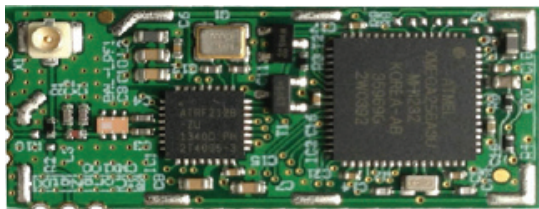
#### PROCESSOR / MODULE

|                               |                                  |
|-------------------------------|----------------------------------|
| <b>Mircoprocessor</b>         | Atmel ATXmega                    |
| <b>Memories</b>               | Flash 256 KB, RAM 16 KB          |
| <b>Speed</b>                  | up to 32 MHz                     |
| <b>Hardware Accelerators:</b> | AES-128 Encryption               |
| <b>Designed for</b>           | IP500®<br>IEEE 802.15.4, 6LoWPAN |

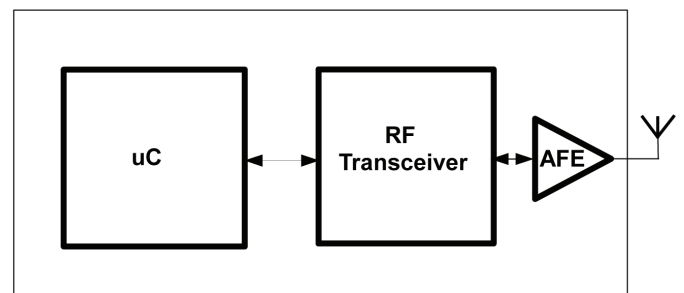
#### INTERFACES

|             |                             |
|-------------|-----------------------------|
| <b>GPIO</b> | 2 x Digital, 1 x Analog ADC |
| <b>UART</b> | Baud 9600-115200            |

CNX100 Module



#### MODULE BLOCK DIAGRAM



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