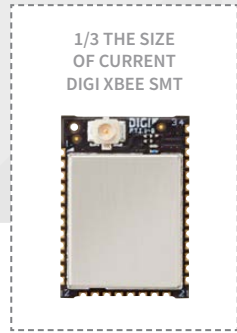




- MICRO FORM FACTOR
- DIGI TRUSTFENCE® SECURED
- MICROPYTHON PROGRAMMABLE



DIGI XBEE³ ZIGBEE 3.0

Embedded modules provide OEMs with a simple way to integrate mesh technology and process data into their application

Digi XBee3™ modules are fully integrated, certified and ready to connect wireless mesh networks. They are ideal for applications that require small, efficient design, and need control logic at the endpoint to eliminate separate micro-controllers. Digi XBee3 brings a new era of flexibility to mesh networking enabling a higher level of abstraction without worrying about the mundane chip level minutia.

Products in the Digi XBee family require little to no configuration or additional development. Because the wireless software is isolated, applications can be developed with no risk to RF performance or security. Using control logic, you can manage bandwidth and power usage by processing data at the end node and only sending actionable data.

Digi offers the world's most trusted and easy-to-use embedded RF modules and software on the market today. By using Digi XBee3, designers can focus on value-added features and speed to market in applications where manufacturing efficiencies are critical.

With the new release of the Digi XBee3, Digi has ushered in a new age of hardware to allow multiple protocols—including ZigBee, Thread, 802.15.4, DigiMesh, Wi-Fi and Bluetooth—all available on a single hardware platform.

SIZE AND FLEXIBILITY

- At 13 mm x 19 mm, the new Digi XBee3 micro form factor allows for more compact and portable applications
- Digi XBee3 is one module for all protocols including: ZigBee, Thread, 802.15.4, DigiMesh, Wi-Fi, and LPWA, all configurable via Digi XCTU

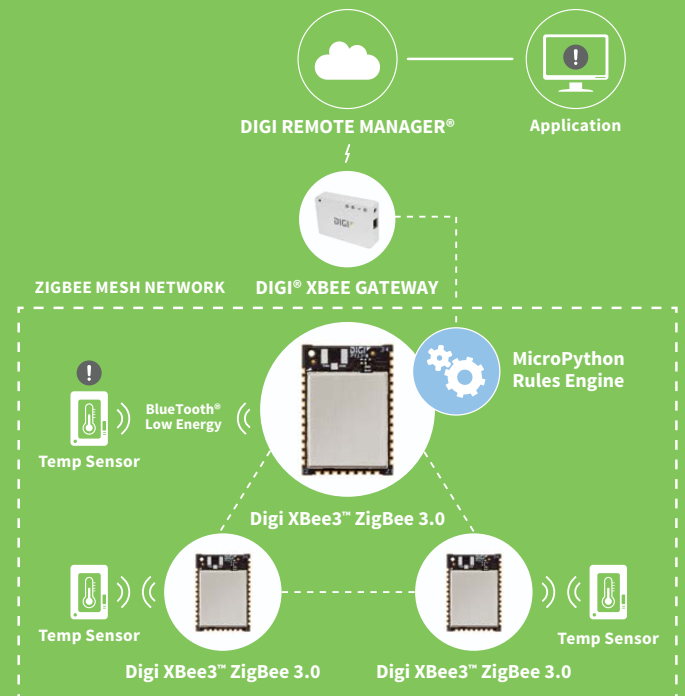
PROGRAMMABILITY

- Eliminate the need for an external microcontroller and create smart end nodes and low-end gateways using MicroPython

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



SPECIFICATIONS

Digi XBee3™ ZigBee 3.0

Digi XBee3™ PRO ZigBee 3.0

PERFORMANCE

TRANSCEIVER CHIPSET	Silicon Labs EFR32MG SoC	
DATA RATE	RF 250 Kbps, Serial up to 1 Mbps	
INDOOR/URBAN RANGE	200 ft (60 m)	300 ft (90 m)
OUTDOOR/RF LINE-OF-SIGHT RANGE	4000 ft (1200 m)	2 miles (3200 m)
TRANSMIT POWER	+8 dBm	+19 dBm
RECEIVER SENSITIVITY (1% PER)	-103 dBm Normal Mode	

FEATURES

SERIAL DATA INTERFACE	UART, SPI, I ² C	
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	15	
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	
DIMENSIONS (L X W X H)	Through-Hole: 0.960 x 1.087 in (2.438 x 2.761 cm) SMT: 0.866 x 1.33 x 0.120 in (2.199 x 3.4 x 0.305 cm) Micro: 0.533 x 0.76 x 0.087 in (13 x 19 x 2 mm)	

PROGRAMMABILITY

MEMORY	1 MB / 128 KB RAM	
CPU/CLOCK SPEED	HCS08 / up to 50.33 MHz	

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	

POWER REQUIREMENTS

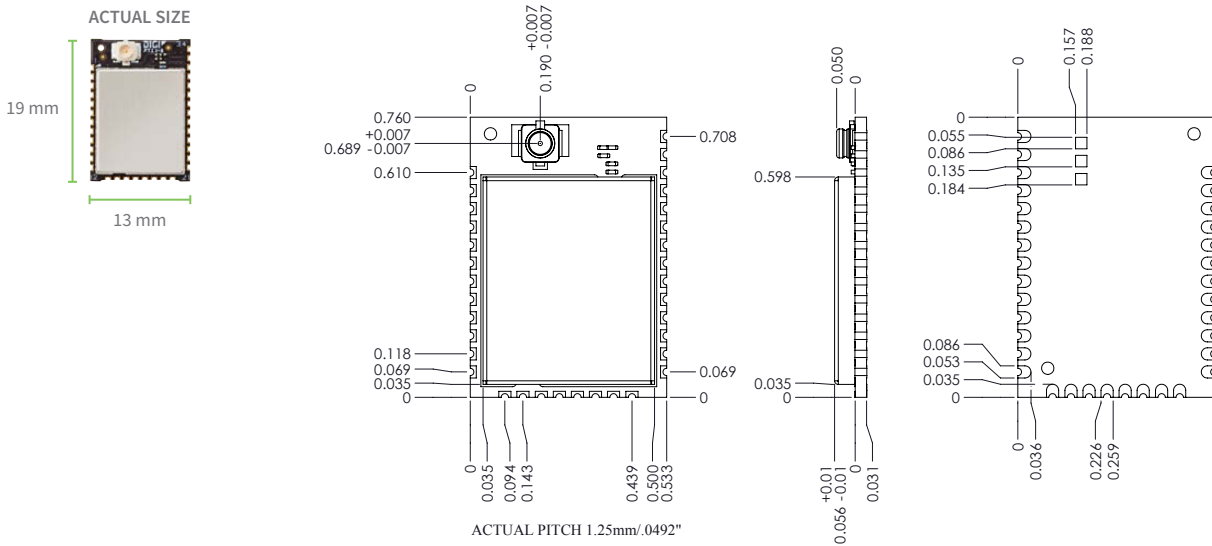
SUPPLY VOLTAGE	2.1 to 3.6V	
TRANSMIT CURRENT	40 mA @ 8 dBm	
RECEIVE CURRENT	15 mA	135 mA @ 19 dBm
POWER-DOWN CURRENT	1.7 micro Amp @ 25 degrees C	

REGULATORY APPROVALS

FCC, IC (NORTH AMERICA)	Yes	Yes
ETSI (EUROPE)	Yes	No

PART NUMBERS	DESCRIPTION
XB3-24Z8RM-J	Digi XBee3 ZigBee 3.0, 2.4 GHz, Micro, RF Pad Ant, MMT
XB3-24Z8UM-J	Digi XBee3 ZigBee 3.0, 2.4 GHz, Micro, U.FL Ant, MMT
XB3-24Z8CM-J	Digi XBee3 ZigBee 3.0, 2.4 GHz, Micro, Chip Ant, MMT
XB3-24Z8RM	Digi XBee3 PRO ZigBee 3.0, 2.4 GHz, Micro, RF Pad Ant, MMT
XB3-24Z8UM	Digi XBee3 PRO ZigBee 3.0, 2.4 GHz, Micro, U.FL Ant, MMT
XB3-24Z8CM	Digi XBee3 PRO ZigBee 3.0, 2.4 GHz, Micro, Chip Ant, MMT

PRODUCT DIMENSIONS



The information provided in this document is preliminary and may be subject to change without notice.

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