NPort W2150A/W2250A Series

1 and 2-port serial-to-Wi-Fi (802.11a/b/g/n) device servers with wireless client

Features and Benefits

- Links serial and Ethernet devices to an IEEE 802.11a/b/g/n network
- Web-based configuration using built-in Ethernet or WLAN
- Enhanced surge protection for serial, LAN, and power
- Remote configuration with HTTPS, SSH
- Secure data access with WEP, WPA, WPA2
- Fast roaming for quick automatic switching between access points
- Offline port buffering and serial data log
- Dual power inputs (1 screw-type power jack, 1 terminal block)

Certifications

Introduction

The NPort® W2150A and W2250A are the ideal choice for connecting your serial and Ethernet devices, such as PLCs, meters, and sensors, to a wireless LAN. Your communications software will be able to access the serial devices from anywhere over a wireless LAN. Moreover, the wireless device servers require fewer cables and are ideal for applications that involve difficult wiring situations. In Infrastructure Mode or Ad-Hoc Mode, the NPort® W2150A and NPort® W2250A can connect to Wi-Fi networks at offices and factories to allow users to move, or roam, between several APs (access points), and offer an excellent solution for devices that are frequently moved from place to place.

Specifications

Ethernet Interface	
10/100BaseT(X) Ports (RJ45 connector)	1
Magnetic Isolation Protection	1.5 kV (built-in)
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X)

Ethernet Software Features	
Configuration Options	Web Console (HTTP/HTTPS), Windows Utility
Management	DHCP Option 82, HTTP, IPv4, SMTP, SNMPv1/v2c/v3, Syslog, Telnet, Web Console
Windows Real COM Drivers	Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded
Linux Real TTY Drivers	Kernel version: 2.4.x, 2.6.x, 3.x, 4.x
Fixed TTY Drivers	SCO UNIX, SCO OpenServer, UnixWare 7, QNX 4.25, QNX 6, Solaris 10, FreeBSD, AIX 5.x, HP-UX 11i, Mac OS X
Android API	Android 3.1.x and later
MIB	Device Settings MIB, RFC1213, RFC1317

Security	HTTPS/SSL, Local Account Accessibility, TACACS+, SSH
Time Management	NTP Client, SNTP Client

WLAN Interface

WLAN Standards	802.11a/b/g/n
Receiver Sensitivity for 802.11a	-91 dBm @ 6 Mbps -74 dBm @ 54 Mbps
Receiver Sensitivity for 802.11b	-92 dBm @ 1 Mbps -84 dBm @ 11 Mbps
Receiver Sensitivity for 802.11g	-91 dBm @ 6 Mbps -73 dBm @ 54 Mbps
Receiver Sensitivity for 802.11n (2.4 GHz)	-89 dBm @ 6.5 Mbps (20 MHz) -71 dBm @ 72.2 Mbps (20 MHz)
Receiver Sensitivity for 802.11n (5 GHz)	-89 dBm @ 6.5 Mbps (20 MHz) -71 dBm @ 72.2 Mbps (20 MHz) -85 dBm @ 13.5 Mbps (40 MHz) -67 dBm @ 150 Mbps (40 MHz)
Modulation Type	DSSS OFDM
Transmission Distance	Up to 100 meters (in open areas)
Transmission Rate	802.11a/g: 54 Mbps 802.11b: 11 Mbps 802.11n: 6.5 to 150 Mbps
Transmitter Power for 802.11b	16±1.5 dBm @ 1 Mbps 16±1.5 dBm @ 11 Mbps
Transmitter Power for 802.11g	16±1.5 dBm @ 6 Mbps 14±1.5 dBm @ 54 Mbps
Transmitter Power for 802.11a	15±1.5 dBm @ 6 Mbps 14±1.5 dBm @ 54 Mbps
Transmitter Power for 802.11n (2.4 GHz)	16 dBm @ 1.5 Mbps (6.5 MHz) 12 dBm @ 1.5 Mbps (72.2 MHz)
Transmitter Power for 802.11n (5 GHz)	15 dBm @ 1.5 Mbps (6.5 MHz) 12 dBm @ 1.5 Mbps (150 MHz)
Wireless Security	WEP encryption (64-bit and 128-bit) WPA/WPA2-Enterprise (IEEE 802.1X/RADIUS, TKIP, AES) WPA/WPA2-Personal
WLAN Modes	Ad-hoc Mode, Infrastructure mode

Serial Interface

Connector	DB9 male
No. of Ports	NPort W2150A/W2150A-T: 1 NPort W2250A/W2250A-T: 2
Serial Standards	RS-232, RS-422, RS-485
Operation Modes	Real COM mode, TCP Server mode, TCP Client mode, UDP mode, RFC2217 mode, Pair Connection mode, Ethernet Modem mode, Disabled
Baudrate	50 bps to 921.6 kbps
Data Bits	5, 6, 7, 8

Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark
Flow Control	None, RTS/CTS, XON/XOFF
RS-485 Data Direction Control	ADDC® (automatic data direction control)
Pull High/Low Resistor for RS-485	1 kilo-ohm, 150 kilo-ohms
Terminator for RS-485	120 ohms
Surge	1 kV

Physical Characteristics

Housing	Metal
Installation	Desktop, DIN-rail mounting (with optional kit), Wall mounting
Dimensions (with ears, without antenna)	77 x 111 x 26 mm (3.03 x 4.37 x 1.02 in)
Dimensions (without ears or antenna)	100 x 111 x 26 mm (3.94 x 4.37 x 1.02 in)
Weight	NPort W2150A/W2150A-T: 547 g (1.21 lb) NPort W2250A/W2250A-T: 557 g (1.23 lb)
Antenna Length	109.79 mm (4.32 in)

Environmental Limits

Operating Temperature	Standard Models: 0 to 55°C (32 to 131°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 75°C (-40 to 167°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Power Parameters

Input Current	NPort W2150A/W2150A-T: 179 mA @ 12 VDC NPort W2250A/W2250A-T: 200 mA @ 12 VDC
Input Voltage	12 to 48 VDC

Standards and Certifications

EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-8 PFMF IEC 61000-4-11 DIPs
Radio Frequency	CE (ETSI EN 301 893, ETSI EN 300 328, ETSI EN 301 489-17, ETSI EN 301 489-1), ARIB RCR STD-33, ARIB STD-66

Reliability

Alert Tools	RTC (real-time clock)
Automatic Reboot Trigger	Built-in WDT

MTBF

Time	NPort W2150A/W2150A-T: 383,187 hrs NPort W2250A/W2250A-T: 363,327 hrs
Standards	Telcordia (Bellcore) Standard TR/SR

Warranty

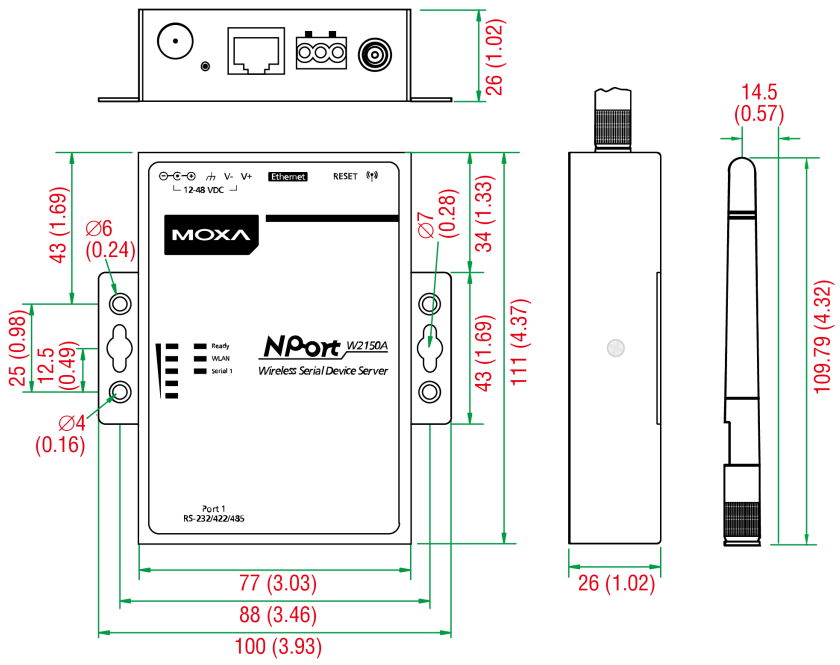
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x NPort W2150A/W2250A Series device server
Power Supply	1 x power adapter, suitable for your region (standard temp. models only)
Antenna	1 x 2.4/5 GHz antenna
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	No. of serial ports	Serial Standards	Baudrate	Operating Temp.	Input Current	Input Voltage
NPort W2150A	1	RS-232/422/485	50 bps to 921.6 kbps	0 to 55°C	179 mA @ 12 VDC	12-48 VDC
NPort W2250A	2	RS-232/422/485	50 bps to 921.6 kbps	0 to 55°C	200 mA @ 12 VDC	12-48 VDC
NPort W2150A-T	1	RS-232/422/485	50 bps to 921.6 kbps	-40 to 75°C	179 mA @ 12 VDC	12-48 VDC
NPort W2250A-T	2	RS-232/422/485	50 bps to 921.6 kbps	-40 to 75°C	200 mA @ 12 VDC	12-48 VDC

Accessories (sold separately)

Cables

CBL-F9M9-150	DB9 female to DB9 male serial cable, 1.5 m
CBL-F9M9-20	DB9 female to DB9 male serial cable, 20 cm

Connectors

ADP-RJ458P-DB9F	DB9 female to RJ45 connector
Mini DB9F-to-TB	DB9 female to terminal block connector

DIN-Rail Mounting Kits

DK35A	DIN-rail mounting kit, 35 mm

Power Cords

CBL-PJ21NOPEN-BK-30	Locking barrel plug to bare-wire cable

Power Adapters

PWR-12050-WPAU-S1	Locking barrel plug, 12 VDC, 0.5 A, 100-240 VAC, Australia (AU) plug, 0 to 40°C operating temperature
PWR-12050-WPCN-S1	Locking barrel plug, 12 VDC, 0.5 A, 100-240 VAC, China (CN) plug, 0 to 40°C operating temperature
PWR-12050-WPEU-S1	Locking barrel plug, 12 VDC, 0.5 A, 100-240 VAC, Continental Europe (EU) plug, 0 to 40°C operating temperature
PWR-12050-WPUK-S1	Locking barrel plug, 12 VDC, 0.5 A, 100-240 VAC, United Kingdom (UK) plug, 0 to 40°C operating temperature
PWR-12050-WPUSJP-S1	Locking barrel plug, 12 VDC, 0.5 A, 100-240 VAC, United States/Japan (US/JP) plug, 0 to 40°C operating temperature
PWR-12150-AU-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100-240 VAC, Australia (AU) plug, -40 to 75°C operating temperature Applicable Models: NPort W2150A-T NPort W2250A-T
PWR-12150-CN-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100-240 VAC, China (CN) plug, -40 to 75°C operating temperature Applicable Models: NPort W2150A-T NPort W2250A-T
PWR-12150-EU-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100-240 VAC, Continental Europe (EU) plug, -40 to 75°C operating temperature Applicable Models: NPort W2150A-T NPort W2250A-T
PWR-12150-UK-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100-240 VAC, United Kingdom (UK) plug, -40 to 75°C operating temperature Applicable Models: NPort W2150A-T NPort W2250A-T
PWR-12150-USJP-SA-T	Locking barrel plug, 12 VDC 1.5 A, 100-240 VAC, United States/Japan (US/JP) plug, -40 to 75°C operating temperature Applicable Models: NPort W2150A-T NPort W2250A-T

Antennas

ANT-WDB-ARM-02	2.4/5 GHz, omni-directional rubber duck antenna, 2 dBi, RP-SMA (male)