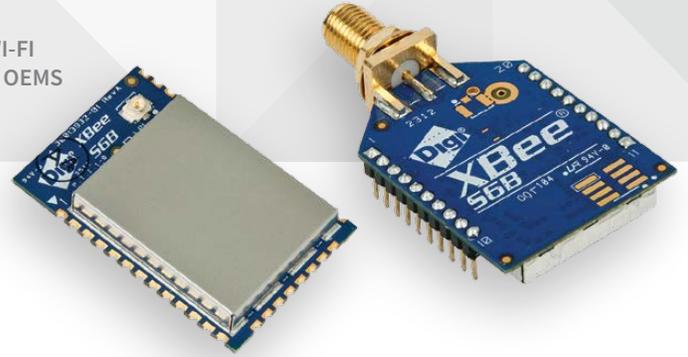# DIGI XBEE® WI-FI

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 <6 µA power-down current
– Over-the-air data rates up to 72 Mbps
– Simple provisioning methods including Soft AP and Wi-Fi Protected Setup (WPS)

APPLICATION EXAMPLE

OIL DISTRIBUTOR REMOTE MANAGEMENT SYSTEM

Ethernet

DIGI REMOTE MANAGER®

Internet

EXISTING WI-FI NETWORK

DIGI XBEE® WI-FI MODULE

Ultrasonic Sensor with Digi XBee® Wi-Fi Module

WI-FI ACCESS POINT

Storage Tanks

Storage Tanks

RELATED PRODUCTS

Wi-Fi System-on-Modules

Wi-Fi Modules

Wireless Serial Servers

Digi XBee Modules
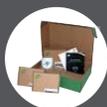
Development Kits
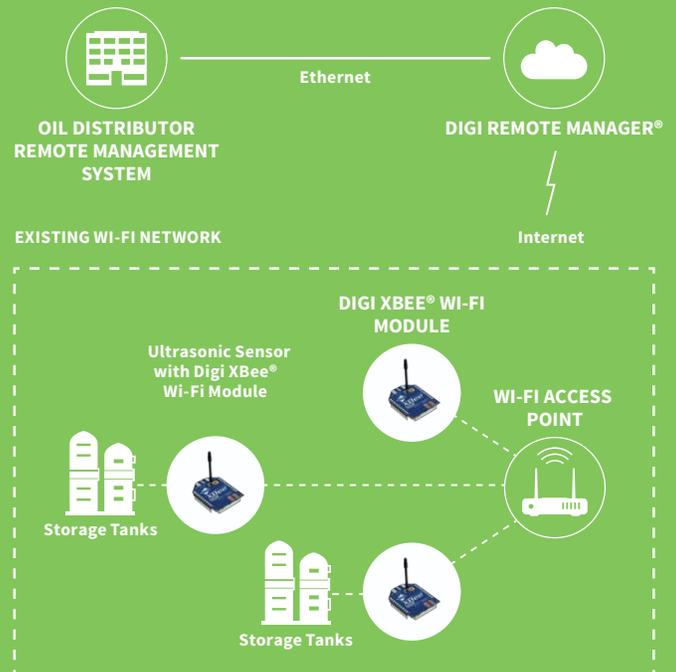
SPECIFICATIONS	Digi XBee® Wi-Fi (S6B)
FEATURES	
SERIAL DATA INTERFACE	UART up to 1 Mbps, SPI up to 6 Mbps
CONFIGURATION METHOD	API or AT commands
FREQUENCY BAND	ISM 2.4 GHz
ADC INPUTS	4 (12-bit)
DIGITAL I/O	10
FORM FACTOR	Through-Hole, Surface Mount
ANTENNA OPTIONS	Through-Hole: PCB (Embedded), U.FL, RPSMA, Integrated Wire; SMT: PCB (Embedded), U.FL, RF Pad
OPERATING TEMPERATURE	-30º C to +85º C
DIMENSIONS (L X W)	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	
SECURITY	WPA-PSK,WPA2-PSK and WEP
CHANNELS	13 channels
WIRELESS LAN	
STANDARD	802.11b/g/n
DATA RATES	1 Mbps to 72 Mbps
MODULATION	802.11b: CCK, DSSS; 802.11g/n: OFDM with BPSK, QPSK, 16-QAM, 64-QAM
TRANSMIT POWER	Up to +16 dBm (+13 dBm for Europe/Australia/Brazil)
RECEIVER SENSITIVITY	-93 to -71 dBm
POWER REQUIREMENTS	
SUPPLY VOLTAGE	3.14 - 3.46 VDC
TRANSMIT CURRENT	Up to 309 mA
RECEIVE CURRENT	100 mA
POWER-DOWN CURRENT	<6 µA @ 25º C
REGULATORY APPROVALS	
FCC (USA)	Yes
IC (CANADA)	Yes
CE/ETSI (EUROPE)	Yes
C-TICK (AUSTRALIA)	Yes
TELEC (JAPAN)	Yes
ANATEL (BRAZIL)	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