Digi XBee® Family Features Comparison

Family	Frequency	Protocol	Description	RF Line of Sight Range	Form Factor	Development Kit Part Numbers	RF Data Rate	Current Draw Tx/Rx	Hardware Reference # / Chipset(s)	Certified Regions
Digi XBee® Wi-Fi	2.4 GHz	IEEE 802.11	Wi-Fi 802.11b/g/n with easy provisioning and point-to-multipoint device connectivity	N/A	Through-Hole / Surface Mount	XKA2B-WFT-0	1 to 72 Mbps	309 mA / 100 mA	**S6B** SiLabs EFM32LG230 ARM M3 MCU, Atheros AR4100 Transceiver	US, CA, EU, AU, JP
Digi XBee® DigiMesh® 2.4		DigiMesh®	DigiMesh networking, low-cost, low-power	4000 ft (1200 m)		XK-WDM	250 Kbps	33mA / 28mA	**S2C** SiLabs EM357 SoC	US, CA, EU, AUS/ NZ, BR, JP
Digi XBee-PRO DigiMesh® 2.4			Extended-range DigiMesh	2 miles (3200 m)				120 mA / 31 mA		US, CA, AU, NZ, BR
Digi XBee® 802.15.4		Proprietary 802.15.4	low cost, low power point-to-multipoint device connectivity	4000 ft (1.2 km)		XKB2-A2T-WWC		33mA / 28mA		US, CA, EU, AUS/ NZ, BR, JP
Digi XBee-PRO® 802.15.4			Point to multipoint extended range version	2 miles (3.2 km)				120mA / 31 mA		US, CA, AU, NZ, BR
Digi XBee® ZigBee		ZigBee® Pro	ZigBee mesh networking, low-cost, low-power	4000 ft / 1.2 km		XKB2-Z7T-WZM		33mA / 28mA		US, CA, EU, AUS/ NZ, BR, JP
Digi XBee-PRO® ZigBee			Extended-range ZigBee	2 miles / 3.2 km		XKA2C-Z7T-U		120 mA / 31 mA		US, CA, AU, NZ, BR
Digi XBee® ZigBee - Thread Ready		ZigBee® Pro Thread	ZigBee protocol (upgradable to Thread protocol) low cost, low power	4000 ft (1.2km)	Surface Mount	XKB2-Z7T-WTZM		33mA / 28mA	**S2D** SiLabs EM3587 SoC	US, CA, EU
Digi XBee-PRO® 900HP	900 MHz	Multipoint DigiMesh®	Extended-range peer-to-peer mesh, sleeping routers	9 miles / 14.5 km	Through-Hole	XKB9-DMT-UHP (US/CA) XKB9-DMT-AHP (AU) XKB9-DMT-BHP (BR) XKB9-DMT-SHP (SGP)	10 Kbps or 200 Kbps	215 mA / 29 mA	**S3B** SiLabs EFM32G230F128 ARM M3 MCU, Analog Devices ADF7023 Transceiver	US, CA, AU, BR
Digi XBee® SX			20mW networking XBee module for mission critical applications	9 miles / 14 km	Surface Mount	XK9X-DMS-0	250 Kbps	55 mA / 40 mA	**S10** SiLabs EFM32LG230F256G ARM M3 MCU, Analog Devices ADF7023 Transceiver, LNA/SAW (PRO version: PA+LNA/SAW)	US, CA, AU, NZ (BR Pending)
Digi XBee-PRO® SX			1-Watt networking XBee module for mission critical applications	65 miles / 105 km				900 mA / 40 mA		US, CA, AU, (BR Pending)
Digi XBee® SX 868	868 MHz	Multipoint DigiMesh®	Low-cost, low-power peer-to-peer mesh for Europe	9 miles / 14.5 km	Surface Mount	XK8X-DMS-0	Up to 80 Kbps	55 mA / 40 mA	**S10** SiLabs EFM32LG230F256G ARM M3 MCU, Analog Devices ADF7023 Transceiver, LNA/SAW	EU

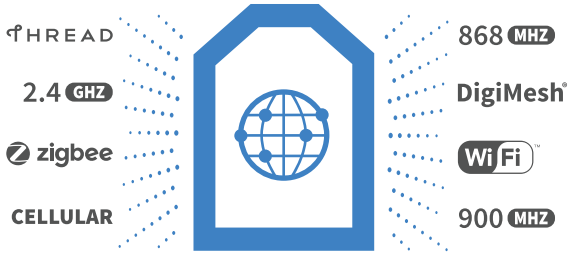
See reverse for Digi XBee Cellular

Digi XBee® Family Features Comparison - continued

Family	Frequency	Carriers	Description	Network	Form Factor	Development Kit Part Numbers	RF Data Rate	Current Draw Tx/Rx	Hardware Reference # / Chipset(s)	Certified Regions
Digi XBee® Cellular LTE Cat 1	Bands 4 and 13	Verizon and AT&T	FCC and End-Device certified LTE Cat 1 for low-power cellular applications, MicroPython Programmable	LTE CAT1	Through-Hole	XKC-V1T-U	10 Mbps Down / 5 Mbps Up	860mA / 530mA	SiLabs EFM32G-G395F1024 ARM M3 MCU + Telit LE866	US and Canada
Digi XBee® Cellular LTE-M	Verizon Bands: 4 and 13 AT&T Bands: 2,4, and 12		FCC and End-Device certified LTE-M for ultra-low-power cellular applications, MicroPython Programmable	LTE-M		N/A	384 kbps	TBD	Silabs EFM G395F1024 ARM M3 MCU + ublox 404M/410M	US and Canada
Digi XBee® Cellular NB-IoT	Bands 8 and 20	Vodafone, Deutsche TK, Orange, and others that support these bands	CE/RED certified NB-IoT for ultra-low-power cellular applications, MicroPython Programmable	NB-IoT		N/A	< 100kbps	TBD	Silabs EFM G395F1024 ARM M3 MCU + ublox N211	Europe
Digi XBee® Cellular 3G Global	Band 19 (800 MHz) Band 5 (850 Mhz) Band 8 (900 MHz) Band 2 (1900 MHz) Band 1 (2100 MHz)	AT&T, Vodafone, Rogers, & many others	FCC and PTCRB certified 3G GSM/HSPA modem for low-power cellular applicationn, MicroPython Programmable	HSPA/GSM 3G		XKC-M5-W	7.2 Mbps Down / 5.76 Mbps Up	860mA / 530 mA	Silabs EFM G395F1024 ARM M3 MCU + ublox U201	Global

Worldwide Deployment

- Digi offers frequencies from 2.4GHz (global) and sub-GHz solutions for regional ISM solutions, as well as 3GPP standards like LTE Cat 1, LTE-M, NB-IoT and 3G.
- Available with power management options from 10uA up to 1W for flexibility in range and power consumption
- Pre-certified for use in various regions of the world
- In one design footprint, XBee modules support multiple wireless protocols, RF frequencies, and cellular standards around the globe. This flexibility lowers manufacturing and engineering costs and offers OEMs ability to quickly expand their roadmap



Multiple Protocols

Digi XBee modules leverage multiple types of wireless protocols which are suitable for many different network architectures. These protocols can be grouped in two categories: “point-to-multipoint” and “mesh networking” which are explained below:

Point-to-Multipoint Networking

Point-to-multipoint communication is accomplished by a one-to-one or one-to-many connection, providing multiple paths from a single location to multiple locations. Here are some of the protocols that fall under point-to-multipoint:

802.15.4

IEEE 802.15.4 is a standard which specifies the physical layer and media access control and is ideal for applications requiring low latency and predictable communication timing.

802.11 (Wi-Fi)

IEEE 802.11, or more commonly known as Wi-Fi, has a variety of sub-protocols represented by the suffix a/b/g/n/ac with varying degrees of bandwidth.

Cellular

With the introduction of protocols such as LTE Cat 1, LTE-M, and NB-IoT, cellular data rates have come down to a point where it should be considered for certain low power applications.

Mesh Networking

Mesh networking is used where the range between two points may be beyond the range of the two radios located at those points, but intermediate radios are in place that could forward on any messages to and from the desired radios.

ZigBee

ZigBee is an open, global wireless standard developed to address the needs of low-cost, low-power M2M networks.

DigiMesh

DigiMesh is similar to ZigBee mesh networking, but unlike ZigBee, DigiMesh only has one node-type that can route data and are interchangeable. DigiMesh is a proprietary, low-power mesh networking protocol with a single node-type, and capable of scaling for larger networks.

Thread

Thread is an open, global, IPv6 based, low power mesh networking protocol that is simple to setup and use.

Programmable versions are also available in several of these products.

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