DIGI

XBEE® DIGIMESH® 2.4

Embedded RF modules deliver wireless connectivity using the innovative and easy-to-deploy DigiMesh protocol

XBee and XBee-PRO DigiMesh 2.4 embedded RF modules provide wireless connectivity to electronic devices using a globally deployable 2.4 GHz transceiver. These modules use the DigiMesh networking protocol. This innovative, peer-to-peer mesh network offers users added network stability through self-healing, dense network operation and support for sleeping routers, extending the operational life of battery dependent networks.

XBee modules are ideal for low-power applications. XBee-PRO modules are power-amplified versions of XBee modules for extended-range applications. Products in the XBee family are easy to use, share a common hardware footprint, and are fully interoperable with other XBee products utilizing the same technology. They are available in a variety of different protocols to suit different applications, enabling users to substitute one XBee module for another with minimal development time and risk.

Digi's unsurpassed offering of XBee products provide users with seamless communication between devices. XBee adapters deliver wireless connectivity to electronic devices in wired networks. ConnectPort® X gateways enable users to access and configure remote devices in a network.
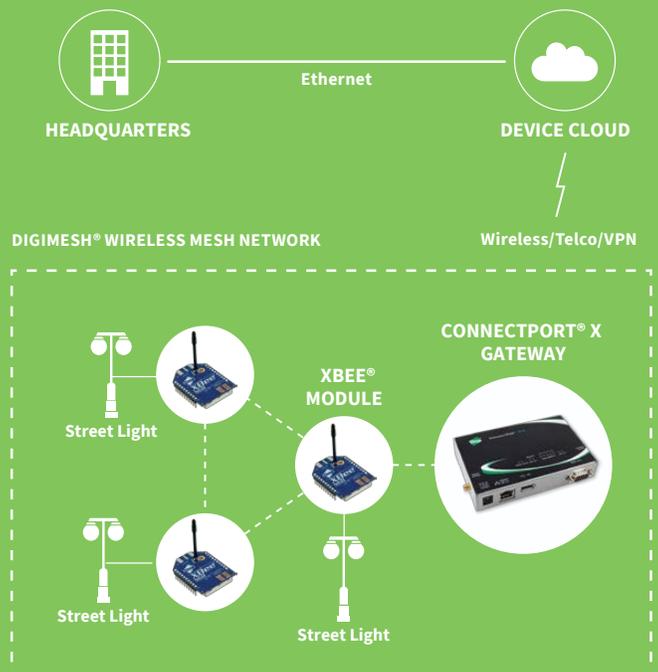
BENEFITS

– No configuration needed for out-of-the-box RF communications
– Common XBee footprint for a variety of RF modules
– Simple topology to deploy and grow
– 2.4 GHz for worldwide deployment
– Low-power XBee or extended-range XBee-PRO (pin/over-the-air compatible)
– Multiple antenna options
– Outdoor RF line-of-sight range up to 1 mile (1.6 km) with high-gain antennas
– DigiMesh peer-to-peer mesh networking protocol
  - Self-healing and discovery for network stability
  - Sleeping routers supported for long battery life

APPLICATION EXAMPLE

HEADQUARTERS — Ethernet — DEVICE CLOUD

DIGIMESH® WIRELESS MESH NETWORK

Wireless/Telco/VPN

Street Light

XBEE® MODULE

CONNECTPORT® X GATEWAY

Street Light

Street Light

RELATED PRODUCTS

Gateways   Modules   Adapters   Network Extenders   Development Kits

SPECIFICATIONS	XBee® DigiMesh® 2.4	XBee-PRO® DigiMesh® 2.4	XBee-PRO® DigiMesh® 2.4 (Int'l)
PERFORMANCE			
RF DATA RATE	250 Kbps		
INDOR/URBAN RANGE	100 ft (30 m)	300 ft (90 m)	200 ft (60 m)
OUTDOOR/RF LINE-OF-SIGHT RANGE	300 ft (90 m)	1 mile (1.6 km)	2500 ft (750 m)
TRANSMIT POWER	1 mW (+0 dBm)	63 mW (+18 dBm)	10 mW (+10 dBm)
RECEIVER SENSITIVITY (1% PER)	-92 dBm	-100 dBm	
FEATURES			
SERIAL DATA INTERFACE	3.3V CMOS serial UART		
CONFIGURATION METHOD	AT & API		
FREQUENCY BAND	2.4 GHz ISM		
INTERFERENCE IMMUNITY	DSSS (Direct Sequence Spread Spectrum)		
SERIAL DATA RATE	Up to 115.2 Kbps		
ADC INPUTS	(6) 10-bit ADC inputs		
DIGITAL I/O	13		
ANTENNA OPTIONS	Chip, Wire Whip, U.FL, RPSMA		
NETWORKING & SECURITY			
ENCRYPTION	128-bit AES		
RELIABLE PACKET DELIVERY	Retries/Acknowledgments		
ADDRESSING OPTIONS	PAN ID, channel, 64-bit address		
CHANNELS	16	12	
POWER REQUIREMENTS			
SUPPLY VOLTAGE	2.8 – 3.4VDC		
TRANSMIT CURRENT	45 mA	250 mA (Wire, Chip, U.FL), 340 mA (RPSMA)	150 mA (Wire, Chip, U.FL), 180 mA (RPSMA)
RECEIVE CURRENT	50 mA	55 mA	
POWER-DOWN CURRENT	<50 uA		
REGULATORY APPROVALS			
FCC (USA)	Yes		
IC (CANADA)	Yes		
ETSI (EUROPE)	Yes	Yes (Max Tx 10 mW)	Yes
C-TICK AUSTRALIA	Yes		
TELEC (JAPAN)	Yes	No	Yes

ZigBee Mesh

DigiMesh

Side Views

Top View

Top View
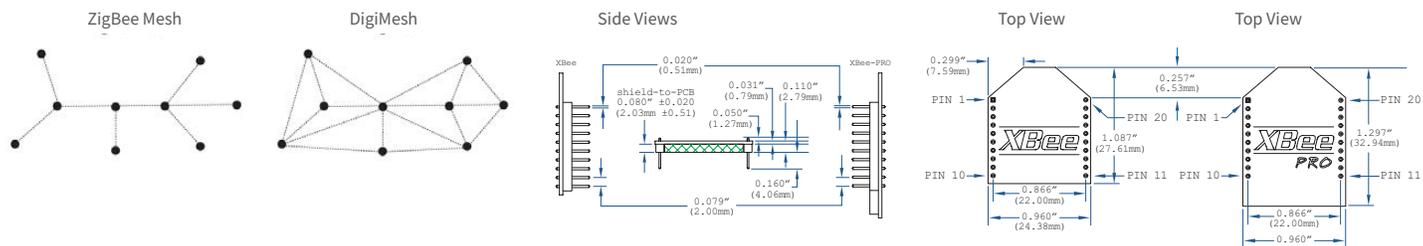
PART NUMBERS	DESCRIPTION
XB24-DMDK	North American/International (except Japan) DigiMesh 2.4 Development Kit w/ 2 XBee and 2 XBee-PRO modules
XB24-DMDK-WJ	Japan DigiMesh 2.4 Development Kit w/ 2 XBee and 2 XBee-PRO modules (International)
XB24-DMUIT-250	XBee DigiMesh 2.4 low power module w/ U.FL connector
XB24-DMSIT-250	XBee DigiMesh 2.4 low power module w/ RPSMA connector
XB24-DMWIT-250	XBee DigiMesh 2.4 low power module w/ wire antenna
XB24-DMPIT-250	XBee DigiMesh 2.4 low-power module w/ PCB antenna
XBP24-DMSIT-250	XBee-PRO DigiMesh 2.4 extended range module w/ RPSMA connector
XBP24-DMSIT-250J	XBee-PRO DigiMesh 2.4 extended range module w/ RPSMA connector (International)
XBP24-DMWIT-250	XBee-PRO DigiMesh 2.4 extended range module w/ wire antenna
XBP24-DMWIT-250J	XBee-PRO DigiMesh 2.4 extended range module w/ wire antenna (International)
XBP24-DMUIT-250	XBee-PRO DigiMesh 2.4 extended range module w/ U.FL connector
XBP24-DMUIT-250J	XBee-PRO DigiMesh 2.4 extended range module w/ U.FL connector (International)
XBP24-DMPIT-250	XBee-PRO DigiMesh 2.4 extended range module w/ PCB antenna
XBP24-DMPIT-250J	XBee-PRO DigiMesh 2.4 extended range module w/ PCB antenna (International)

FOR MORE INFORMATION
PLEASE VISIT WWW.DIGI.COM

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DIGI

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Largest Supplier of Electrical and Electronic Components

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Other Similar products are found below :

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LoRa Node Kit(US) Sierra HL7588 4G KIT(US) WISE-4610-S672NA EC21AUFA-MINIPCIE CS-EASYSWITCH-25 EC21JFB-MINIPCIE
E28-2G4M27S E22-400T30D DL-RFM95-868M DL-RFM95-915M DL-RFM96-433M Ra-07H-V1.1 Ra-07 Ra-01SH Ra-01S-T Ra-01SH-
T CMD-HHCP-418-MD CMD-HHCP-433-MD CMD-HHLR-418-MD 2095000000200 XB9X-DMRS-031 20911051101 COM-13909
HMC-C033 COM-13910 WRL-14498 SX1276RF1KAS HMC-C004 HMC-C011 HMC-C014 HMC-C010 HMC-C050 HMC-C001 HMC-
C006 HMC-C029 HMC-C030 HMC-C021 HMC-C041 HMC-C042 HMC-C048 HMC-C051 HMC-C071