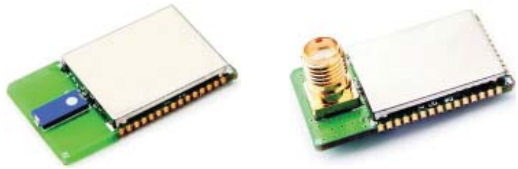
ZigBee Modules

JN5139 Series



The JN5139-xxx-Myy family is a range of surface mount modules that enables users to implement IEEE802.15.4 or ZigBee compliant systems with minimum time to market and at the lowest cost. They remove the need for expensive and lengthy development of custom RF board designs and test suites. The modules use Jennic's JN5139 wireless microcontroller to provide a comprehensive solution with high radio performance and all RF components included. All that is required to develop and manufacture wireless control or sensing products is to connect a power supply and peripherals such as switches, actuators and sensors, considerably simplifying product development.

Features: Module

- 2.4GHz IEEE802.15.4 & ZigBee compliant
- 2.7-3.6V operation
- Sleep current (with active sleep timer) 2.8µA
- **JN5139-xxx-M00/01/03** up to 1km range

M00: on board antenna
M01: SMA connector
M03: uFl connector
o Receiver sensitivity -96.5dBm
o TX power +2.5dBm
o TX current 37mA
o RX current 37mA
o 18x30mm

- **JN5139-xxx-M02/04** up to 4km range

M02: SMA connector
M04: uFl connector
o Receiver sensitivity -100dBm
o TX power +19dBm
o TX current 120mA
o RX current 45mA
o 18x41mm

Features: Microcontroller

- 16MHz 32-bit RISC CPU
- 96kB RAM, 192kB ROM
- 4-input 12-bit ADC, 2 11-bit DACs,2 comparators, temperature sensor
- 2 Application timer/counters, 3 system timers
- 2 UARTs (one for in-system debug)
- SPI port with 5 selects
- 2-wire serial interface
- 21 GPIO

	Part No.	Note	Ord.No.
S	JN5139-Z01-M00	with an integrated antenna	63045
S	JN5139-Z01-M02	with a power amplifier and LNA	63051

ZigBee Evaluation Kit

Jennic's ZigBee evaluation kit provides all the software tools and hardware required to develop and monitor wireless sensor network products. The kit contains one controller board with display, and four sensor boards. Each board features temperature, humidity and light level sensors and the JN5139 device implemented on a compact reference module. Two high power modules are provided for extended range testing. Expansion boards and ZigBee enabled modules allow networks of any size to be easily constructed.

	Part No.	Ord.No.
S	JN5139-EK010	64201

XBee Series


XB24-ACI


XB24-AUI


XB24-AWI


XBP24-ACI


XBP24-AUI


XBP24-AWI

The XBee and XBee-PRO OEM RF Modules were engineered to meet IEEE 802.15.4 standards and support the unique needs of low-cost, low-power wireless sensor networks.The modules require minimal power and provide reliable delivery of data between devices. The modules operate within the ISM 2.4 GHz frequency band and are pin-for-pin compatible with each other.

Technical Parameters	XBee	XBee PRO
Supply Voltage	2,8 - 3,4 V	
Range Indoor/Outdoor	30 m/100m	100/1500m
Transmit Power	0dBm (1mW)	18dBm (60mW)
Transmit Current	45 mA (at 3,3V)	137 mA to 215mA (at3,3V)
Idle / Receive Current	50 mA (at 3,3V)	55 mA (pri 3,3V)
Power-down Current	<10uA	<10uA
Receiver Sensitivity	-92 dBm	-100 dBm
RF Data Rate	250 000bps	
Serial Interface Data Rate	1200-115200bps	
Dimensions	2,43 x 2,76 cm	
Operating Temperature	-40°C to 85°C	

	Part No.	Note	Ord.No.
O	XB24-ACI-001	with an integrated antenna	63044
S	XB24-AUI-001	with an int. antenna and U.FL connector	63413
S	XB24-AWI-001	with wire antenna	61456
S	XBP24-ACI-001	with an integrated antenna	63042
S	XBP24-AUI-001	with an int. antenna and U.FL connector	63043
S	XBP24-AWI-001	with wire antenna	63041

XBee DigiMesh Series

XBee & XBee-PRO DigiMesh 2.4 embedded RF modules utilize the peer-to-peer DigiMesh protocol in 2.4 GHz for global deployments. This innovative mesh protocol offers users added network stability through self-healing, self discovery, and dense network operation. With support for sleeping routers, DigiMesh is ideal for power sensetive applications relying upon batteries or power harvesting technology for power.

Technical Parameters	XBee DigiMesh	XBee PRO DigiMesh
Supply Voltage	2,8 - 3,4 V	
Range Indoor/Outdoor	30 m/90m	90/1600m
Transmit Power	0dBm (1mW)	18dBm (63mW)
Transmit Current	45 mA (at 3,3V)	250 mA to 340mA (at3,3V)
Idle / Receive Current	50 mA (at 3,3V)	55 mA (pri 3,3V)
Power-down Current	<50uA	<50uA
Receiver Sensitivity	-92 dBm	-100 dBm
RF Data Rate	250 000bps	
Serial Interface Data Rate	1200bps-250kbps	
Dimensions	2,43 x 2,76 cm	
Operating Temperature	-40°C to 85°C	

	Part No.	Note	Ord.No.
S	XB24-DMSIT-250	with RPSMA	79845
S	XB24-DMUIT-250	with uFL connector	79844
S	XB24-DMWIT-250	with wire antenna	79841
S	XBP24-DMUIT-250	with uFL connectorr	79848
S	XB24-DMWIT-250	with wire antenna	79846

XBIB-U-DEV

USB, XBee / XBee-PRO professional interface board

	Part No.	Ord.No.
S	XBIB-U-DEV	79850

ZigBee Antennas

A24-HABUF

A24-HAFM

	Part No.		Ord.No.
S	A24-HABUF-P5I	2,4-2,5 GHz 2,1dBi, U.FL female	79850
S	A24-HASM-450	2,4-2,5 GHz 2,1dBi, RPSMA female	63420