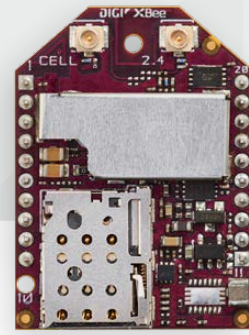# DIGI XBEE³ CELLULAR NB-IoT

Designed for improved range and optimized for extended battery life.

Digi XBee3™ modules accelerate time to market for designers, OEMs and solution providers by quickly enabling wireless connectivity and easy-to-add functionality. Building on industry-leading technology, pre-certified Digi XBee3 modules offer the flexibility to switch between multiple frequencies and wireless protocols as needed.

Digi XBee3 modules are the latest addition to the expanding Digi XBee Ecosystem of wireless modules, adapters and software – all engineered to accelerate development and deployment. Ideal for low data (typically <1 MB per month),
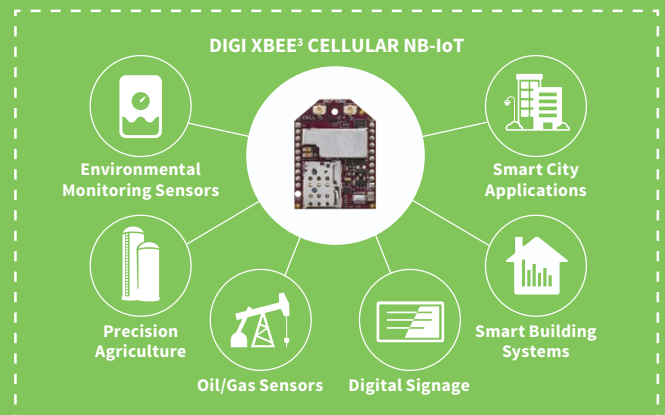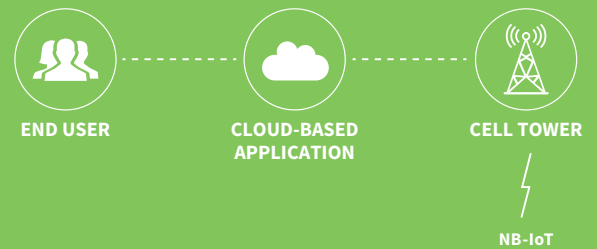
low power, low-cost applications, Digi XBee3 Cellular NB-IoT modules feature a power saving mode which extends sleep time and battery life.

With Digi Remote Manager®, Digi XBee3 modules can be easily configured and controlled from a simple, central platform. Built-in Digi TrustFence® security, identity and data privacy features use more than 175 controls to protect against new and evolving cyber threats. Standard Digi XBee API frames and AT commands, MicroPython and XCTU software tools simplify adding functionality, set-up, configuration and testing.

BENEFITS

– Extremely low power consumption for battery life of 10+ years
– Integrated MicroPython programmability
– 180 days of free cellular service with development kits
– Excellent coverage and building penetration
– Enhanced with Digi TrustFence® security framework
– CE/RED certified and network tested
– Manage and configure with XCTU and Digi Remote Manager
– Transparent and API modes simplify software integration
– Reduced hardware complexity with only 1 antenna required

RELATED PRODUCTS

Development Kits

ConnectCore® 6UL SBC Pro

XCTU

Digi Remote Manager®

Digi Design Services

APPLICATION EXAMPLE

END USER

CLOUD-BASED APPLICATION

CELL TOWER

NB-IoT

DIGI XBEE³ CELLULAR NB-IoT

Environmental Monitoring Sensors

Smart City Applications

Precision Agriculture

Oil/Gas Sensors

Digital Signage

Smart Building Systems

SPECIFICATIONS — Digi XBee3™ Cellular Smart Modem, NB-IoT

HARDWARE

CELLULAR CHIPSET	u-blox SARA-R410M-02B
FORM FACTOR	Digi XBee 20-pin through-hole
ANTENNA OPTIONS	1 U.FL (Cellular), 1 U.FL (Bluetooth)
DIMENSIONS	24.38 mm x 32.94 mm
OPERATING TEMPERATURE	-40º C to +85º C
SIM SIZE	4FF Nano

INTERFACE AND I/O

DATA INTERFACE	UART, SPI
OPERATING MODES	Transparent, API, UDP
SECURITY	Digi TrustFence® security with Secure Boot and Protected JTAG
CONFIGURATION TOOLS	Digi XCTU (Local), Digi Remote Manager (OTA)
EMBEDDED PROGRAMMABILITY	MicroPython with 32 KB Flash / 32 KB RAM
I/O	4 ADC lines (10-bit), 13 Digital I/O, I²C
BLUETOOTH	Bluetooth LE Ready

CELLULAR CHARACTERISTICS

TRANSMIT POWER	Up to 23 dBm
RECEIVE SENSITIVITY	-135 dBm
SUPPORTED BANDS	Bands 1, 2, 3, 4, 5, 8, 12, 13, 17, 19, 20, 25, 26 and 28
DOWNLINK/UPLINK SPEEDS	Up to 27.2 kb/s Downlink, 62.5 kb/s Uplink
DUPLEX MODE	Half-Duplex

POWER REQUIREMENTS (AT 3.3VDC INPUT POWER)

SUPPLY VOLTAGE	Standard Range: 3.2 to 4.2VDC Extended Input Range*: 2.8 to 5.5VDC
PEAK TRANSMIT CURRENT	TBD: Bluetooth Disabled TBD: Bluetooth Enabled
AVG TRANSMIT CURRENT	255mA
AVG RECEIVE CURRENT	81mA
POWER SAVE MODE	Standard input range: 15uA Extended input range: 55uA

REGULATORY AND CARRIER APPROVALS

CE MARK	Pending
RED COMPLIANCE	Pending
PTCRB END-DEVICE CERTIFIED	Pending

PART NUMBERS — DESCRIPTION

PART NUMBERS	DESCRIPTION
XB3-C-A2-UT-001	Digi XBee3 Cellular Smart Modem, NB-IOT
XK3-C-N1-UT-E	Digi XBee3 Cellular Smart Modem, NB-IOT, Development Kit

*Contact Digi for more information

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