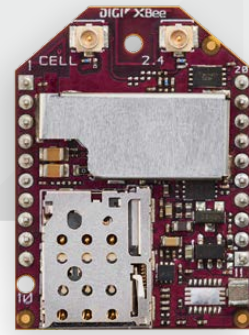# DIGI XBEE³ CELLULAR LTE-M/NB-IOT

Compact, flexible cellular connectivity for IoT devices and gateways.

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, gateways, software and development tools – all engineered to accelerate development and deployment. Ideal for low-data (typically <5 MB per month and where latency is not critical), low-power,
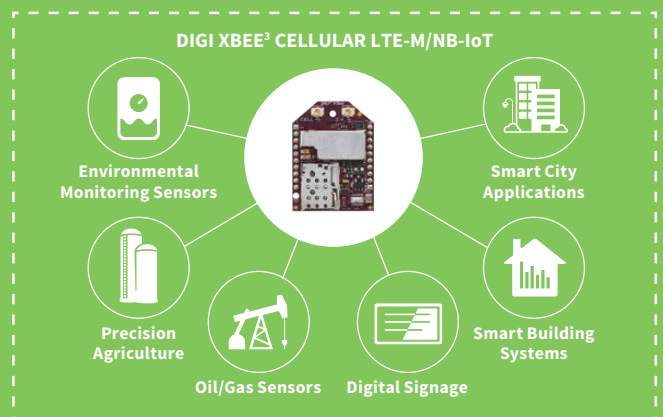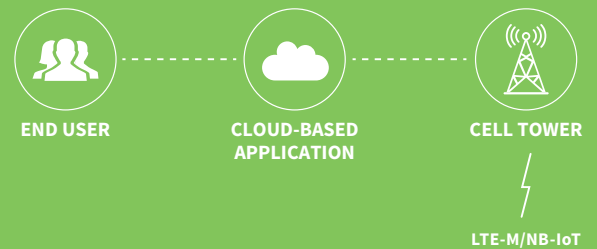
low-cost applications, Digi XBee3 Cellular LTE-M/NB-IoT modules feature a power saving mode which extends sleep time and battery life.

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

- One hardware platform for use on LTE-M/NB-IoT networks with multi-band support to integrate with many carriers
- FCC certified and carrier end-device certified
- Integrated MicroPython programmability for edge compute
- 6 months of free cellular service with development kits
- Low power consumption optimized for long battery life
- Enhanced with Digi TrustFence® security framework
- Manage and configure with XCTU and Digi Remote Manager®
- Digi XBee Transparent and API modes simplify design
- CE/RED certified and network tested
- Dual-mode radio for local configuration over Bluetooth® low energy using the Digi XBee Mobile app

APPLICATION EXAMPLE

END USER

CLOUD-BASED APPLICATION

CELL TOWER

LTE-M/NB-IoT

DIGI XBEE³ CELLULAR LTE-M/NB-IoT

Environmental Monitoring Sensors

Smart City Applications

Precision Agriculture

Oil/Gas Sensors

Digital Signage

Smart Building Systems

RELATED PRODUCTS

Development Kits

ConnectCore® 6UL SBC Pro

XCTU

Digi Remote Manager®

Digi Design Services

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	-40° C to +85° C
SIM SIZE	4FF Nano

INTERFACE AND I/O

DATA INTERFACE	UART, SPI, USB
OPERATING MODES (LTE-M)	Transparent and API over serial, PPP over USB or serial
OPERATING MODES (NB-IOT)	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, USB, I^2C
BLUETOOTH	Bluetooth Low Energy Ready

CELLULAR CHARACTERISTICS

TRANSMIT POWER	Up to 23 dBm
RECEIVE SENSITIVITY (LTE-M)	-105 dBm
RECEIVE SENSITIVITY (NB-IOT)	-113 dBm
CARRIER APPROVALS	AT&T End Device Certified (LTE-M) Verizon End Device Certififed (LTE-M) T-Mobile End Device Certified (NB-IoT)* Vodafone End Device Certified (NB-IoT) Bell End Device Certification (Pending) Telus End Device Certification (Pending) Compatible with other carriers offering LTE-M and NB-IoT services (see supported bands below)
SUPPORTED BANDS	Bands 1, 2, 3, 4, 5, 8, 12, 13, 18, 19, 20, 25, 26, 28 and 39
DOWNLINK/UPLINK SPEEDS (LTE-M)	Up to 375 kb/s
DOWNLINK/UPLINK SPEEDS (NB-IOT)	Up to 27.2 kb/s Downlink, 62.5kb/s Uplink
DUPLEX MODE	Half-Duplex

POWER REQUIREMENTS (AT 3.3VDC INPUT POWER)

SUPPLY VOLTAGE	3.3-4.3VDC
PEAK TRANSMIT CURRENT	550mA w/ Bluetooth disabled; 610mA w/ Bluetooth enabled
AVG TRANSMIT CURRENT (LTE-M)	235mA
AVG TRANSMIT CURRENT (NB-IOT)	190mA
POWER SAVE MODE	20uA
DEEP SLEEP	10uA

REGULATORY APPROVALS

FCC (USA)	MCQ-XB3M1
IC (CANADA)	1846A-XB3M1
CE / RED (EUROPE)	Complete

*For use on T-Mobile NB-IoT network for evaluation and development purposes. Full certification will be completed with an upcoming software revision (03B).
Contact Digi sales for more information.

PART NUMBERS	DESCRIPTION
XB3-C-A2-UT-001	Digi XBee3 Cellular Smart Modem, LTE-M/NB-IoT
XK3-C-A2-UT-U	Digi XBee3 Cellular Smart Modem, LTE-M/NB-IoT, Development Kit, AT&T
XK3-C-N1-UT-E	Digi XBee3 Cellular Smart Modem, LTE-M/NB-IoT, Development Kit

FOR MORE INFORMATION
PLEASE VISIT WWW.DIGI.COM

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