

NPort 6600-G2シリーズ

第2世代8/16/32ポートのRS-232/422/485セキュアターミナルサーバー



機能とメリット

- Real COM、TCPサーバー、TCPクライアント、ペア接続、ターミナル、リバースタターミナルのセキュアな動作モードによるデータ暗号化
- セキュアブートにより、Moxaが承認したファームウェアのみがデバイスで実行可能
- ワンクリックログ収集とアプリケーション分析による簡単なトラブルシューティング
- ソフトウェア調整可能なプルアップ/プルダウン抵抗およびターミネータにより、簡単なRS-485シリアルインターフェース設定を実現
- RSA-4096/ECC-521によるSSL証明書署名をサポート
- IEC 62443-4-2セキュリティレベル2認証を取得

認証



製品紹介

Moxaは、IEC 62443-4-1セキュア開発ライフサイクルプロセスを活用して、新世代のNPort G2セキュアターミナルサーバーを開発しました。また、NPort 6600-G2シリーズのセキュアターミナルサーバーはIEC 62443-4-2セキュリティレベル2認証も取得しており、既存のシリアルデバイスを産業ネットワークに安全に接続できます。Moxaの35年にわたるシリアル接続分野の経験に基づき、さまざまなスペース要件に対応する多様な設置オプションと、メンテナンス用の使いやすいトラブルシューティングツールを提供することで、ユーザーエクスペリエンスを向上させています。

セキュアなデータ送信

多くの用途の場合、セキュアなデータ送信を保証することは、シリアルデバイスをネットワークに接続する際に、重要な課題です。この重要課題に対応するため、NPort® 6600-G2セキュアターミナルサーバーはTLSおよびSSHプロトコルをサポートしています。これらのプロトコルは、ネットワーク経由でデータを送信する前に暗号化することで機能します。NPort® 6600-G2を使用すれば、シリアルデータがプライベートネットワークとパブリックネットワークの両方で安全に伝送されることを確信できます。

ワンクリックログ収集とアプリケーション分析による簡単なトラブルシューティング

導入段階では、システムインテグレータはデバイスを接続し、通信がスムーズに行われることを確認する必要があります。問題が発生した場合には、トラブルシューティングを行うツールを使用して原因を特定しなければなりません。Moxaは、アプリケーションアナライザを提供しており、ボタンをクリックするだけでレポートを生成し、システムインテグレータが潜在的な問題を簡単に特定し、解決方法を理解するのに役立ちます。

メンテナンス段階では、システムエラーが発生した場合にサポートへの問い合わせが必要になる場合があります。デバイスベンダーは、情報を収集し、テクニカルサポートチームと協議する必要があるため、問題のトラブルシューティングに長い時間がかかる可能性があります。NPort 6600-G2シリーズはワンクリックログ収集機能を搭載しており、テクニカルサポートチームがシステムの問題を迅速に解決するために必要なすべてのデータを提供できます。

仕様

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
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MTBF

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

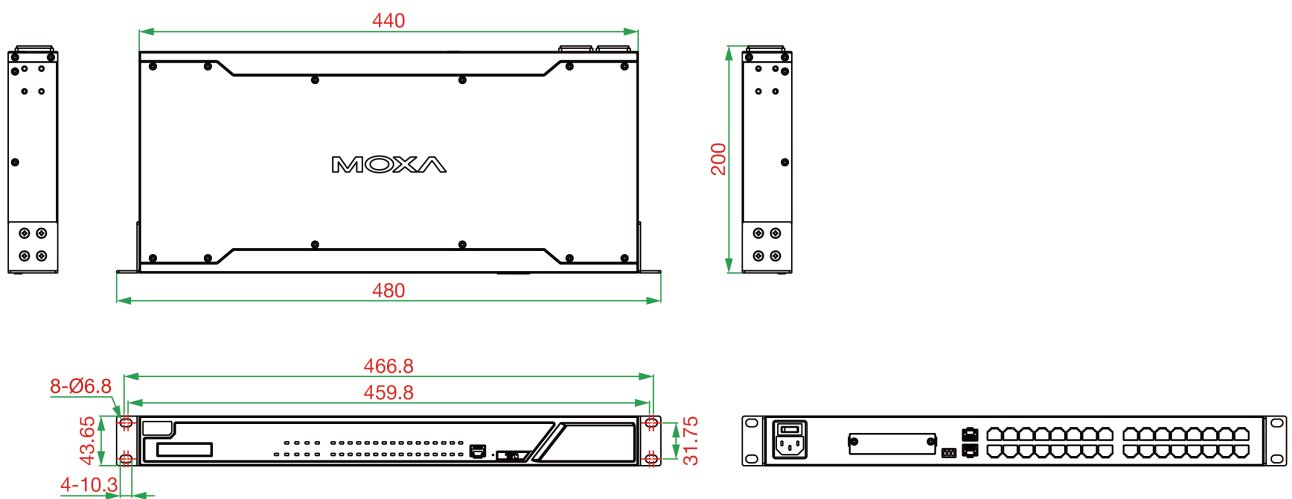
Warranty Period	5 years
Details	See www.moxa.com/jp/warranty

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

寸法

単位：mm（インチ）



注文情報

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

Model Name	Ethernet Ports	No. of Serial Ports	Serial Standards	Isolation	No. of Power Cables Included	Operating Temp.
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
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

アクセサリ（別売）

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-1GLHXC	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-1GLHXC-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
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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

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