

# NPort® 6150 Series

## 1-port RS-232/422/485 secure terminal servers



- > Secure operation modes for Real COM, TCP Server, TCP Client, Pair Connection, Terminal, and Reverse Terminal
- > Non-standard baudrates supported with high precision
- > Automatic RS-485 data direction control with Moxa's patented ADDC®
- > Enhanced remote configuration with HTTPS and SSH
- > Port buffers for storing serial data when the Ethernet is off-line
- > Supports IPv6
- > Generic serial commands supported in Command-by-Command mode



### Overview

The NPort® 6150 1-port device servers use the SSL and SSH protocols to transmit encrypted serial data over Ethernet. The NPort®

6150's 3-in-1 serial port supports RS-232, RS-422, and RS-485, with the interface selected from an easy-to-access configuration menu.

### Secure Data Transmission

For many applications, guaranteeing secure data transmission is an important concern when connecting serial devices to a network. To answer this concern, the NPort® 6150 supports the SSL and SSH

protocols, which work by encrypting data before sending it over the network. With the NPort® 6150, users can rest assured that serial data is transmitted securely over both private and public networks.

### Specifications

#### Ethernet Interface

**Number of Ports:** 1  
**Speed:** 10/100 Mbps, auto MDI/MDIX  
**Connector:** 8-pin RJ45  
**Magnetic Isolation:** 1.5 kV built-in

#### Serial Interface

**Number of Ports:** 1  
**Serial Standards:** RS-232/422/485  
**Connector:** DB9 male  
**RS-485 Data Direction Control:** ADDC® (Automatic Data Direction Control)

**Serial Line Protection:** 15 kV ESD protection for all signals  
**Console Port:** Serial port doubles as RS-232 console port

#### Serial Communication Parameters

**Data Bits:** 5, 6, 7, 8  
**Stop Bits:** 1, 1.5, 2  
**Parity:** None, Even, Odd, Space, Mark  
**Flow Control:** RTS/CTS, DTR/DSR, XON/XOFF  
**Baudrate:** 50 bps to 921.6 kbps (supports non-standard baudrates)  
**Pull High/Low Resistor for RS-485:** 1 kΩ, 150 kΩ

#### Serial Signals

**RS-232:** TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND  
**RS-422:** Tx+, Tx-, Rx+, Rx-, GND  
**RS-485-4w:** Tx+, Tx-, Rx+, Rx-, GND  
**RS-485-2w:** Data+, Data-, GND

#### Software

**Network Protocols:** ICMP, IPv4/v6, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP V1/V2c/V3, HTTP, SMTP, ARP, PPPoE

**Security Protocols:** DES, 3DES, AES, SSH, SSL

**Configuration Options:** Web Console, Serial Console, Telnet Console, Windows Search Utility

**Windows Real COM Drivers:** Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded

**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

**Linux Real TTY Drivers:** Linux 2.4.x, 2.6.x, 3.x

**Management:** SNMP MIB-II

**IP Routing:** Static, RIP-I, RIP-II

#### Operation Modes

**Standard:** Real COM, TCP Server, TCP Client, UDP, Pair Connection, RFC2217, Terminal, Reverse Telnet, Ethernet Modem, Printer, PPP, Disabled

**Secure:** Secure Real COM, Secure TCP Server, Secure TCP Client, Secure Pair Connection, SSH, Reverse SSH

#### Applications

**Terminal Sessions:** 8 sessions per port

#### Physical Characteristics

**Housing:** Metal

**Weight:** 700 g

**Dimensions:**

Without ears: 67 x 100.4 x 29 mm (2.64 x 3.95 x 1.1 in)

With ears: 90 x 100.4 x 29 mm (3.54 x 3.95 x 1.1 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:** -40 to 75°C (-40 to 167°F)  
**Ambient Relative Humidity:** 5 to 95% (non-condensing)  
**Altitude:** Up to 2000 m  
*Note: Please contact Moxa if you require products guaranteed to function properly at higher altitudes.*

**Power Requirements**

**Input Voltage:** 12 to 48 VDC  
**Power Consumption:** 285 mA @ 12 V, 150 mA @ 24 V  
**Alarm Contact:** Relay output with current carrying capacity of 1 A @ 24 VDC  
**Power Line Protection:** 1 kV burst (EN 61000-4-4: EFT/B), 0.5 kV surge (EN 61000-4-5)

**Standards and Certifications**

**Safety:** UL 60950-1, EN 60950-1  
**EMI:** EN 55022 Class A, FCC Part 15 Subpart B Class A  
**EMS:**  
 EN 55024,  
 EN 61000-4-2 (ESD) Level 2/3,

EN 61000-4-3 (RS) Level 2,  
 EN 61000-4-4 (EFT) Level 2,  
 EN 61000-4-5 (Surge) Level 2,  
 EN 61000-4-6 (CS) Level 2,  
 EN 61000-4-8 Level 1,  
 EN 61000-4-11

**Freefall:** IEC-68-2-6, IEC-68-2-34, IEC-68-2-32

**Vibration:** IEC-68-2-6, IEC-68-2-34

**Green Product:** RoHS, CRoHS, WEEE

**Reliability**

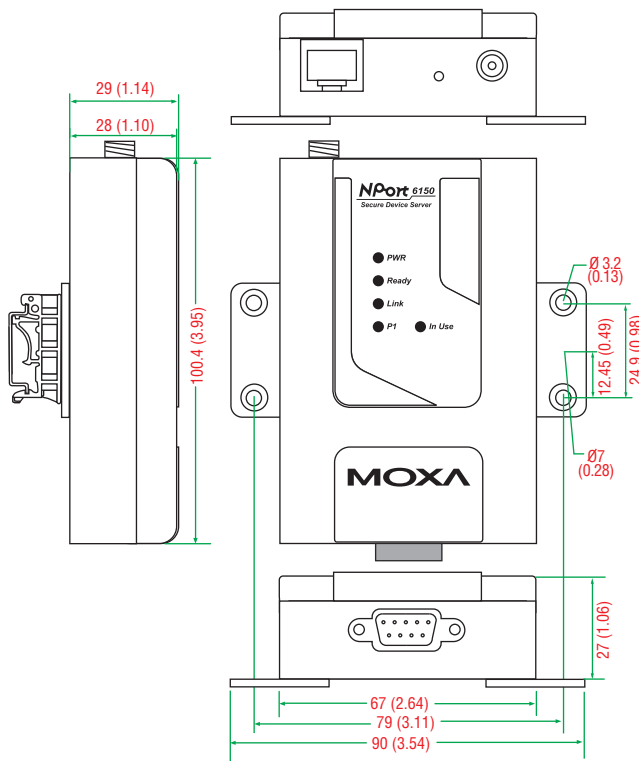
**Alert Tools:** Built-in buzzer and RTC (real-time clock)  
**Automatic Reboot Trigger:** Built-in WDT (watchdog timer)  
**MTBF (mean time between failures):** 2,097,705 hrs

**Warranty**

**Warranty Period:** 5 years  
**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

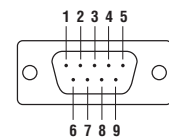
**Dimensions and Pin Assignment**

Unit: mm (inch)



DB9 male connector

**Pin Assignment**



PIN	RS-232	RS-422/485-4w	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 6150:** 1-port RS-232/422/485 secure device server  
**NPort 6150-T:** 1-port RS-232/422/485 secure device server, -40 to 75°C operating temperature

**Optional Accessories** (can be purchased separately)

- DK-35A:** Mounting kit for 35-mm DIN-Rail
- PWR-12150-USJP-SA-T:** 100 to 240 VAC input, 12 VDC / 1.5 A output, screw-type, US/JP plug, -40 to 75°C operating temperature
- PWR-12150-EU-SA-T:** 100 to 240 VAC input, 12 VDC / 1.5 A output, screw-type, EU plug, -40 to 75°C operating temperature
- PWR-12150-UK-SA-T:** 100 to 240 VAC input, 12 VDC / 1.5 A output, screw-type, UK plug, -40 to 75°C operating temperature
- PWR-12150-CN-SA-T:** 100 to 240 VAC input, 12 VDC / 1.5 A output, screw-type, CN plug, -40 to 75°C operating temperature
- PWR-12150-AU-SA-T:** 100 to 240 VAC input, 12 VDC / 1.5 A output, screw-type, AU plug, -40 to 75°C operating temperature
- Mini DB9F-to-TB adapter:** DB9 female to terminal block adapter for RS-422/485 applications

**Package Checklist**

- 1 NPort 6150 device server
- 100 to 240 VAC power adapter (excluding T models)
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card