



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

1/3 THE SIZE  
OF CURRENT  
DIGI XBEE SMT



# DIGI XBEE<sup>3</sup> 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

## RELATED PRODUCTS AND SERVICES



Development  
Kits



Digi XCTU



Digi  
TrustFence®

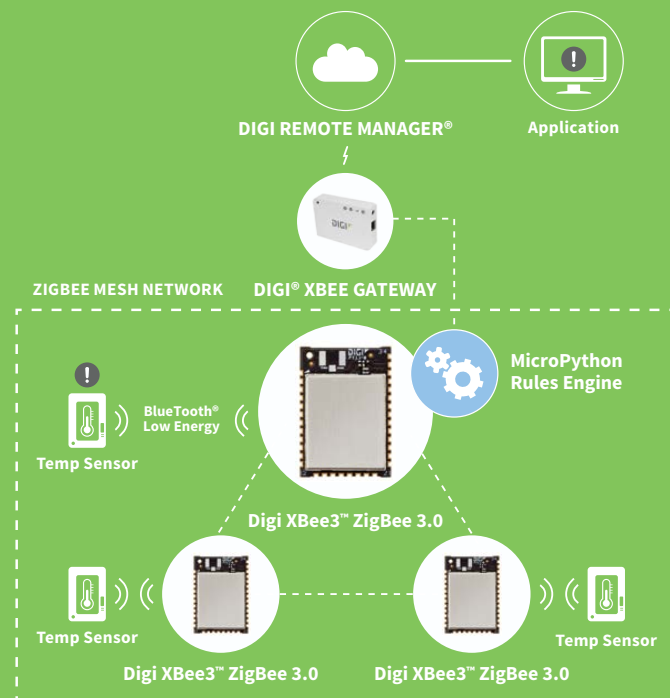


Digi Remote  
Manager®



Digi Design  
Services

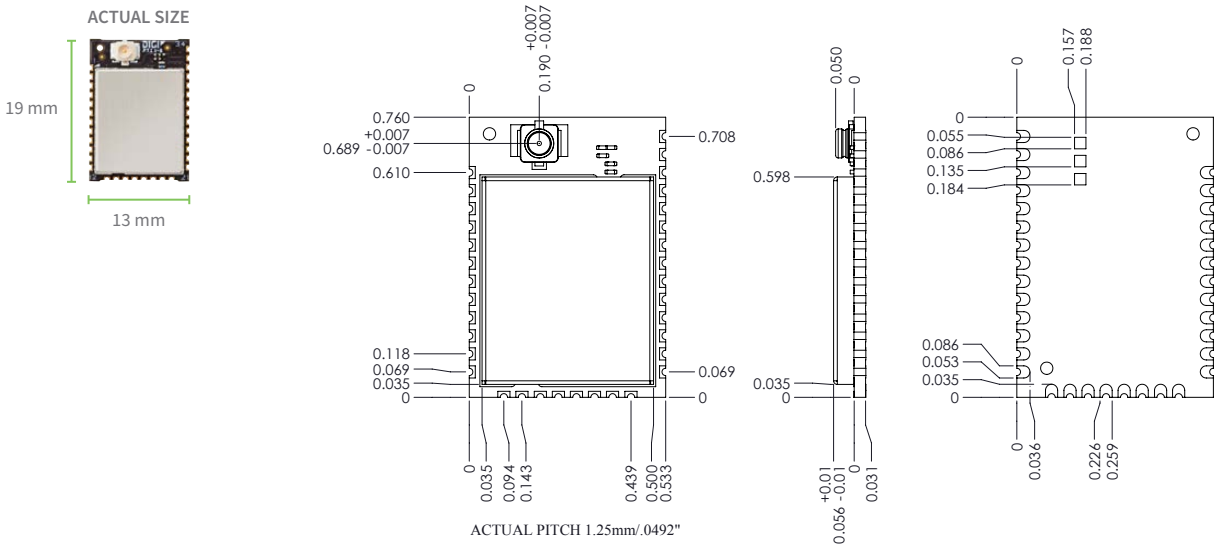
## APPLICATION EXAMPLE



SPECIFICATIONS		Digi XBee3™ ZigBee 3.0		Digi XBee3™ PRO ZigBee 3.0	
PERFORMANCE					
TRANSCIVER 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, 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		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.

**DIGI SERVICE AND SUPPORT** / You can purchase with confidence knowing that Digi is always available to serve you with expert technical support and our industry leading warranty. For detailed information visit [www.digi.com/support](http://www.digi.com/support).

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**DIGI INTERNATIONAL WORLDWIDE HQ**  
877-912-3444 / 952-912-3444 / [www.digi.com](http://www.digi.com)

**DIGI INTERNATIONAL GERMANY**  
+49-89-540-428-0

**DIGI INTERNATIONAL JAPAN**  
+81-3-5428-0261 / [www.digi-intl.co.jp](http://www.digi-intl.co.jp)

**DIGI INTERNATIONAL SINGAPORE**  
+65-6213-5380

**DIGI INTERNATIONAL CHINA**  
+86-21-50492199 / [www.digi.com.cn](http://www.digi.com.cn)

