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

1/3 THE SIZE OF CURRENT DIGI XBEE SMT

# DIGI XBEE³ DIGIMESH 2.4

## Wireless connectivity using the innovative and easy-to-deploy DigiMesh protocol.

Digi XBee3™ 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 XBee3 modules offer the flexibility to switch between multiple frequencies and wireless protocols as needed.

These modules use the DigiMesh® networking protocol using a globally deployable 2.4 GHz transceiver. This peer-to-peer mesh network offers users added network stability through self-healing, dense network operation, extending the operational life of battery dependent networks and provides an upgrade path to IEEE 802.15.4 or ZigBee® mesh protocols, if desired.

With Digi Remote Manager®, Digi XBee3 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. MicroPython and XCTU software tools simplify adding functionality, configuration and testing.

From edge computing to future migration, Digi XBee modules offer size, weight, power and performance advantages ideal for scalable device connectivity. A versatile addition to the expanding Digi XBee Ecosystem of wireless modules, adapters and software, the Digi XBee3 series is engineered to accelerate development and deployment.

### 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, 802.15.4, DigiMesh, and BLE, all configurable via Digi XCTU

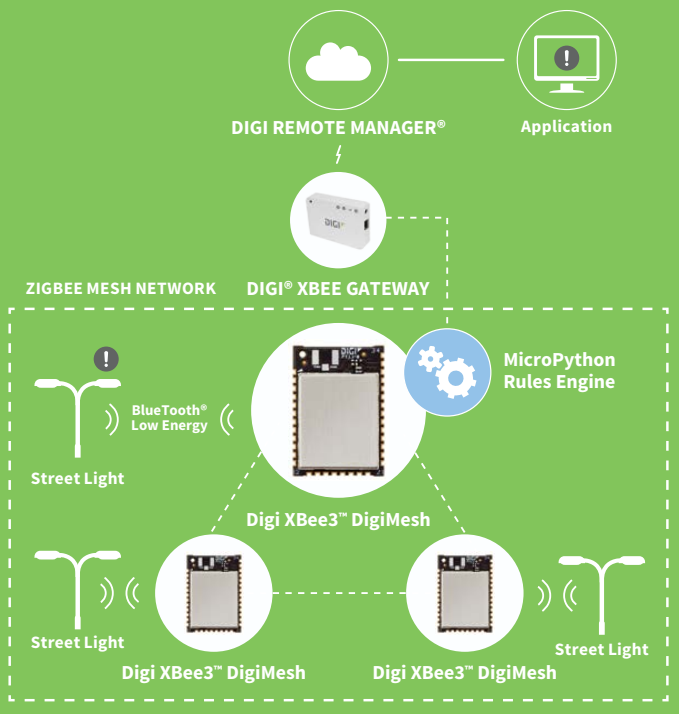
### PROGRAMMABILITY

- 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

Development Kits

Digi XCTU

Digi TrustFence®

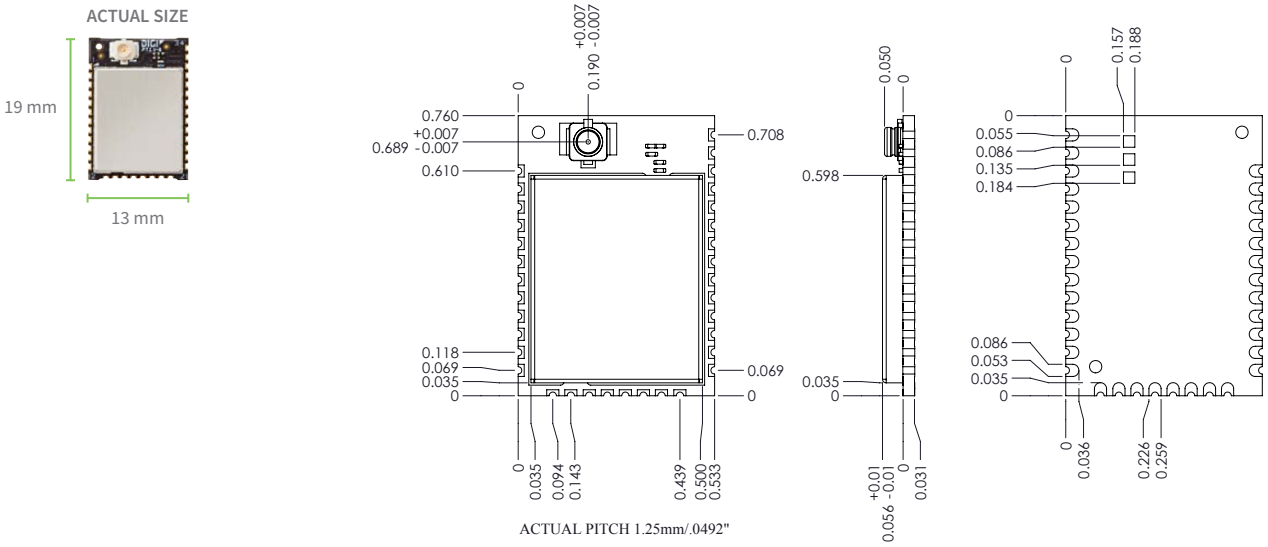
Digi Remote Manager®

Digi Design Services

| SPECIFICATIONS | Digi XBee3™ DigiMesh | Digi XBee3™ DigiMesh PRO |
|---|---|---|
| **PERFORMANCE** | | |
| 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 | |
| INTERFERENCE IMMUNITY | DSSS (Direct Sequence Spread Spectrum) | |
| ADC INPUTS | (4) 10-bit ADC inputs | |
| DIGITAL I/O | 15 | |
| ANTENNA OPTIONS | Micro: U.FL Antenna, RF Pad, Chip Antenna | |
| OPERATING TEMPERATURE | -40° C to +85° C | |
| DIMENSIONS (L X W X H) | 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 | 802.15.4 | |
| 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 |
|---|---|
| XB3-24DMRM-J | Digi XBee3, 2.4 Ghz, DigiMesh, Micro, RF Pad Ant, MMT |
| XB3-24DMUM-J | Digi XBee3, 2.4 Ghz, DigiMesh, Micro, U.FL Ant, MMT |
| XB3-24DMCM-J | Digi XBee3, 2.4 Ghz, DigiMesh, Micro, Chip Ant, MMT |
| XB3-24DMRM | Digi XBee3 PRO, 2.4 Ghz, DigiMesh, Micro, RF Pad Ant, MMT |
| XB3-24DMUM | Digi XBee3 PRO, 2.4 Ghz, DigiMesh, Micro, U.FL Ant, MMT |
| XB3-24DMCM | Digi XBee3 PRO, 2.4 Ghz, DigiMesh, Micro, Chip Ant, MMT |

## PRODUCT DIMENSIONS

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