NPort 6100-G2/6200-G2 Series

2nd Gen 1/2-port RS-232/422/485 secure terminal servers

Features and Benefits

- Data encryption with secure operation modes for Real COM, TCP Server, TCP Client, Pair Connection, Terminal, and Reverse Terminal

- Supports SSL certificate signing by RSA-4096 / ECC-521

- Secure Boot only allows Moxa-authorized firmware to run on devices

- Side-mount installation option and two-sided LEDs to meet all installation scenarios and enable system downsizing

- Easy RS-485 configuration of serial interfaces with software-adjustable pull high/low resistor and terminator

Certifications

CE   FC   c(UL)us LISTED   NEMA TS2

Introduction

Moxa has leveraged IEC 62443-4-1 secure development lifecycle process to develop a new generation of secure terminal servers. The NPort 6100-G2/6200-G2 Series secure terminal servers follow the IEC 62443-4-2 design and guidelines to securely connect your legacy serial devices to industrial networks. In addition, the user experience is enhanced based on Moxa's 35 years of experience in the serial-connectivity field by providing versatile installation means for different space requirements and an easy troubleshooting tool for maintenance.

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® 6100-G2/6200-G2 secure terminal servers support the TLS and SSH protocols, which work by encrypting data before sending it over the network. With the NPort® 6100-G2/6200-G2, you can be rest assured that serial data is transmitted securely over both private and public networks.

Easy Provisioning With Side-mount and Software-configurable Pull High/low Resistors and Terminator

In line with the trend for smaller systems and easier setup, the NPort® 6100-G2/6200-G2 secure terminal servers support side-mount installation and two-sided LEDs to fit in a variety of installation scenarios with the added benefit of reduction in the system size. The software-configurable pull high/low resistors and terminator function eliminate the requirement to open the chassis to adjust the pull high/low resistors or terminators, making it convenient for operators to install the devices at field sites.

Easy Troubleshooting With One-click Log Collection

At the maintenance stage, system errors may require you to call for help. Device vendors might take a long time to troubleshoot issues because they need to collect information and then hold discussions with the technical support team. The NPort 6100-G2/6200-G2 comes with a one-click log collection function to enable logging of data, which can provide all the data that a technical support team needs to quickly troubleshoot system issues.

Specifications

Memory

SD Slot	NPort 6200-G2 models: microSD card Up to 2 TB (high speed, 25 Mbps)

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	1 Auto MDI/MDI-X connection
Magnetic Isolation Protection	1.5 kV (built-in)

Ethernet Software Features

Configuration Options	Web Console (HTTP/HTTPS) Windows Utility Device Search Utility (DSU) MCC Tool Serial Console
Management	ARP DHCP Client DNS HTTPS ICMP IPv4/IPv6 SMTP SMTPS SNMPv1/v2c/v3 SNTP TCP/IP UDP WINS
Windows Real COM Drivers	Windows 11, 10, 8.1, 8, and 7 Windows Server 2022, 2019, 2016, 2012 R2, 2012, and 2008 R2
Linux Real TTY Drivers	Kernel versions 6.x, 5.x, and 4.x
Fixed TTY Drivers	macOS versions: 14, 13, 12, and 11
Arm®-based Platform Support	Windows 11 Linux kernel 6.x, 5.x, and 4.x macOS 14, 13, 12, and 11
Virtual Machine	VMWare ESXi (Windows 11/10/8.1/8/7 & Linux 6.x, 5.x, and 4.x) VMware Fusion (Windows on macOS 14, 13, 12, and 11) Parallels Desktop (Windows on macOS 14, 13, 12, and 11)
Time Management	SNTP Client
MIB	MIB-II RFC1213, RFC1317 Private MIB
Unicast Routing	RIPV1/V2 Static Route

Security Functions

Root of Trust	Secure Boot True Random Number Generator (TRNG) Security Screws
Authentication	Local database RADIUS TACACS+
Encryption	AES-128 AES-256 ECC-256 ECC-384 ECC-521 HMAC RSA-1024 RSA-2048 RSA-3072 RSA-4096 SHA-256 SHA-384
Security Protocols	HTTPS (TLS 1.2) SNMPv3 SSHv2

MOXA®
Reliable Networks ▲ Sincere Service

Serial Interface

Connector	DB9 male
No. of Ports	NPort 6150-G2 models: 1 NPort 6250-G2 models: 2
Serial Standards	RS-232 RS-422 RS-485
Secure Operation Modes	Reverse SSH Secure Pair Connection Secure Real COM Secure TCP Client Secure TCP Server SSH
Standard Operation Modes	Disabled Pair Connection SLIP PPP Real COM Reverse Terminal RFC2217 TCP Client TCP Server Terminal UDP
Baudrate	50 bps to 921.6 kbps (supports non-standard baudrates)
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Flow Control	None RTS/CTS DTR/DSR RTS Toggle XON/XOFF
Parity	None, Even, Odd, Space, Mark
RS-485 Data Direction Control	Automatic Data Direction Control (ADDC)
Terminator for RS-485	120 ohms
Pull High/Low Resistor for RS-485	1 kilo-ohm, 150 kilo-ohms (software–configurable)

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

Power Parameters

Input Current	12 to 48 VDC, 160 mA (max.)
Input Voltage	12 to 48 VDC

MOXA®
Reliable Networks ▲ Sincere Service

Reliability

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

Physical Characteristics

Housing	Metal
Dimensions (with ears)	NPort 6150-G2 models: 64 x 111.8 x 25 mm (2.52 x 4.4 x 0.98 in) NPort 6250-G2 models: 76.3 x 122.4 x 25 mm (3 x 4.82 x 0.98 in)
Weight	Product with package: NPort 6150-G2: 228 g (0.50 lb); 437 g (0.96 lb) NPort 6150-G2-T: 228 g (0.50 lb); 302 g (0.67 lb) NPort 6250-G2: 278 g (0.61 lb); 487 g (1.07 lb) NPort 6250-G2-T: 278 g (0.61 lb); 352 g (0.78 lb)
Installation	Desktop DIN-rail mounting (with optional kit) Wall mounting (with optional kit) Side-panel mounting (with optional kit)

Environmental Limits

Operating Temperature	Standard models: -10 to 60°C (14 to 140°F) Standard models with power adapter (in the box): 0 to 40°C (32 to 104°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)

Standards and Certifications

EMC	EN 55032/35
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: 1 kV(AC), 0.5 kV(DC); Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 1 kV(AC), 0.5 kV(DC); Signal: 0.5 kV IEC 61000-4-6 CS: 3 V IEC 61000-4-8 PFMF IEC 61000-4-11
Traffic Control	NEMA TS2
Vibration	IEC 60068-2-6
Package Drop Test	ISTA 1A
Safety	IEC 62368-1 UL 62368-1 EN 62368-1
International Approval	KC

Declaration

Green Product	RoHS, CRoHS, WEEE

MTBF

Time	NPort 6150-G2/6150-G2-T: 3,843,653 hrs NPort 6250-G2/6250-G2-T: 3,351,651 hrs
Standards	Telcordia Standard SR-332 Telcordia SR-332 Issue 4

Warranty

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

Package Contents

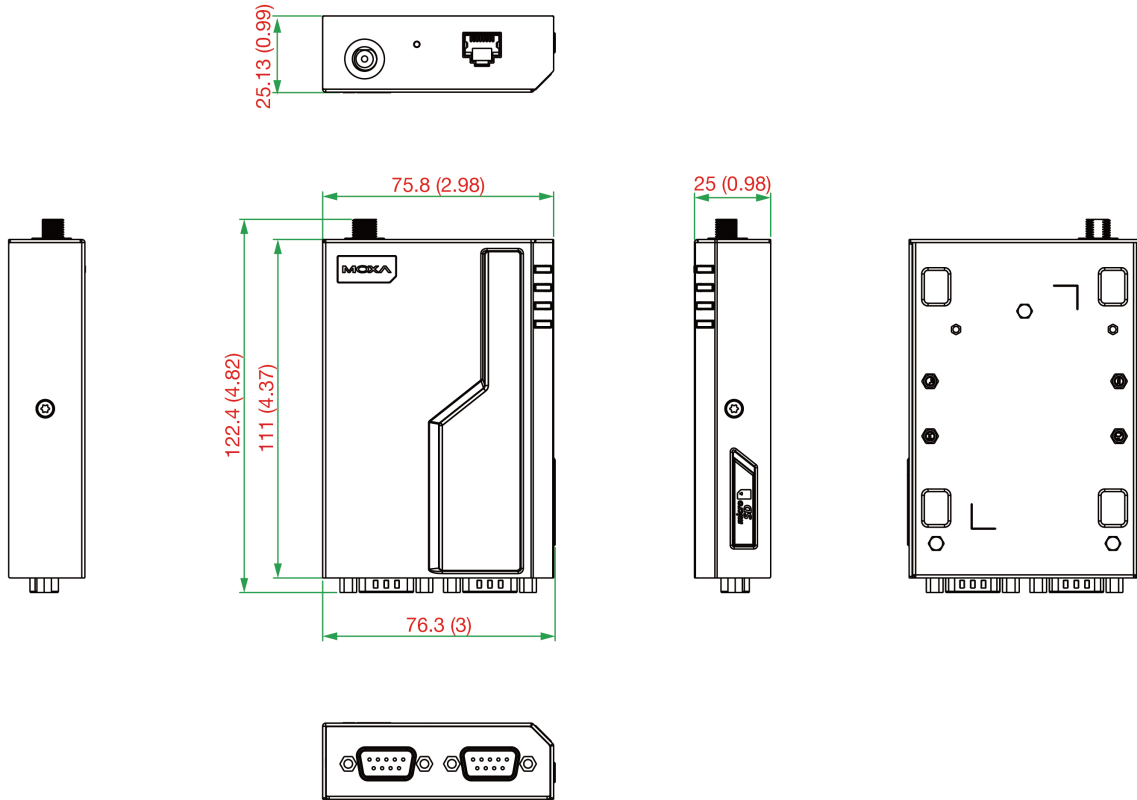|	
Device	1 x NPort 6100-G2/6200-G2 Series terminal server
Power Supply	1 x power adapter, suitable for your region (except for -T models)
Installation Kit	1 x wall-mounting kit (WK-32-01)
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

NPort 6150–G2 Models

Unit: mm (inch)

MOXA
Reliable Networks ▲ Sincere Service
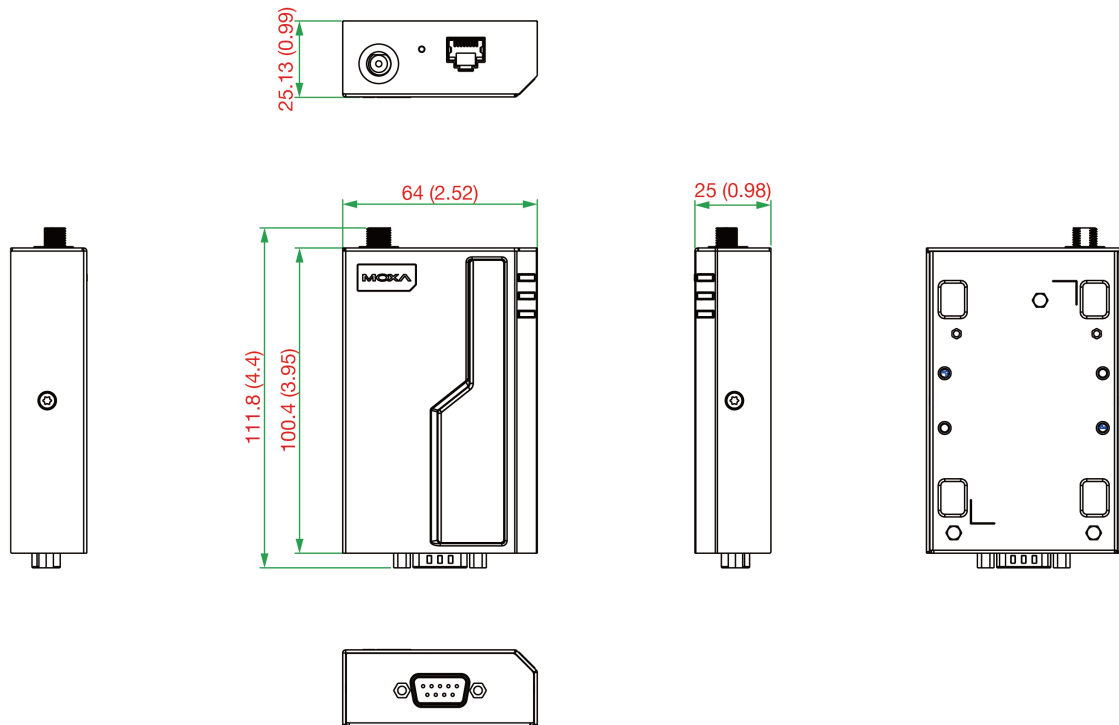
NPort 6250–G2 Models

Unit: mm (inch)

Ordering Information

Model Name	Ethernet Interface	No. of Serial Ports	SD Card Support	Operating Temp.	Power Supply Included
NPort 6150-G2	RJ45	1	–	-10 to 60°C	✓
NPort 6150-G2-T	RJ45	1	–	-40 to 75°C	–
NPort 6250-G2	RJ45	2	Up to 2 TB (high speed, 25 Mbps)	-10 to 60°C	✓
NPort 6250-G2–T	RJ45	2	Up to 2 TB (high speed, 25 Mbps)	-40 to 75°C	–

Accessories (sold separately)

Cables

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

Connectors

ADP-RJ458P-DB9F	DB9 female to RJ45 connector
Mini DB9F-to-TB	DB9 female to terminal block connector
LB-DB9F-G-01	Serial loopback DB9 adaptor

DIN-Rail Mounting Kits

DK-115-01	DIN-rail mounting kit with 2 plates (89 x 19 mm), 3 M3 x 5 mm screws and SK-115-01 side-mounting kit
DK-43-01	DIN-rail mounting kit with 2 plates (42.5 x 19.3 mm), 4 M3 x 6 mm screws (black)

Wall-Mounting Kits

WK-32-01	Wall-mounting kit with 2 plates (32 x 29.5 mm), 4 M3 x 6 mm screws

Side-mounting Kits

SK-115-01	Side-mounting kit with T-shaped mounting bracket (81.2 x 115.0 mm), 4 M3 x 6 mm screws

Power Cords

CBL-PJ21NOPEN-BK-30 w/Nut	CBL-PJ21NOPEN-BK-30 w/Nut

Power Adapters

PWR-12050-AU-S1	Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, AU plug, 0 to 40°C operating temperature
PWR-12050-CN-S1	Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, CN plug, 0 to 40°C operating temperature
PWR-12050-EU-S1	Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, EU plug, 0 to 40°C operating temperature
PWR-12050-KR-S1	Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, KR plug, 0 to 40°C operating temperature
PWR-12050-UK-S1	Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, UK plug, 0 to 40°C operating temperature
PWR-12050-USJP-S1	Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, US/JP plug, 0 to 40°C operating temperature
PWR-12150-AU-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, AU plug, -40 to 75°C operating temperature
PWR-12150-CN-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, CN plug, -40 to 75°C operating temperature
PWR-12150-EU-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, EU plug, -40 to 75°C operating temperature
PWR-12150-UK-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, UK plug, -40 to 75°C operating temperature
PWR-12150-USJP-SA-T	Locking barrel plug, 12 VDC 1.5 A, 100 to 240 VAC, US/JP plug, -40 to 75°C operating temperature

www.moxa.com