NPort 6600-G2 系列

第 2 代 8/16/32 埠 RS-232/422/485 安全終端伺服器

特色與優點

- 支援多種安全作業模式的資料加密，包括 Real COM、TCP Server、TCP Client、Pair Connection、Terminal 與 Reverse Terminal
- Secure Boot 僅允許在裝置上執行經 Moxa 授權的韌體
- 一鍵式日誌收集與應用程式分析，可輕鬆進行故障排除
- 軟體可調式上拉/下拉電阻與終端電阻，可簡化串列介面的 RS-485 設定
- 支援 RSA-4096 / ECC-521 簽署的 SSL 憑證
- 通過 IEC 62443-4-2 Security Level 2 認證

認證

簡介

Moxa 採用 IEC 62443-4-1 安全開發生命週期流程，開發出新一代的 NPort G2 安全終端伺服器。此外，NPort 6600-G2 通過 IEC 62443-4-2 Security Level 2 認證，為既有串列設備提供連接至工業網路的安全通訊能力。此外，憑藉 Moxa 在串列連接領域 35 年的經驗，透過多樣化安裝方式滿足不同空間需求，並提供易於使用的故障排除工具，有效提升整體使用體驗。

安全資料傳輸

對於許多應用程式，將串列裝置連接至網路，考量的重點就是保護資料傳輸的安全性。為此，NPort® 6600-G2 支援 TLS 與 SSH 通訊協定，可在資料傳輸前進行加密，確保資料在網路傳輸過程中的安全性。使用 NPort® 6600-G2，使用者就可放心在私有或公用網路上安全地傳送串列資料。

一鍵式日誌與應用程式分析，可輕鬆進行故障排除

在部署階段，系統整合商必須連接裝置並確保通訊順暢。他們可能會遇到問題，並需要工具來進行故障排除。Moxa 提供應用程式分析儀，可一鍵產生分析報告，協助系統整合商輕鬆識別潛在問題並瞭解如何解決這些問題。

在維運階段，系統異常往往需仰賴設備廠商支援，而傳統流程常因資訊收集與溝通耗時而延誤處理。NPort 6600-G2 內建一鍵式日誌收集功能，可快速提供完整診斷資料，協助技術支援團隊即時定位並排除問題。

規格

Memory

SD Slot	microSD card Up to 2 TB (high speed, 25 Mbps)

Ethernet Interface

10/100/1000BaseT(X) Ports (RJ45 connector)	2 ports (up to 4) 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+
Security Protocols	HTTPS (TLS 1.2/1.3) SNMPv3 SSHv2
Encryption	HTTPS: ECC-256, ECC-384, ECC-521, RSA-1024, RSA-2048, RSA-3072, RSA-4096, AES-128, AES-256, CHACHA20, SHA-256, SHA-384, HMAC SSH: ECC-256, ECC-384, ECC-521, RSA-2048, AES-128, AES-256, SHA-256, SHA-384, HMAC SNMPv3: AES-128, SHA-256, SHA-384 Secure OP mode: HTTPS: ECC-256, ECC-384, ECC-521, RSA-1024, RSA-2048, RSA-3072, RSA-4096, AES-128, AES-256, CHACHA20, SHA-256, SHA-384, HMAC Config import/export: AES-256, SHA-256, HMAC

Serial Interface

No. of Ports	NPort 6610/6650-8-G2 models: 8 NPort 6610/6650-16-G2 models: 16 NPort 6610/6650-32-G2 models: 32
Connector	8-pin RJ45
Serial Standards	NPort 6610-G2 models: RS-232 NPort 6650-G2 models: RS-232, RS-422, RS-485
Secure Operation Modes	Reverse SSH, Secure Pair Connection, Secure Real COM, Secure TCP Client, Secure TCP Server, SSH, Secure Redundant COM, Secure Reverse Real COM
Standard Operation Modes	Disabled, Pair Connection, SLIP, PPP, Real COM, Reverse Terminal, RFC2217, TCP Client, TCP Server, Terminal, UDP, Redundant COM, Reverse Real COM
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 (software–configurable)
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-485-2w	Data+, Data-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND

Power Parameters

Input Current	NPort 6610-G2/6650-G2 models: 320 mA (max.) NPort 6650I-G2 models: 330 mA (max.) NPort 6650-48V-G2 models: 340 mA (max.)
Input Voltage	AC models: 100 to 240 VAC, 50 to 60 Hz DC models: ±48 VDC (20 to 72 VDC, -20 to -72 VDC)

Reliability

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

Physical Characteristics

Housing	Metal
Dimensions (with ears)	440 x 200 x 43.65 mm (17.32 x 7.87 x 1.72 in)
Weight	NPort 6610/6650-32-2AC-G2: 2.80 kg (6.17 lb) NPort 6650I-16-2AC-G2: 2.80 kg (6.17 lb) NPort 6610/6650-32-48V-G2: 2.62 kg (5.78 lb)
Installation	Desktop, Rack mounting (RK-43-01, included in the box)

Environmental Limits

Operating Temperature	Standard models: -10 to 60°C (14 to 140°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: 2 kV (AC), 0.5 kV (DC) IEC 61000-4-6 CS: 3 V IEC 61000-4-8 PFMF

	IEC 61000-4-11: Excluding DC models
Traffic Control	NEMA TS2
Safety	IEC 62368-1, UL 62368-1, EN 62368-1
Vibration	IEC 60068-2-6
Package Drop Test	ISTA 1A

Declaration

Green Product	RoHS, CRoHS, WEEE

MTBF

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Time	NPort 6610-8-G2: 29,613 hrs NPort 6610-16-G2: 29,517 hrs NPort 6610-32-G2: 29,045 hrs NPort 6650-8-G2: 29,515 hrs NPort 6650-16-G2: 29,321 hrs NPort 6650-32-G2: 29,045 hrs NPort 6650-8-G2-T: 1,860,004 hrs NPort 6650-16-G2-T: 1,314,137 hrs NPort 6650-32-G2-T: 921,748 hrs NPort 6610-8-2AC-G2: 29,612 hrs NPort 6610-16-2AC-G2: 29,515 hrs NPort 6610-32-2AC-G2: 29,429 hrs NPort 6650-8-2AC-G2: 29,514 hrs NPort 6650-16-2AC-G2: 29,321 hrs NPort 6650-32-2AC-G2: 29,045 hrs NPort 6650-8-2AC-G2-T: 1,857,027 hrs NPort 6650-16-2AC-G2-T: 1,312,651 hrs NPort 6650-32-2AC-G2-T: 921,017 hrs NPort 6650I-8-G2: 29,446 hrs NPort 6650I-16-G2: 29,185 hrs NPort 6650I-8-G2-T: 1,620,368 hrs NPort 6650I-16-G2-T: 1,086,881 hrs NPort 6650I-8-2AC-G2: 29,445 hrs NPort 6650I-16-2AC-G2: 29,184 hrs NPort 6650I-8-2AC-G2-T: 1,618,109 hrs NPort 6650I-16-2AC-G2-T: 1,085,864 hrs NPort 6650-8-48V-G2: 29,514 hrs NPort 6650-16-48V-G2: 29,321 hrs NPort 6650-32-48V-G2: 29,045 hrs
Standards	Telcordia Standard SR-332 Telcordia SR-332 Issue 4

Warranty

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

Package Contents

Device	1 x NPort 6600-G2 Series terminal server
Power Supply	2AC models: 2 x power cables, suitable for your region All other models (excluding DC models): 1 x power cable, suitable for your region
Installation Kit	1 x rack-mounting kit (RK-43-01)
Documentation	1 x quick installation guide

尺寸

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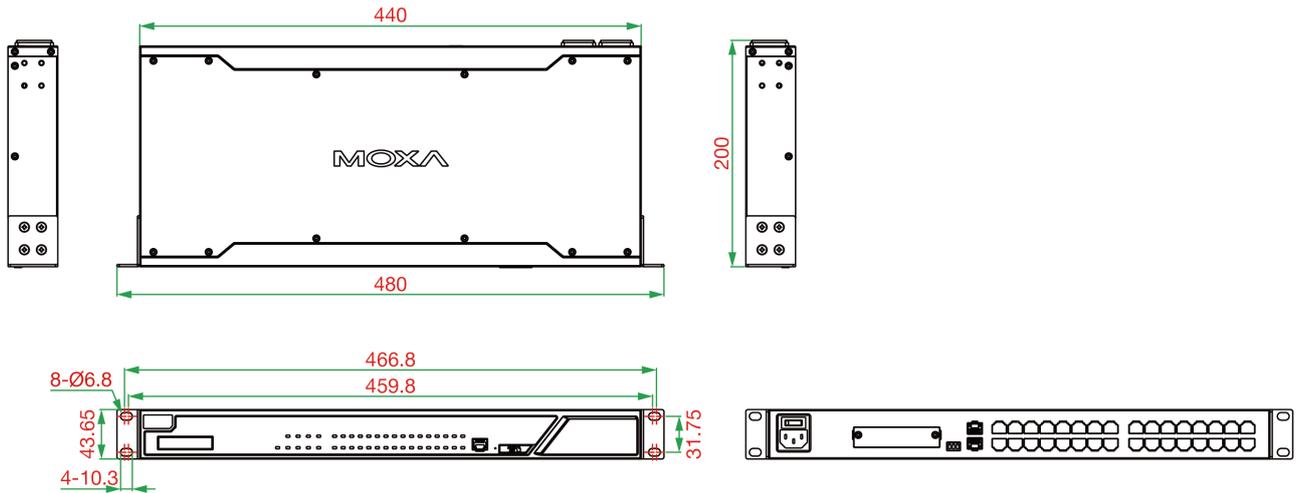
訂購資訊

Model Name	Ethernet Ports	No. of Serial Ports	Serial Standards	Isolation	No. of Power Cables Included	Operating Temp.
NPort 6610-8-G2	2 x 10/100/1000M RJ45	8	RS-232	–	1	-10 to 60°C
NPort 6610-16-G2	2 x 10/100/1000M RJ45	16	RS-232	–	1	-10 to 60°C
NPort 6610-32-G2	2 x 10/100/1000M RJ45	32	RS-232	–	1	-10 to 60°C
NPort 6610-8-2AC-G2	2 x 10/100/1000M RJ45	8	RS-232	–	2	-10 to 60°C
NPort 6610-16-2AC-G2	2 x 10/100/1000M RJ45	16	RS-232	–	2	-10 to 60°C
NPort 6610-32-2AC-G2	2 x 10/100/1000M RJ45	32	RS-232	–	2	-10 to 60°C
NPort 6650-8-G2	2 x 10/100/1000M RJ45	8	RS-232/422/485	–	1	-10 to 60°C
NPort 6650-16-G2	2 x 10/100/1000M RJ45	16	RS-232/422/485	–	1	-10 to 60°C
NPort 6650-32-G2	2 x 10/100/1000M RJ45	32	RS-232/422/485	–	1	-10 to 60°C
NPort 6650-8-2AC-G2	2 x 10/100/1000M RJ45	8	RS-232/422/485	–	2	-10 to 60°C
NPort 6650-16-2AC-G2	2 x 10/100/1000M RJ45	16	RS-232/422/485	–	2	-10 to 60°C
NPort 6650-32-2AC-G2	2 x 10/100/1000M RJ45	32	RS-232/422/485	–	2	-10 to 60°C
NPort 6650-8-G2-T	2 x 10/100/1000M RJ45	8	RS-232/422/485	–	1	-40 to 75°C
NPort 6650-16-G2-T	2 x 10/100/1000M RJ45	16	RS-232/422/485	–	1	-40 to 75°C
NPort 6650-32-G2-T	2 x 10/100/1000M RJ45	32	RS-232/422/485	–	1	-40 to 75°C
NPort 6650-8-2AC-G2-T	2 x 10/100/1000M RJ45	8	RS-232/422/485	–	2	-40 to 75°C
NPort 6650-16-2AC-G2-T	2 x 10/100/1000M RJ45	16	RS-232/422/485	–	2	-40 to 75°C
NPort 6650-32-2AC-G2-T	2 x 10/100/1000M RJ45	32	RS-232/422/485	–	2	-40 to 75°C
NPort 6650I-8-G2	2 x 10/100/1000M RJ45	8	RS-232/422/485	2 kV	1	-10 to 60°C
NPort 6650I-16-G2	2 x 10/100/1000M RJ45	16	RS-232/422/485	2 kV	1	-10 to 60°C
NPort 6650I-8-2AC-G2	2 x 10/100/1000M RJ45	8	RS-232/422/485	2 kV	2	-10 to 60°C
NPort 6650I-16-2AC-G2	2 x 10/100/1000M RJ45	16	RS-232/422/485	2 kV	2	-10 to 60°C
NPort 6650I-8-G2-T	2 x 10/100/1000M RJ45	8	RS-232/422/485	2 kV	1	-40 to 75°C
NPort 6650I-16-G2-T	2 x 10/100/1000M RJ45	16	RS-232/422/485	2 kV	1	-40 to 75°C

Model Name	Ethernet Ports	No. of Serial Ports	Serial Standards	Isolation	No. of Power Cables Included	Operating Temp.
NPort 6650I-8-2AC-G2-T	2 x 10/100/1000M RJ45	8	RS-232/422/485	2 kV	2	-40 to 75°C
NPort 6650I-16-2AC-G2-T	2 x 10/100/1000M RJ45	16	RS-232/422/485	2 kV	2	-40 to 75°C
NPort 6650-8-48V-G2	2 x 10/100/1000M RJ45	8	RS-232/422/485	–	1	-10 to 60°C
NPort 6650-16-48V-G2	2 x 10/100/1000M RJ45	16	RS-232/422/485	–	1	-10 to 60°C
NPort 6650-32-48V-G2	2 x 10/100/1000M RJ45	32	RS-232/422/485	–	1	-10 to 60°C

配件（選購）

Expansion Modules

NM-TX02-G2	2nd Gen 2 10/100BaseT(x) port connector, -10 to 60°C operating temperature
NM-TX02-G2-T	2nd Gen 2 10/100BaseT(x) port connector, -40 to 75°C operating temperature
NM-FX02-M-SC-G2	2nd Gen 2 100BaseFX port multi-mode SC connector, -10 to 60°C operating temperature
NM-FX02-M-SC-G2-T	2nd Gen 2 100BaseFX port multi-mode SC connector, -40 to 75°C operating temperature
NM-FX02-S-SC-G2	2nd Gen 2 100BaseFX port single-mode SC connector, -10 to 60°C operating temperature
NM-FX02-S-SC-G2-T	2nd Gen 2 100BaseFX port single-mode SC connector, -40 to 75°C operating temperature
NM-SFP02-G2-T	2nd Gen 2 1000BaseSFP port connector, -40 to 75°C operating temperature

SFP Modules

SFP-1GLHLC	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature
SFP-1GLHXLC	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature
SFP-1GLXLC	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
SFP-1GZXLC	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature
SFP-1GSXLC	SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, 0 to 60°C operating temperature
SFP-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature
SFP-1GLHXLC-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature

Cables

CBL-RJ458P-Cisco-BK-180	8-pin RJ45 to 8-pin RJ45 serial cable, 1.8 m, for Cisco console port
CBL-RJ45F25-150	8-pin RJ45 to DB25 female serial cable, 1.5 m
CBL-RJ45F9-150	8-pin RJ45 to DB9 female serial cable, 1.5m
CBL-RJ45M25-150	8-pin RJ45 to DB25 male serial cable, 1.5m
CBL-RJ45M9-150	8-pin RJ45 to DB9 male serial cable, 1.5m
CBL-RJ45SF25-150	8-pin RJ45 to DB25 female serial cable with shielding, 1.5m
CBL-RJ45SF9-150	8-pin RJ45 to DB9 female serial cable with shielding, 1.5m
CBL-RJ45SM25-150	8-pin RJ45 to DB25 male serial cable with shielding, 1.5m
CBL-RJ45SM9-150	8-pin RJ45 to DB9 male serial cable with shielding, 1.5m

Connectors

LB-DB9F-G-01	Serial loopback DB9 adaptor

Power Cords

PWC-C13AU-3B-183	Power cord with AU plug, 1.83 m
PWC-C13CN-3B-183	Power cord with three-prong CN plug, 1.83 m
PWC-C13EU-3B-183	Power cord with EU/KR plug, 1.83 m
PWC-C13JP-3B-183	Power cord with JP plug plug, 7A/125V, 1.83 m
PWC-C13UK-3B-183	Power cord with UK plug, 1.83 m
PWC-C13US-3B-183	Power cord with US plug, 1.83 m
PWC-C15AU-3B-183	Power cord with AU plug, 1.83 m, -40 to 75°C operating temperature
PWC-C15EU-3B-183	Power cord with EU plug, 1.83 m, -40 to 75°C operating temperature
PWC-C15JP-3B-183	Power cord with JP plug, 1.83 m, -40 to 75°C operating temperature
PWC-C15UK-3B-183	Power cord with UK plug, 1.83 m, -40 to 75°C operating temperature
PWC-C15US-3B-183	Power cord with US plug, 1.83 m, -40 to 75°C operating temperature