

# DIGI XBEE® WI-FI

Embedded Wi-Fi modules provide ultra low-power 802.11b/g/n communications in the flexible Digi XBee hardware and software footprint

Digi XBee Wi-Fi embedded RF modules provide simple serial to IEEE 802.11 connectivity. By bridging the low-power/low-cost requirements of wireless device networking with the proven infrastructure of 802.11, the Digi XBee Wi-Fi creates new wireless opportunities for energy management, process and factory automation, wireless sensor networks, intelligent asset management and more. Featuring easy provisioning methods and native Digi Remote Manager® connectivity, Digi XBee Wi-Fi modules give developers the fastest IP-to-device and device-to-cloud capability possible. Focused on the rigorous requirements of these wireless device networks, the module gives developers IP-to-device and device-to-cloud capability.

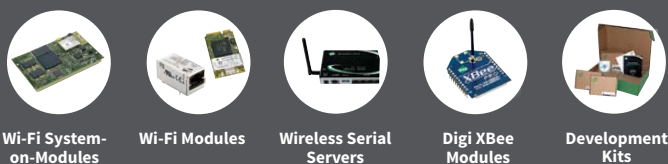
Digi XBee modules offer developers tremendous flexibility and are available in surface mount and through-hole form factors. The Digi XBee Wi-Fi shares a common footprint with other Digi XBee modules. This allows different Digi XBee technologies to be drop-in replacements for each other.

As a member of the Digi XBee family, the Digi XBee Wi-Fi combines hardware with software for a complete modular solution. Digi XBee Wi-Fi modules are designed to communicate with access points in existing 802.11 infrastructures. Developers can use AT and API commands for advanced configuration options.

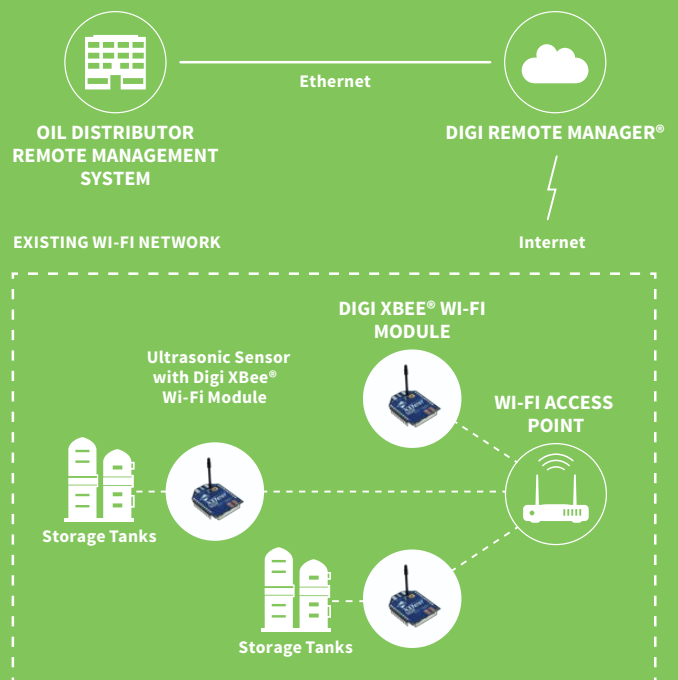
## BENEFITS

- Native Digi Remote Manager integration for data acquisition and device management
- Hardware and software complete module easily joins existing 802.11 b/g/n (Wi-Fi) infrastructures
- Common Digi XBee footprint allows OEMs to support a variety of wireless protocols
- Flexible SPI and UART serial interfaces
- Available in Surface Mount and Through-Hole form factors
- Support for low-power sleeping applications with <math><6 \mu A</math> power-down current
- Over-the-air data rates up to 72 Mbps
- Simple provisioning methods including Soft AP and Wi-Fi Protected Setup (WPS)

## RELATED PRODUCTS



## APPLICATION EXAMPLE



## SPECIFICATIONS

## Digi XBee® Wi-Fi (S6B)

## FEATURES

<b>SERIAL DATA INTERFACE</b>	UART up to 1 Mbps, SPI up to 6 Mbps
<b>CONFIGURATION METHOD</b>	API or AT commands
<b>FREQUENCY BAND</b>	ISM 2.4 GHz
<b>ADC INPUTS</b>	4 (12-bit)
<b>DIGITAL I/O</b>	10
<b>FORM FACTOR</b>	Through-Hole, Surface Mount
<b>ANTENNA OPTIONS</b>	Through-Hole: PCB (Embedded), U.FL, RPSMA, Integrated Wire; SMT: PCB (Embedded), U.FL, RF Pad
<b>OPERATING TEMPERATURE</b>	-30° C to +85° C
<b>DIMENSIONS (L X W)</b>	Through-Hole: 0.960 in x 1.297 in (2.438 cm x 3.294 cm); SMT: 0.87 in x 1.33 in x 0.12 in (2.20 cm x 3.40 cm x 0.30 cm)

## NETWORKING AND SECURITY

<b>SECURITY</b>	WPA-PSK, WPA2-PSK and WEP
<b>CHANNELS</b>	13 channels

## WIRELESS LAN

<b>STANDARD</b>	802.11b/g/n
<b>DATA RATES</b>	1 Mbps to 72 Mbps
<b>MODULATION</b>	802.11b: CCK, DSSS; 802.11g/n: OFDM with BPSK, QPSK, 16-QAM, 64-QAM
<b>TRANSMIT POWER</b>	Up to +16 dBm (+13 dBm for Europe/Australia/Brazil)
<b>RECEIVER SENSITIVITY</b>	-93 to -71 dBm

## POWER REQUIREMENTS

<b>SUPPLY VOLTAGE</b>	3.14 - 3.46 VDC
<b>TRANSMIT CURRENT</b>	Up to 309 mA
<b>RECEIVE CURRENT</b>	100 mA
<b>POWER-DOWN CURRENT</b>	<6 µA @ 25° C

## REGULATORY APPROVALS

<b>FCC (USA)</b>	Yes
<b>IC (CANADA)</b>	Yes
<b>CE/ETSI (EUROPE)</b>	Yes
<b>C-TICK (AUSTRALIA)</b>	Yes
<b>TELEC (JAPAN)</b>	Yes
<b>ANATEL (BRAZIL)</b>	Yes

## PART NUMBERS

## DESCRIPTION

XB2B-WFPS-001	Digi XBee Wi-Fi (S6B), PCB Antenna, SMT
XB2B-WFRS-001	Digi XBee Wi-Fi (S6B), RF Pad Antenna, SMT
XB2B-WFUS-001	Digi XBee Wi-Fi (S6B), U.FL Antenna, SMT
XB2B-WFPT-001	Digi XBee Wi-Fi (S6B), PCB Antenna, Through-Hole
XB2B-WFUT-001	Digi XBee Wi-Fi (S6B), U.FL Antenna, Through-Hole
XB2B-WFWT-001	Digi XBee Wi-Fi (S6B), Wire Antenna, Through-Hole
XB2B-WFST-001	Digi XBee Wi-Fi (S6B), RPSMA Antenna, Through-Hole

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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

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