



DIGI XBEE³ CELLULAR NB-IOT DEVELOPMENT KIT

Digi XBee3™ Cellular NB-IoT development kit provides OEMs with a simple, quick way to integrate cellular connectivity into their devices.

The new Digi XBee3™ Cellular embedded smart modem brings together the power and flexibility of the Digi XBee ecosystem with the latest in 4G cellular technology. OEMs can quickly integrate cutting edge 4G cellular into their devices and applications, eliminating the painful, time-consuming and expensive FCC and carrier end-device certification process.

Digi's XBee3™ Cellular development kit offers a great way to learn how to integrate cellular connectivity using Digi XBee3™ embedded modems. Starting with simple examples, we provide step-by-step guidance as you assemble the kit components to create reliable, low-power cellular communications for OEM devices like sensors and control/monitoring systems.

This kit is designed for anyone interested in getting started in the world of embedded cellular. Hardware and software engineers, corporate technologists, or educators and students can quickly learn more about cellular integration using the hands-on examples included in the kit.

With the full suite of standard Digi XBee API frames and AT commands, existing XBee customers can seamlessly transition to this new embedded modem with only minor software adjustments. When OEMs add Digi XBee3™ Cellular to their design, they create a future-proof design with flexibility to

The Kit Includes:

- ✓ 1 Digi XBee3 Cellular LTE-M/NB-IoT embedded modem
- ✓ 1 Digi XBee3 development board
- ✓ Antennas and power supply

NUMBER	DESCRIPTION
XK3-C-N1-UT-E	Digi XBee3 Cellular Smart Modem, LTE-M/ NB-IoT, Development Kit

switch between wireless protocols or pivot to LTE-M or CAT-1 as application requirements dictate—making Digi XBee3 ideal for any OEM business with an agile roadmap.

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	-40° C to +85° C
SIM SIZE	4FF Nano

INTERFACE AND I/O

DATA INTERFACE	UART, SPI, USB
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, USB, I ² C
BLUETOOTH	Bluetooth Low Energy Ready

CELLULAR CHARACTERISTICS

TRANSMIT POWER	Up to 23 dBm
RECEIVE SENSITIVITY	-113 dBm
CARRIER APPROVALS	AT&T End Device Certified (LTE-M) Verizon End Device Certified (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, 17, 18, 19, 20, 25, 26, 28 and 39
DOWNLINK/UPLINK SPEEDS	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	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.

