NPort 6400-G2 系列

第 2 代 4 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

CE   FC   c(UL)us LISTED   NEMA TS2

簡介

Moxa 採用 IEC 62443-4-1 安全開發生命週期流程，開發出新一代的安全終端伺服器。NPort 6400-G2 系列同時通過 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® 6400-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® 6400-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 6400-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

10/100BaseT(X) Ports (RJ45 connector)	1 to 3 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	4
Connector	DB9 male
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 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-485-4w	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND

Power Parameters

Input Current	373 mA (max.)
Input Voltage	12 to 48 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)	158 x 114.4 x 30 mm (6.22 x 4.5 x 1.18 in)
Weight	NPort 6450-G2: 538 g (1.186 lb) NPort 6450-2TX-G2: 546 g (1.204 lb) NPort 6450-G2-T: 522 g (1.151 lb) NPort 6450-2TX-G2-T: 530 g (1.168 lb) NPort 6450-2M/-2S-SC-G2-T: 535 g (1.179 lb)
Weight (including package)	NPort 6450-G2: 900 g (1.984 lb) NPort 6450-2TX-G2: 908 g (2.002 lb) NPort 6450-G2-T: 690 g (1.521 lb) NPort 6450-2TX-G2-T: 698 g (1.539 lb) NPort 6450-2M/-2S-SC-G2-T: 705 g (1.554 lb)
Installation	Desktop DIN-rail mounting (with optional kit) Wall mounting

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; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 1 kV IEC 61000-4-6 CS: 3 V IEC 61000-4-8 PFMF IEC 61000-4-11
Safety	IEC 62368-1 UL 62368-1 EN 62368-1
Traffic Control	NEMA TS2
Vibration	IEC 60068-2-6
Package Drop Test	ISTA 1A

Declaration

Green Product	RoHS, CRoHS, WEEE

MTBF

|	
Time	NPort 6450-G2: 29,716 hrs NPort 6450-2TX-G2: 29,713 hrs NPort 6450-2M-SC-G2-T: 2,664,201 hrs NPort 6450-2S-SC-G2-T: 2,664,201 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 6400-G2 Series terminal server
Power Supply	NPort 6450-G2/NPort 6450-2TX-G2: 1 x power adapter, suitable for your region
Installation Kit	1 x wall-mounting kit (WK-32-01)
Documentation	1 x quick installation guide

尺寸

單位：公釐
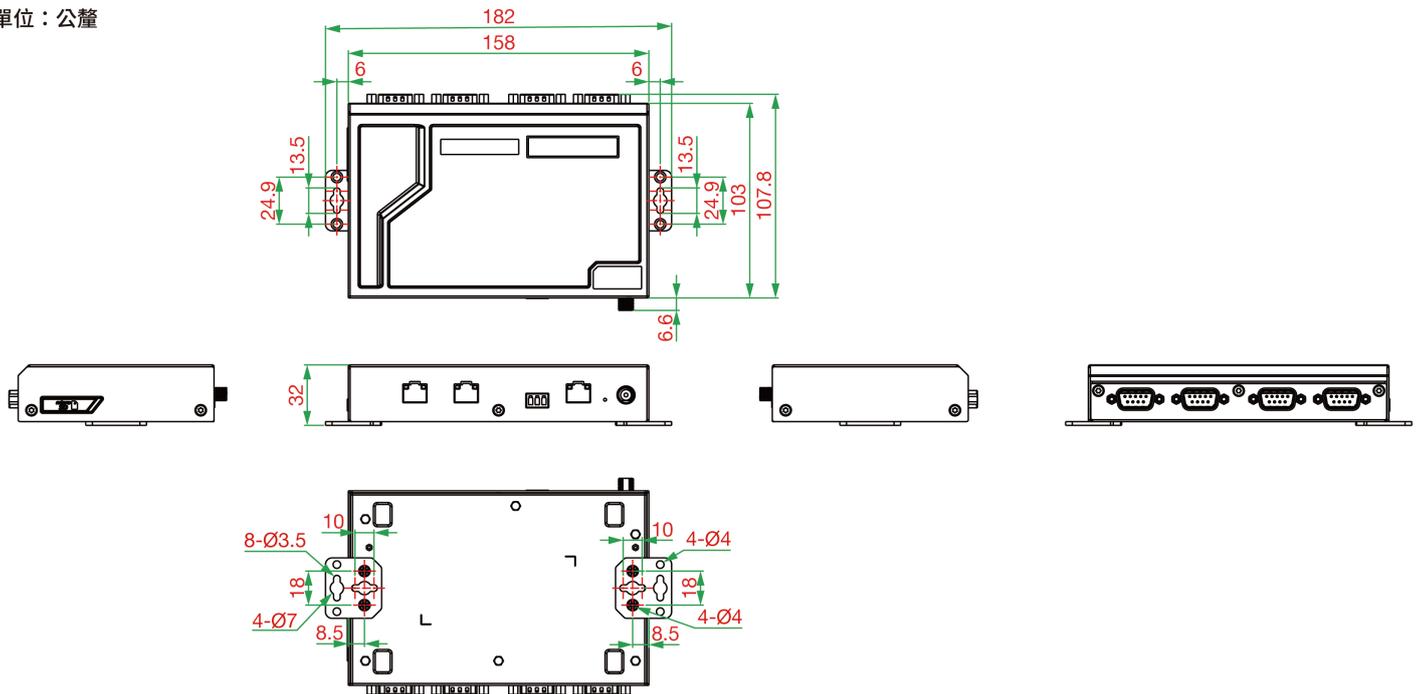
訂購資訊

Model Name	Ethernet Ports	No. of Serial Ports	Serial Standards	Power Adapter Included?	Operating Temp.
NPort 6450-G2	1 x 10/100M RJ45	4	RS-232/422/485	P	-10 to 60°C
NPort 6450-G2-T	1 x 10/100M RJ45	4	RS-232/422/485	–	-40 to 75°C
NPort 6450-2TX-G2	3 x 10/100M RJ45	4	RS-232/422/485	P	-10 to 60°C
NPort 6450-2TX-G2-T	3 x 10/100M RJ45	4	RS-232/422/485	–	-40 to 75°C
NPort 6450-2M-SC-G2-T	1 x 10/100M RJ45 2 x 100M Multi-mode SC	4	RS-232/422/485	–	-40 to 75°C
NPort 6450-2S-SC-G2-T	1 x 10/100M RJ45 2 x 100M Single-mode SC	4	RS-232/422/485	–	-40 to 75°C

配件（選購）

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-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

Power Cords

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

Power Adapters

PWR-12150-WPAU-S4	Locking barrel plug with 12 VDC, 1.5 A, 100 to 240 VAC, AU plug, 0 to 40°C operating temperature
PWR-12150-WPCN-S4	Locking barrel plug with 12 VDC, 1.5 A, 100 to 240 VAC, CN plug, 0 to 40°C operating temperature
PWR-12150-WPKR-S4	Locking barrel plug with 12 VDC, 1.5 A, 100 to 240 VAC, KR plug, 0 to 40°C operating temperature
PWR-12150-WPEU-S4	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, EU plug, 0 to 40°C operating temperature
PWR-12150-WPUK-S4	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, UK plug, 0 to 40°C operating temperature
PWR-12150-WPUSJP-S4	Locking barrel plug with 12 VDC, 1.5 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