

NPort® Z2150/Z3150 Series

1-port RS-232/422/485 to ZigBee converter or ZigBee-to-Ethernet gateway



NPort® Z2150

NPort® Z3150

- > IEEE 802.15.4/ZigBee compliant
- > Network topologies: Mesh/Star/Cluster tree
- > 128-bit AES hardware encryption
- > Enhanced surge protection for serial and power
- > Dual DC power inputs (NPort Z3150 only)
- > Easy-to-use configuration utility
- > Up to 99 nodes per network

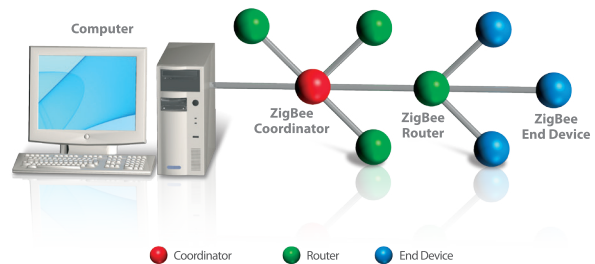
Overview

The NPort Z2150 and NPort Z3150 are IEEE 802.15.4/ZigBee compliant, providing a reliable wireless solution for serial-to-ZigBee networks requiring minimal wiring presence.

The NPort Z2150 can be configured as a ZigBee coordinator (ZC), a ZigBee router (ZR), or a ZigBee end device (ZED). Any serial device can be connected to the NPort Z2150 and exchange data via PAN. A user-friendly utility is provided to configure the device type and network settings in simple steps.

The NPort Z3150 was designed specifically to perform as a ZigBee Coordinator (ZC), providing nodes with an Ethernet interface to the ZigBee PAN. Internet connection and network services are also provided via the ZigBee PAN. Remote users can monitor any ZigBee device in the PAN through the NPort Z3150.

The following figure shows a typical topology of a ZigBee network. The NPort Z3150 is the ZigBee coordinator (ZC) connected to numerous ZigBee routers (ZR) and the routers are connected to end devices (ZED).



Surge-protected Serial and Power Lines

Surge, which is typically caused by high voltages that result from switching and lightning transients, is a common threat to all electrical devices. Moxa's leading-edge surge immunity solution, which is applied to the NPort Z2150/Z3150's serial and Ethernet lines, is tested

and proven compliant with IEC 61000-4-5. This surge protection provides a robust solution that can protect electrical devices from voltage spikes and withstand electrically noisy environmental conditions.

Specifications

ZigBee Interface

- RF Standard:** 802.15.4/ZigBee compliant
- Frequency Band:** 2.4 GHz
- RF Data Rate:** 250 Kbps
- Rx sensitivity:** -96 dBm
- Tx Power:** 4.5 dBm (Max)
- Transmission Distance:** Up to 100m (open space)
- Antenna:** 2dBi
- RF Channel:** 16 channels
- Device Type:** Coordinator, Router (NPort Z2150 only), End Device (NPort Z2150 only)
- Network Topology:** Star, Mesh, Cluster tree
- Security:** 128-bit AES encryption algorithms

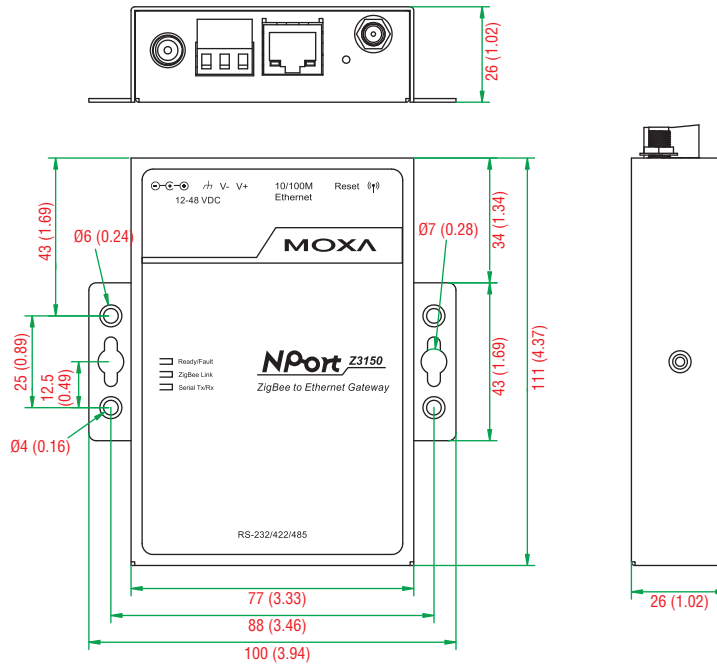
Ethernet Interface (NPort Z3150 only)

- Number of Ports:** 1
- Speed:** 10/100 Mbps, auto MDI/MDIX
- Connector:** RJ45
- Magnetic Isolation Protection:** 1.5 KV built-in
- Serial Interface**
- Number of Ports:** 1
- Serial Standards:** RS-232/422/485
- Connector:** DB9 male
- Serial Line Protection:** 1KV surge protection, 15KV ESD protection for all signals
- RS-485 Data Direction Control:** ADDC (Automatic Data Direction Control)

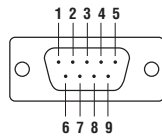
Dimensions

Unit: mm (inch)

NPort® Z3150



Pin Assignment



PIN	RS-232	RS-422/RS-485-4w	RS-485-2W
1	DCD	TxD-(A)	-
2	RXD	TxD+(B)	-
3	TXD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	-	-
7	RTS	-	-
8	CTS	-	-

Ordering Information

Available Models

NPort Z2150: 1-port RS-232/422/485 serial-to-ZigBee converter with 802.15.4, 0 to 55°C operating temperature

NPort Z3150: 1-port ZigBee-to-Ethernet gateway, 0 to 55°C operating temperature

NPort Z2150-T: 1-port RS-232/422/485 serial-to-ZigBee converter with 802.15.4, -40 to 75°C operating temperature

NPort Z3150-T: 1-port ZigBee-to-Ethernet gateway, -40 to 75°C operating temperature

Optional Accessories (can be purchased separately)

Serial Cables and Adaptors: See page A-6 for details

DK-35A: 35 mm DIN-Rail Mounting Kit

PWR-12150-USJP-SA-T: 100 to 240 VAC input, 12 VDC/1.5A output, -40 to 75°C, screw type, US/JP Plug

PWR-12150-EU-SA-T: 100 to 240 VAC input, 12 VDC/1.5A output, -40 to 75°C, screw type, EU Plug

PWR-12150-UK-SA-T: 100 to 240 VAC input, 12 VDC/1.5A output, -40 to 75°C, screw type, UK Plug

PWR-12150-CN-SA-T: 100 to 240 VAC input, 12 VDC/1.5A output, -40 to 75°C, screw type, CN Plug

PWR-12150-AU-SA-T: 100 to 240 VAC input, 12 VDC/1.5A output, -40 to 75°C, screw type, AU Plug

Package Checklist

- NPort Z2150 or NPort Z3150
- 2.4 GHz antenna
- Documentation and software CD
- Warranty card
- Quick installation guide (printed)