DIGI

DIGI XBEE 3 CELLULAR LTE-M/NB-IOT

Compact, flexible cellular connectivity for IoT devices and gateways

Digi XBee® 3 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 XBee 3 modules offer the flexibility to switch between multiple frequencies and wireless protocols as needed.

Digi XBee 3 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 XBee 3 Cellular LTE-M/NB-IoT modules feature a power saving mode which extends sleep time and battery life.

With Digi Remote Manager®, Digi XBee 3 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 Digi XCTU® software tools simplify adding functionality, set-up, configuration and testing.

FEATURES AND 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

– MQTT support for Microsoft Azure and Amazon AWS

– 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

– Bluetooth® Low Energy for beaconing, connecting to Bluetooth sensors and local configuration using the Digi XBee Mobile app

– Modem includes SIM, ready to activate at shop.digi.com

APPLICATION EXAMPLE

END USER — CLOUD-BASED APPLICATION — CELL TOWER

LTE-M/NB-IoT

DIGI XBEE® 3 CELLULAR LTE-M/NB-IoT

Environmental Monitoring Sensors

Smart City Applications

Precision Agriculture

Oil/Gas Sensors

Digital Signage

Smart Building Systems
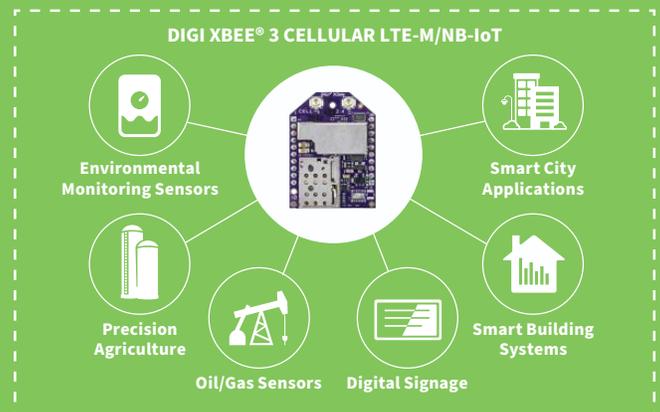
RELATED PRODUCTS

Digi XBee® 3 Development Kit

ConnectCore® 6UL SBC Pro

Digi XCTU®

Digi Remote Manager®

Digi Wireless Design Services

SPECIFICATIONS	Digi XBee® 3 Cellular Smart Modem, LTE-M/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 (0.96 in x 1.3 in)
OPERATING TEMPERATURE	-40º C to 85º C (-40º F to 185º F)
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
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 512 KB Flash / 64 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 Certified (LTE-M) Bell End Device Certified (LTE-M) Telus End Device Certified (LTE-M) 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, 62.5 kb/s Uplink
DUPLEX MODE	Half-Duplex
POWER REQUIREMENTS (AT 3.3VDC INPUT POWER)	
SUPPLY VOLTAGE	3.3 - 4.3 VDC
PEAK TRANSMIT CURRENT	550 mA w/ Bluetooth disabled; 610 mA w/ Bluetooth enabled
AVG TRANSMIT CURRENT (LTE-M)	235 mA
AVG TRANSMIT CURRENT (NB-IOT)	190 mA
POWER SAVE MODE	20 uA
DEEP SLEEP	10 uA
REGULATORY APPROVALS	
FCC (USA)	MCQ-XB3M1
IC (CANADA)	1846A-XB3M1
CE / RED (EUROPE)	Complete
RCM (AUSTRALIA/NEW ZEALAND)	Complete
WARRANTY	
PRODUCT WARRANTY	1-year

DIGI REMOTE MANAGER®
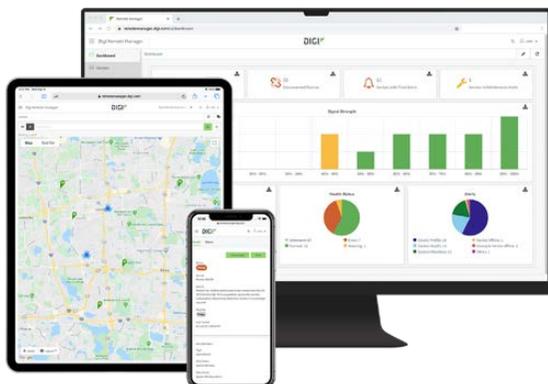
Digi Remote Manager is the technology platform that brings networks to the next level, allowing networks — and the people who manage them — to work smarter. With Digi Remote Manager you can transform a multitude of dispersed IoT devices into a dynamic, intelligent network. Now you can easily deploy, monitor and diagnose thousands of mission-critical devices from a single point of command — on your desktop, tablet or phone. All the while, its software-defined security diligently safeguards your entire Digi ecosystem.

Learn more at www.digi.com/digi-remote-manager

CAPABILITIES

– Activate, monitor and diagnose your mission-critical devices from a single point of command and control — on your desktop or mobile app
– Schedule key operations — including firmware updates and file management — on a single device or on a group of devices, keeping your network functionality up-to-date and maintaining compliance standards
– Manage edge devices out-of-band via console terminal access
– Keep tabs on device health and connectivity across device deployments of any size
– Create detailed reports and enable real-time alerts for specified conditions
– Integrate device data through open APIs to gain deeper insights and control with third-party applications
– Report and alert on performance statistics, including connection history, signal quality, latency, data usage and packet loss

INFRASTRUCTURE

– Hosted in a commercial-grade cloud server environment that meets SOC 1®, SOC 2® and SOC 3® standards
– Superior availability, operating to 99.9% or greater
– Open APIs available to support application development

SECURITY

– More than 175 security controls in place to protect your data
– Member of the Center for Internet Security® (CIS®)
– Enables compliance with security frameworks like ISO27002, HIPAA, NIST and more
– Earned Skyhigh's CloudTrust™ Program highest rating of Enterprise-Ready

DIGI WIRELESS DESIGN SERVICES

DEFINITION

DEVELOPMENT

CERTIFICATION

MANUFACTURING

GET TO MARKET FASTER

Digi Wireless Design Services (WDS) has a 15-year history of helping clients speed down the path to success by guiding them around the technological and regulatory certification pitfalls that that botch budgets and disrupt product introductions.

We begin by actively listening to your business and technical requirements, and then leverage our proven methodology, world-class engineering expertise and library of IP to design a cost-effective solution that is tailored to your specific needs.

Acceslerate toward the solution that is right for you and your customers. Contact Digi WDS to find out how we can guide you to success.

WDS SERVICES

We offer services to support you wherever you are along your development path:

– Proof of concept
– Architecture consultation
– Requirements definition
– System, software and electrical design
– Design reviews
– Certifications
– Prototype build
– Manufacturing test fixtures

WDS RECORD

Our record speaks for itself.

– 250+ product development projects
– 100+ certification failure rescues
– 100 million connected devices around the globe

DIGI®

DIGI XBEE® TOOLS

The Digi XBee Ecosystem is fully supported with the award-winning Digi XBee Tools suite. Designed to support the full product lifecycle, from prototyping and development to deployment and ongoing monitoring, Digi XBee Tools includes code libraries, testing and prototyping tools, product development and manufacturing support, and tools for deploying and managing end devices in the field.

DEVELOP **BUILD** **DEPLOY** **MANAGE**

DIGI DATA PLAN SERVICES

READY TO ACTIVATE

Modem includes SIM, ready to activate.

Work with Digi for your SIM and data management plan.

Visit shop.digi.com to activate.

- Ease of deployment and support with a single supplier
- Avoid extra costs and the complexity of having to purchase and insert SIM/program APN during manufacturing process
- No internal staff needed to manage carrier contracts and billing
- Leverage Digi's buying power, roll out at your own pace and avoid volume based commitments to carriers in exhange for cost effective rates

PART NUMBERS	DESCRIPTION
XK3-C-A2-T-UB	Digi XBee 3 Cellular Smart Modem, LTE-M/NB-IoT, Development Kit with XBIB-C Dev Board, AT&T
XK3-C-N1-T-EB	Digi XBee 3 Cellular Smart Modem, LTE-M/NB-IoT, Development Kit with XBIB-C Dev Board
XB3-C-A2-UT-001	Digi XBee 3 Cellular Smart Modem, LTE-M/NB-IoT
XB3-C-A2-UT-101	Digi XBee 3 Cellular Smart Modem, LTE-M/NB-IoT, Pre-inserted AT&T SIM
XBIB-CU-TH	Development board - XBee 3, USB-C, through-hole sockets
XBIB-C-GPS	Digi XBee GPS Daughter Board
XBEE-MP-TH	Digi XBee Multi Programmer, through-hole (TH)
XBEE-MP-TH-PCB	Digi XBee Multi Programmer, through-hole (TH) printed circuit board

FOR MORE INFORMATION PLEASE VISIT DIGI.COM

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