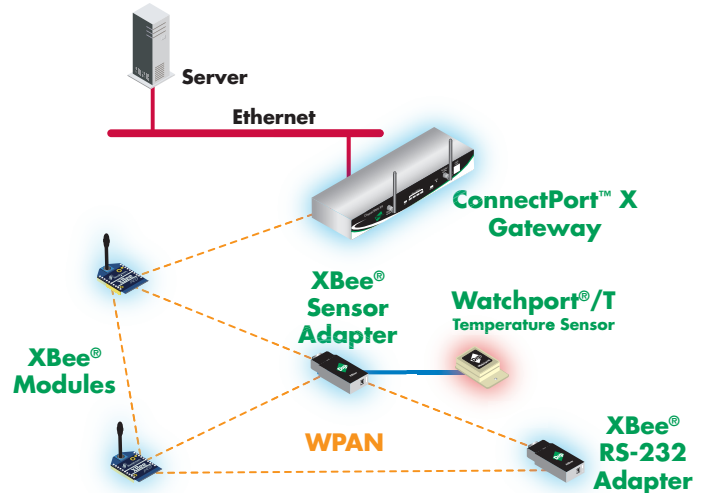


# Drop-in Networking Starter Kit

Wireless PAN-to-IP Application & Development Kit

The Drop-in Networking Starter Kit is designed to demonstrate the functionality of Digi's Drop-in Networking solutions and how these versatile and easy-to-apply products can be used to implement innovative wireless device networking applications.



## Features/Benefits

- Easy-to-use, cost reduced kit includes:
  - ConnectPort X8 gateway (1)
  - XBee RS-232 adapter (1)
  - XBee Sensor adapter (1)
  - XBee modules and interface boards (2)
  - Watchport/T temperature sensor (1)
- Allows quick configuration of a low-power mesh or multipoint network
- Wirelessly enable an existing serial device using the XBee RS-232 adapter
- ConnectPort X8 gateway provides WPAN-to-Ethernet connectivity
- Includes Python programming tools for custom software development

## Overview

Digi's Drop-in Networking solutions are designed to provide end-to-end wireless connectivity to distributed electronic devices so those devices and the information they hold can be accessed and managed from anywhere. Drop-in Networking enables product and service differentiation by making devices smarter through wireless network connectivity and using this added intelligence to deliver faster, more accurate and more relevant information to end users.

The Drop-in Networking Starter Kit provides the hardware and software tools to add low-cost wireless communication functionality to new and existing products. Each kit contains the following items and can be configured in a matter of minutes:

**ConnectPort™ X8 Gateway (1)** - Wireless Personal Area Network (WPAN)-to-Ethernet model; collects data traffic from XBee devices, in this case the two included XBee adapters and the two XBee modules, and IP-enables that data traffic. The ConnectPort X8 is also available with cellular and Wi-Fi connectivity

**XBee® RS-232 Adapter (1)** - Provides wireless connectivity to any RS-232 serial device.

**XBee® Sensor Adapter (1)** - Wirelessly enables the Watchport/T temperature sensor.

**Watchport®/T Temperature Sensor (1)** - Provides remote temperature readings.

**XBee® Modules and Interface Boards (2)** - Provide embeddable wireless capability for integration into original product designs (e.g., sensors, meters, pumps, controllers).

**Other** - Also includes power supplies, cable adapters, user documentation, and Python code samples.



Kit Type	XBee® ZNet 2.5	XBee® 802.15.4
<b>Product Type</b>	<b>XBee® Embedded Modules</b>	
<b>Performance</b>		
RF Data Rate	250 Kbps	250 Kbps
Indoor/Urban Range	Up to 133 ft (40 m)	Up to 100 ft (30 m)
Outdoor/RF Line-of-Sight Range	Up to 400 ft (20 m)	Up to 300 ft (90 m)
Transmit Power	1.25 mW (+1 dBm) / 2 mW (+3 dBm) boost mode	1 mW (0 dBm)
Receiver Sensitivity (1% PER)	-96 dBm in boost mode	-92 dBm
<b>General</b>		
Frequency Band	2.4 GHz	
Sleep Modes	Low-power sleep modes enable power-down currents less than 10 uA	
Support Topologies	Point-to-point, Point-to-multipoint, Mesh	Point-to-point, Point-to-multipoint, Peer-to-peer
<b>Environmental</b>		
Operating Temperature	-40° C to +85° C (Industrial)	
<b>Product Type</b>	<b>ConnectPort™ X8 Gateway</b>	
<b>General</b>		
Configuration Options	Interfaces – Physical: Serial, Ethernet, USB; Air: Low-power RF via XBee module, Cellular & Wi-Fi via PCIe module (not included)	
Other Options	GPS and Local Storage – Available separately via PCIe module	
Programmability	On-board Python engine; kit includes sample applications	
Security	IPsec and SSL VPNs on WAN connections with DES, 3DES or AES encryption, 128-bit AES on ZigBee network	
Commercial/Industrial Grade	Enclosed PCIe modules to reduce breakage/theft Extended operating temperature (-20° C to +60° C) Hardened metal enclosure with integrated mounting slots	
Router/Security Features	NAT, port forwarding, access control lists (IP filtering)	
Management	HTTP interface, password access control, IP service port control, optional network management via Digi Connectware Manager	
<b>Power Requirements</b>		
Power Input	9-30VDC (12 VDC power supply included)	
Power Consumption	1.2 W (idle) / 3.4 W (max)	
<b>Product Type</b>	<b>XBee® Adapters</b>	
<b>General</b>		
Wireless	Same as module specifications above	Same as module specifications above
Form Factor	Small form factor for easy handling/installation	
Interface Options	Serial (RS-232, RS-485), USB, Sensor (Accepts Digi's Watchport Sensors), Digital I/O, Analog I/O	
Powering Options	External power supply or N-cell alkaline batteries; Lithium battery powered models available separately	
<b>Product Type</b>	<b>Watchport®/T Temperature Sensor</b>	
<b>General</b>		
Compatibility	Plugs into included XBee Sensor adapter for wireless remote temperature monitoring	
Maximum Reading Rate	20 per second	
Temperature Accuracy	Temperature accuracy: - +/- 3.6° F (+/- 2° C) at -40° F to +14° F (-40° C to -10° C) - +/- 0.9° F (+/- 0.5° C) at 14° F to 185° F (-10° C to +85° C)	
Temperature Resolution	0.1° C	
Power Consumption	15 (normal operation) / 1.0 mA (suspend mode)	

Please visit [www.digi.com/technology/drop-in-networking/products.jsp](http://www.digi.com/technology/drop-in-networking/products.jsp) for a complete listing of product specifications and part numbers



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**Digi International**, the leader in device networking for business, develops reliable products and technologies to connect and securely manage local or remote electronic devices over the network or via the web. With over 20 million ports shipped worldwide since 1985, Digi offers the highest levels of performance, flexibility and quality.

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