Digi XBee 3 Global LTE Cat 4 Development Kit

The Digi XBee 3 Global LTE Cat 4 Development Kit provides OEMs with a simple, quick way to integrate higher bandwidth cellular connectivity into their devices

Digi XBee® 3 Global LTE Cat 4 embedded smart modems bring together the power and flexibility of the **Digi XBee Ecosystem** with the latest in LTE cellular technology. OEMs can quickly integrate cutting-edge LTE cellular into their devices and applications, eliminating the time-consuming and expensive FCC and carrier end-device certification process.

Starting with simple examples, we provide step-by-step guidance as you assemble the **Digi XBee 3 Global LTE Cat 4 Development Kit** components to create reliable, low-power cellular communication connectivity for OEM devices like sensors and monitoring systems.

Each kit includes three months of cellular data service, pre-activated and ready to go, so your team can focus on your primary goal: prototyping and developing products. This kit is designed for anyone interested in getting started in the world of embedded cellular. Hardware and software engineers, corporate technologists, 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, as well as MicroPython and **Digi XBee Studio®**, you can seamlessly transition to this embedded modem with only minor software adjustments and future-proof your designs. And with **Digi Remote Manager®** you can configure, deploy and manage your devices from a central platform.

With over twenty years of embedded SOM experience enabling millions of globally connected products, Digi is a trusted embedded and IoT solutions provider, simplifying the way customers design, build and deploy connected applications.

Digi Wireless Design Services (WDS) offers additional support, certification assistance and custom design services to get your products to market smarter and faster.

Connect this device with Digi XBee Studio and Digi Remote Manager. Create. Configure. Deploy. Manage.

The kit includes:

- ✓ Digi XBee 3 Global LTE Cat 4 embedded modem
- ✓ Digi XBee 3 Development Board
- ✓ SIM card for LTE Cat 4 cellular service out of the box
- ✓ 3 months free cellular service*
- ✓ Free Level 1 schematic review by **Digi WDS**
- ✓ Antennas and power cable

PART NUMBER	DESCRIPTION
XK3-C-G4-UT-W	Digi XBee 3 Global LTE Cat 4 Development Kit

Key features, benefits and applications

- Integrated MicroPython programmability enables custom scripting directly on the modem
- 2G and 3G fallback and GNSS for accurate location services
- Transparent and API modes simplify software design
- MQTT support for Microsoft Azure and Amazon AWS
- FCC certified and end-device certified with major carriers
- Direct USB for easy PPP integration option
- Integrated with **Digi TrustFence®** security framework
- Easy to manage with **Digi XBee Studio** and **Digi Remote Manager**
- Bluetooth® Low Energy for beaconing, connecting to sensors and local configuration using the **Digi XBee Mobile App**
- Includes SIM, ready to activate and begin using

Management and Configuration

Digi XBee Studio

Free multi-platform application that enables developers to manage Digi XBee cellular devices through a simple-to-use graphical interface

Digi XBee Studio is the definitive tool to manage and configure Digi XBee cellular devices. The application includes embedded tools that make it easy to set up, configure, communicate with and test Digi XBee 3 Cellular modems.

The first thing you need to do in order to work with XBee devices in XBee Studio is to add them to the tool. In XBee Studio, this is easier than ever.

SIMPLE SET UP AND CONNECTIVITY

Just after startup, XBee Studio will automatically look for XBee devices connected to your computer. As modules are found, they will appear in the device browser view. The devices browser view displays all the devices connected to your computer, but you can also manage remote XBee devices registered in a Digi Remote Manager account by switching to the Cloud mode.

VIEW AND MANAGE YOUR DIGI XBEE CELLULAR DEVICES

View all of your Digi XBee devices in one table, or if they are geo-located, you can switch to the map view and see the location of each one.

Digi XBee Studio also offers a more simple and step-by-step way to access and manage devices, including additional options for configuration, diagnostics, development, remote management and other utilities.

PROVEN EXPERIENCE AND EXPERT SUPPORT

With over twenty years of experience enabling millions of globally connected products, Digi is a trusted embedded and IoT solutions provider, simplifying the way customers design, build and deploy connected applications. Digi also offers cellular integration support, certification assistance, and custom design and build services to get your products to market smarter and faster. **Digi Wireless Design Services** (WDS) offers additional services to support you wherever you are along your development path.

KEY FEATURES

- **Deploy on multiple platforms:** Digi XBee Studio is compatible with the most popular operating systems, including Microsoft Windows, macOS and Linux.

- **Discover your devices:** Automatically discover XBee devices connected to your computer, regardless of their port connections or configured settings.

- **Configure any device:** Manage and configure multiple XBee devices at once, including devices enrolled in your Digi Remote Manager account located anywhere in the world.

- **Communicate with your devices:** Use the new smart XBee console to communicate with your devices regardless of what operating mode they are configured for (API or transparent).

- **Access a range of tools:** Use embedded tools to perform operations like creating XBee profiles or recovering your devices.

- **Get automatic updates:** Automatically update the application itself, as well as the radio firmware library, without downloading any extra files.
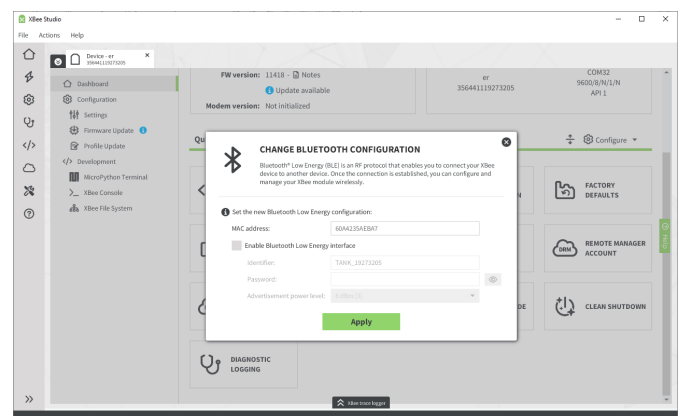
Management and Security

Digi Remote Manager

Digi Remote Manager (Digi RM) is a proven technology platform that brings networks to the next level, empowering networks — and the people who manage them — to work smarter. Digi RM transforms a multitude of dispersed IoT devices into a dynamic, intelligent network. It's easy to deploy, monitor and diagnose thousands of mission-critical devices from a single point of command on a desktop, tablet or phone. All the while, software-defined security diligently safeguards your entire Digi ecosystem.

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

INFRASTRUCTURE

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

SECURITY

- Comprehensive security controls 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 TrustFence

BUILT-IN SECURITY. DELIVERED.

Designed for mission-critical applications, **Digi TrustFence** enables users to easily integrate device security, device identity, and data privacy capabilities into product design. Digi TrustFence security for IoT devices is designed to grow and adapt with new and evolving threats.

Learn more at **www.digi.com/trustfence**.

CAPABILITIES

- Activate, monitor and diagnose your mission-critical devices through a single portal
- 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
- Monitor equipment health and connectivity across 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

Digi TrustFence is a device security framework that simplifies the process of securing connected devices.

- **Secure boot:** Programs and code running on the device are validated to be from an approved source or manufacturer.
- **Protected hardware ports:** Internal and external I/O ports are hardened and access-controlled to prevent unwanted intrusion.
- **Authentication:** TrustFence provides data authentication and device identity management options and ensures that products are not shipped with default user and password settings.
- **Secure connections:** These connections utilize the latest encryption protocols for data in motion and over-the-air (OTA) transmissions to ensure the integrity of network data.
- **Ongoing monitoring and support:** Digi provides ongoing threat measurement and monitoring services and performs external security audits.

Management and Configuration

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 XBee Data Plans

READY TO ACTIVATE

READY TO ACTIVATE

Modem includes SIM, ready to activate.

Work with Digi for your SIM and data management plan.

Activate data plans by phone at (877) 890-4014 or (952) 912-3456 or email at **data.plan.quotedesk@digi.com**.

- 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; we work with carriers to secure volume pricing that we pass on to you, so you can roll out at your own pace, regardless of your deployment size

Digi Wireless Design Services

DEFINITION   **DEVELOPMENT**   **CERTIFICATION**   **MANUFACTURING**

GET TO MARKET FASTER WITH DIGI WDS

Digi Wireless Design Services (WDS) has a proven history of helping clients speed down the path to success by guiding them around the technological and regulatory certification pitfalls 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.

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

DIGI WDS SERVICES

We offer services to support you wherever you are along your development path, with a record that speaks for itself.

- Proof of concept
- Architecture consultation
- Requirements definition
- System, software and electrical design
- Design reviews
- Certifications
- Prototype build
- Manufacturing test fixtures
- 250+ product development projects
- 100+ certification failure rescues
- 100 million connected devices around the globe

Specifications

Manage and configure Digi XBee 3 Global LTE Cat 4 with Digi XBee Studio and Digi Remote Manager

SPECIFICATIONS	DIGI XBEE 3 GLOBAL LTE CAT 4
HARDWARE	
CELLULAR CHIPSET	Thales PLS83-W
FORM FACTOR (CONNECTOR FOOTPRINT)	Digi XBee 20-pin through-hole
ANTENNA OPTIONS	2 U.FL: cellular diversity, 1 U.FL: GNSS Embedded Bluetooth antenna
DIMENSIONS	30.48 mm x 43.18 mm (1.2 in x 1.7 in)
OPERATING TEMPERATURE	−40 °C to 80 °C (−40 °F to 176 °F)
SIM SIZE	4FF Nano
INTERFACE AND I/O	
DATA INTERFACE	UART, SPI, USB
OPERATING MODES	Transparent and API over serial, PPP over USB
SECURITY	Digi TrustFence security with secure boot and protected JTAG
CONFIGURATION TOOLS	Digi XBee Studio (local), Digi Remote Manager (OTA)
EMBEDDED PROGRAMMABILITY	MicroPython with 8 MB flash / 64 kB RAM
I/O	4 ADC lines (10-bit), 13 digital I/O, I2C
BLUETOOTH	Bluetooth Low Energy (BLE)
CELLULAR CHARACTERISTICS	
TRANSMIT POWER: **4G LTE / 3G / 2G**	23 dBm / 23.5 dBm / 30 to 33 dBm
RECEIVE SENSITIVITY: **4G LTE / 3G / 2G**	103 dBm / 110 dBm / 108 dBm
SUPPORTED BANDS	LTE: B1, B2, B3, B4, B5, B7, B8, B12, B13, B18, B19, B20, B26, B28, B38, B40, B41, B66; 3G: B1, B2, B3, B4, B5, B6, B8, B19; 2G: 850, 900, 1800 and 1850 MHz
DOWNLINK / UPLINK SPEEDS	LTE: 150 Mbps downlink, 50 Mbps uplink; 3G: 14.4 Mbps downlink, 5.76 Mbps uplink; 2G: 237 kbps downlink and uplink
DUPLEX MODE	Full-duplex
POWER REQUIREMENTS (AT 3.3 VDC INPUT POWER)	
SUPPLY VOLTAGE	2.8 to 5.5 V
PEAK TRANSMIT CURRENT	1050 mA with Bluetooth disabled; 1090 mA with Bluetooth enabled
AVG TRANSMIT CURRENT	890 mA
AVG RECEIVE CURRENT	320 mA

*3 months free cellular service is limited to ~5 MB/month and limited SMS. For testing purposes only; not for production.
Activate data plans by phone at (877) 890-4014 or (952) 912-3456 or email at data.plan.quotedesk@digi.com.

Specifications and Warranty

Manage and configure Digi XBee 3 Global LTE Cat with Digi XBee Studio and Digi Remote Manager

SPECIFICATIONS	DIGI XBEE 3 GLOBAL LTE CAT 4
REGULATORY AND CARRIER APPROVALS	
FCC (USA)	Complete
ISED (CANADA)	Complete
CE / RED (EUROPE)	Complete
RCM (AUSTRALIA / NEW ZEALAND)	Pending
UKCA (UNITED KINGDOM)	Complete
ANATEL (BRAZIL)	Complete
NOM (MEXICO)	Pending
JAPAN	Pending
SOUTH AFRICA	Pending
ARGENTINA	Pending
PTCRB, AT&T AND VERIZON	Complete
WARRANTY	
PRODUCT WARRANTY	1-year

Part Numbers

Digi XBee Ecosystem

The world-renowned XBee module is part of a family of cellular modems and RF modules that provide ultimate flexibility for IoT application developers, with three programmable form factors, and a range of popular wireless protocols. The XBee family also includes IoT gateways and management tools to connect, monitor and manage your XBee network. **Learn more at www.digi.com/xbee.**
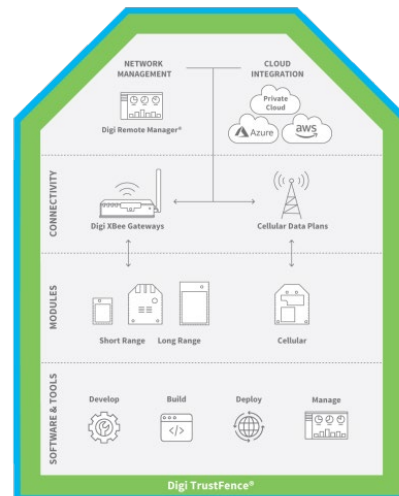
PART NUMBERS	DIGI XBEE 3 GLOBAL LTE CAT 4 DEVELOPMENT KIT
XK3-C-G4-UT-W	Digi XBee 3 Global LTE Cat 4 Development Kit with Digi XBee 3 Global Cat 4 module, antennas (2 cellular U.FL and 1 GNSS U.FL) and development board (XBIB-CU-TH)

PART NUMBERS	DIGI XBEE 3 GLOBAL LTE CAT 4
XB3-C-G4-UT-001	Digi XBee 3 Global LTE Cat 4, 3G / 2G, GNSS, no SIM
XB3-C-G4-UT-101	Digi XBee 3 Global LTE Cat 4, 3G / 2G, GNSS, AT&T SIM
XB3-C-G4-UT-102	Digi XBee 3 Global LTE Cat 4, 3G / 2G, GNSS, Verizon SIM

PART NUMBERS	DIGI XBEE 3 GLOBAL LTE CAT 4 ACCESSORIES
DIGI XBEE MULTI PROGRAMMER	
XBEE-MP-TH	Digi XBee Multi Programmer — through-hole (TH)
XBEE-MP-TH-PCB	Digi XBee Multi Programmer — through-hole (TH) printed circuit board
DIGI XBEE DEVELOPMENT BOARD	
XBIB-CU-TH	Digi XBee Development Board — Digi XBee 3, USB-C, through-hole sockets

For more information, visit digi.com.

For more information about the Digi XBee 3 Global LTE Cat 4 Development Kit, visit **www.digi.com/xbee**.

877-912-3444 | 952-912-3444

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