

Manage this device with Digi Remote Manager

DIGI XBEE RR

Easy-to-add connectivity in a compact, low-power, low-profile footprint

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

Digi XBee RR offers a fully interoperable ecosystem covering all vertical markets including building automation, smart energy, digital health, intelligent lighting, and others.

From edge computing to future migration, Digi XBee RR wireless modules offer size, weight, power and performance advantages ideal for scalable device connectivity, security and flexibility.

Digi Remote Manager® offers a central, cloud-based platform for configuring, monitoring and controlling your entire Digi XBee RR wireless network, via a gateway, as shown in the application example.

Built-in Digi TrustFence® security, identity and data privacy features use more than 175 controls to protect against new and evolving cyber threats. The Digi XBee Mobile App and Digi XCTU® simplify local setup, configuration, testing and adding or changing functionality.

A versatile addition to the expanding Digi XBee Ecosystem of wireless modules, adapters and software, the Digi XBee RR Series offers a complete solution engineered to accelerate development and deployment.

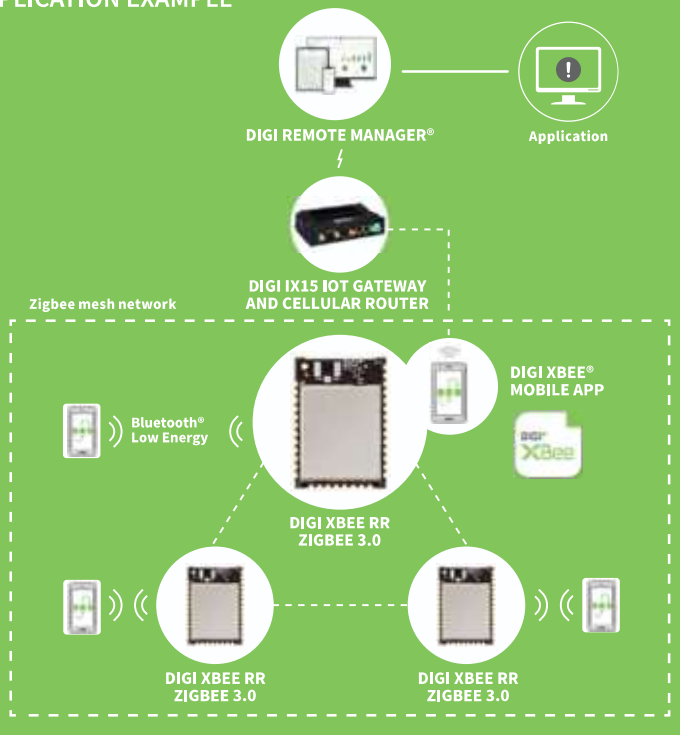
SIZE AND FLEXIBILITY

- At 13 mm x 19 mm, the new Digi XBee RR micro form factor allows for more compact and portable applications
- Digi XBee RR is one module for all protocols including: Zigbee, 802.15.4, DigiMesh® and BLE (slave only), which can be locally configured via Digi XCTU and the Digi XBee Mobile App

SECURITY

- Intrinsic IoT security with Digi TrustFence, a layered approach securing the edge device, through the gateway, into and out of the IoT

APPLICATION EXAMPLE



RELATED PRODUCTS AND SERVICES



Development Kits | Digi XCTU® | Digi TrustFence® | Digi Remote Manager® | Digi Design Services

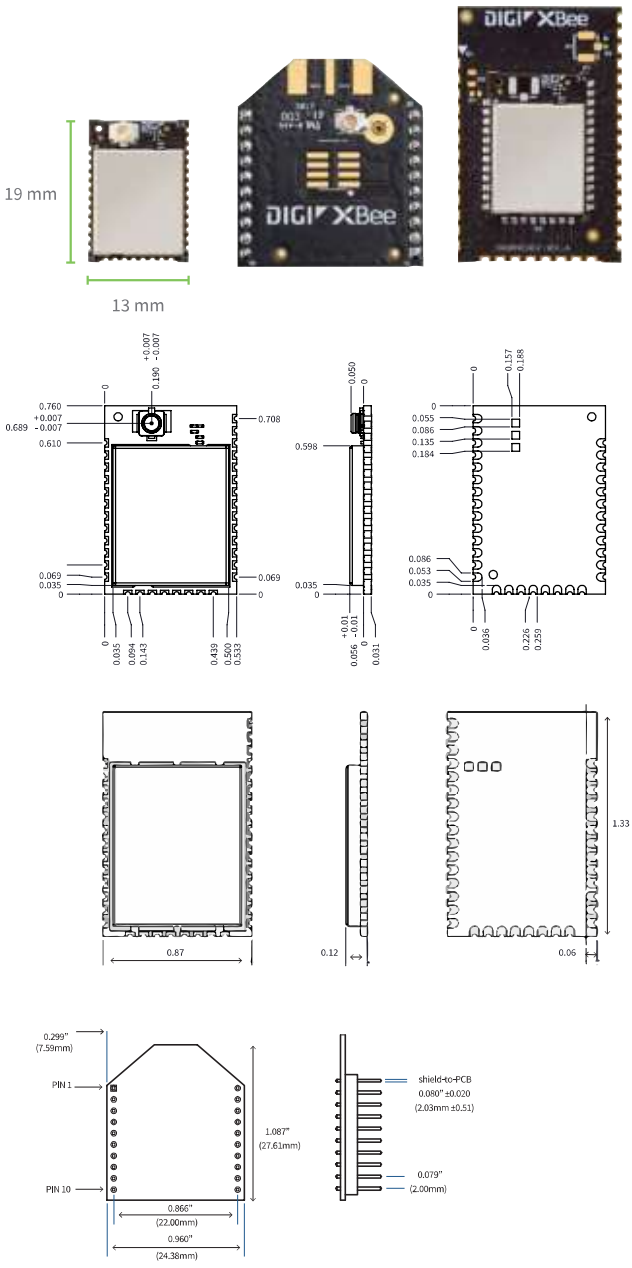
SPECIFICATIONS	DIGI XBEE® RR	DIGI XBEE® RR PRO
ZIGBEE PERFORMANCE		
TRANSCEIVER CHIPSET	Silicon Labs EFR32MG SoC	
DATA RATE	RF 250 Kbps, serial up to 1 Mbps	
INDOOR/URBAN RANGE*	Up to 60 m (200 ft)	Up to 90 m (300 ft)
OUTDOOR/RF LINE-OF-SIGHT RANGE*	Up to 1200 m (4000 ft)	Up to 3200 m (2 miles)
TRANSMIT POWER	6.3 mW (+8 dBm); channel 26 max power: +3 dBm	79 mW (+19 dBm); channel 26 max power: +3 dBm
RECEIVER SENSITIVITY (1% PER)	-103 dBm normal mode	
BLUETOOTH® PERFORMANCE		
TRANSCEIVER CHIPSET	Silicon Labs EFR32MG SoC	
BLE VERSION	Supports Bluetooth Low Energy (BLE) 4.2 (slave only) and capable of interoperating with BLE 5.0 devices that support 1M PHY. Hardware is software upgradable to 5.0, but not yet enabled except payload extensions (future release).	
MAXIMUM DATA RATE	1 Mbps	
INDOOR/URBAN RANGE*	Up to 15 m (49 ft)	
OUTDOOR/RF LINE-OF-SIGHT RANGE*	Up to 300 m (984 ft)	
TRANSMIT POWER	+8 dBm	
RECEIVER SENSITIVITY (1% PER)	-95 dBm normal mode	
FEATURES		
SERIAL DATA INTERFACE	UART, SPI, I2C	
CONFIGURATION METHOD	API or AT commands, local or over-the-air (OTA)	
FREQUENCY BAND	ISM 2.4 GHz	
FORM FACTOR	Micro, through-hole, surface mount	
INTERFERENCE IMMUNITY	DSSS (Direct Sequence Spread Spectrum)	
ADC INPUTS	(4) 10-bit ADC inputs	
DIGITAL I/O	13	
ANTENNA OPTIONS	Through-hole: PCB antenna, U.FL connector, RPSMA connector SMT: RF pad, PCB antenna, or U.FL connector Micro: U.FL antenna, RF pad, chip antenna	
OPERATING TEMPERATURE	-40° C to 85° C (-40° F to 185° F)	
DIMENSIONS (L X W X H)	Through-hole: 2.438 x 2.761 cm (0.960 x 1.087 in) SMT: 2.199 x 3.4 x 0.305 cm (0.866 x 1.33 x 0.120 in) Micro: 13 x 19 x 2 mm (0.533 x 0.76 x 0.087 in)	
MEMORY	1 MB / 96 kB RAM	
NETWORKING AND SECURITY		
PROTOCOL	Zigbee 3.0	
ENCRYPTION	128/256 bit AES	
RELIABLE PACKET DELIVERY	Retries/acknowledgements	
IDS	PAN ID and addresses, cluster IDs and endpoints (optional)	
CHANNELS	16 channels	

*Range figure estimates are based on free-air terrain with limited sources of interference. Actual range will vary based on transmitting power, orientation of transmitter and receiver, height of transmitting antenna, height of receiving antenna, weather conditions, interference sources in the area, and terrain between receiver and transmitter, including indoor and outdoor structures such as walls, trees, buildings, hills, and mountains.

SPECIFICATIONS	DIGI XBEE® RR	DIGI XBEE® RR PRO
POWER REQUIREMENTS		
SUPPLY VOLTAGE	1.71 to 3.8 V	
TRANSMIT CURRENT	32 mA at 3.3 V, +8 dBm	193 mA at 3.3 V, +19 dBm
RECEIVE CURRENT	14 mA	
SLEEP CURRENT	8 µA at 25° C (77° F)	
REGULATORY APPROVALS		
FCC, IC (NORTH AMERICA)	Yes	Yes
ETSI (EUROPE)	Yes	No

PRODUCT IMAGES AND DIMENSIONS





DIGI IX15 IOT GATEWAY AND CELLULAR ROUTER



The versatile Digi IX15 device functions as both gateway and router for customers seeking lower-cost, quicker-to-market alternatives to chip-down DIY designs for networking operations. Digi IX15 is an industrial-grade IoT gateway that connects Digi XBee® modules to cloud applications over cellular or Ethernet, providing the easiest path to Internet connectivity for the Digi XBee ecosystem of hardware, software, services and award-winning tools.

Learn more at www.digi.com/ix15

DIGI XBEE RR AND THE DIGI IX15 IOT GATEWAY

- Connect Digi XBee® RR with the Digi IX15 IoT gateway and cellular router
- Configure, monitor and control your entire Digi XBee RR wireless network with Digi Remote Manager® — your central, cloud-based platform for easy setup, mass configuration, firmware updates, remote device management and out-of-band management — via the Digi IX15 IoT gateway and cellular router
- Provide the most optimal, resilient connecitivity between your XBee network and cloud-based applications

FEATURES AND BENEFITS

- Digi XBee® (Zigbee®, DigiMesh®, 802.15.4), BLE and RS-232/485 for connection to local devices
- Open source Python environment for custom application development
- LTE Cat 4 cellular and 10/100 Ethernet WAN connectivity
- Full-featured industrial cellular routing platform
- Redundant connectivity with dual SIMs and Digi SureLink®
- Built-in Digi TrustFence® for device security, device identity and data privacy

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
- 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

PART NUMBERS	DIGI REMOTE MANAGER®
DIGI-RM-STD-1YR	Digi Remote Manager Standard — 1-year subscription
DIGI-RM-PRM-1YR	Digi Remote Manager Premier — 1-year subscription
DIGI-RM-PRM-3YR	Digi Remote Manager Premier — 3-year subscription
DIGI-RM-PRM-5YR	Digi Remote Manager Premier — 5-year subscription

PART NUMBERS	DIGI XBEE RR
DIGI XBEE RR WIRELESS MODULES	
XBRR-24ACM-J	Digi XBee RR, 2.4 Ghz, 802.15.4, Chip Ant, MMT
XBRR-24Z8CM-J	Digi XBee RR, 2.4 GHz, Zigbee, Chip Ant, MMT
XBRR-24Z8PS-J	Digi XBee RR, 2.4 GHz, Zigbee, PCB Ant, SMT
XBRR-24Z8PT-J	Digi XBee RR, 2.4 GHz, Zigbee, PCB Ant, Through-hole
XBRR-24Z8RM-J	Digi XBee RR, 2.4 GHz, Zigbee, RF Pad Ant, MMT
XBRR-24Z8ST-J	Digi XBee RR, 2.4 GHz, Zigbee, SMA Ant, Through-hole
XBRR-24Z8UM-J	Digi XBee RR, 2.4 GHz, Zigbee, U.FL Ant, MMT
XBRR-24Z8US-J	Digi XBee RR, 2.4 GHz, Zigbee, U.FL Ant, SMT
XBRR-24Z8UT-J	Digi XBee RR, 2.4 GHz, Zigbee, U.FL Ant, Through-hole
DIGI XBEE RR PRO WIRELESS MODULES	
XBRR-24ACM	Digi XBee RR PRO, 2.4 Ghz, 802.15.4, Chip Ant, MMT
XBRR-24DMUM	Digi XBee RR PRO, 2.4 GHz, DigiMesh, U.FL Ant, MMT
XBRR-24DRMR	Digi XBee RR PRO, 2.4 GHz, DigiMesh, RF Pad Ant, MMT
XBRR-24Z8CM	Digi XBee RR PRO, 2.4 GHz, Zigbee, Chip Ant, Through-hole
XBRR-24Z8PS	Digi XBee RR PRO, 2.4 GHz, Zigbee, PCB Ant, SMT
XBRR-24Z8PT	Digi XBee RR PRO, 2.4 GHz, Zigbee, PCB Ant, Through-hole
XBRR-24Z8RM	Digi XBee RR PRO, 2.4 GHz, Zigbee, RF Pad Ant, MMT
XBRR-24Z8RM-R15	Digi XBee RR PRO, 2.4 GHz, Zigbee, RF Pad Ant, MMT, Tape & Reel
XBRR-24Z8ST	Digi XBee RR PRO, 2.4 GHz, Zigbee, SMA Ant, Through-hole
XBRR-24Z8UM	Digi XBee RR PRO, 2.4 GHz, Zigbee, U.FL Ant, MMT
XBRR-24Z8US	Digi XBee RR PRO, 2.4 GHz, Zigbee, U.FL Ant, SMT
XBRR-24Z8UT	Digi XBee RR PRO, 2.4 GHz, Zigbee, U.FL Ant, Through-hole

PART NUMBERS	DIGI IX15 GATEWAYS
IX15-00G4-XB2	Digi IX15 - XBee 3, LTE Cat 4, (1) Ethernet, RS-232/485
IX15-00G4-XBP2	Digi IX15 - XBee 3 PRO, LTE Cat 4, (1) Ethernet, RS-232/485

FOR MORE INFORMATION PLEASE VISIT DIGI.COM

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