

DATASHEET

PacketRoo

DATA DIODE FOR SECURE FILE TRANSFERS

The NEOX PacketRoo is a specialized solution bundle featuring a physical data diode that enforces full galvanic isolation between networks while allowing unidirectional signal transmission, preserving the critical air gap.

		
UNIDIRECTIONAL DATA FLOW	AIRGAP ASSURANCE	GALVANIC ISOLATION
		
PQC ENCRYPTION	WINDOWS & LINUX SUPPORT	AUTOMATIC SPEED SYNC



OVERVIEW

In critical sectors like energy supply, transportation, defense, and industrial manufacturing, protecting IT/OT networks from cyberattacks is essential, especially in applications demanding Safety Integrity Levels (SIL) 3 and 4. Implementing an air gap between OT and IT environments strengthens security by physically separating operational technology systems from external IT networks, significantly reducing the risk of cyber threats.

To enable operators to transmit data, such as sensor information, from OT networks to IT networks while maintaining the required air gap, a robust solution is necessary to securely bridge both environments.

This is where PacketRoo comes into play.

HIGHLIGHTS

- › Vendor agnostic
- › Unidirectional data flow
- › Galvanic isolation
- › For 1 or 2 network links
- › Airgap Assurance
- › For harsh environments
- › Automatic speed sync
- › Windows & Linux Support
- › PQC encryption for Linux to Linux
- › Error prevention through fixed configuration
- › Link loss detection
- › Made in Germany

USE CASES



Export production data and telemetry from industrial networks while preventing external commands or malware from entering.



Send logs, security events, packet metadata, and alerts from protected networks to central monitoring systems.

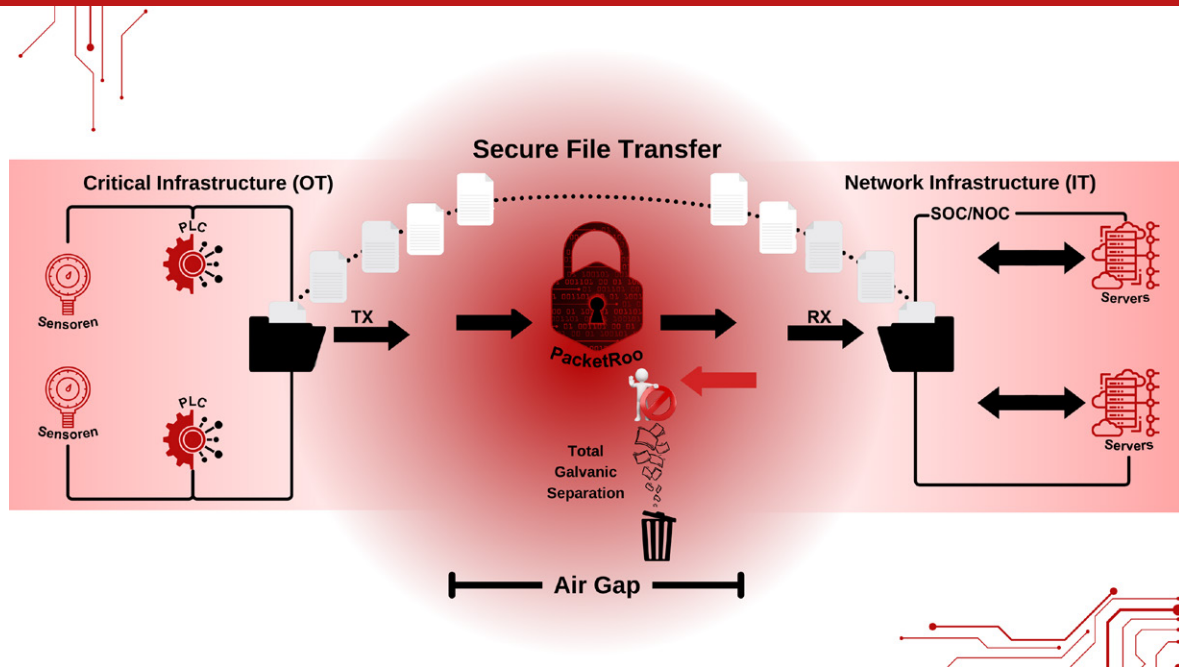


Transfer backups, historian data, or operational records to external storage while reducing the risk of ransomware reaching the source network.

SOFTWARE

The PacketRoo, combined with the NEOX SecureFileTransmitter, offers a scalable and high-performance solution for both Windows and Linux hosts, enabling seamless unidirectional data transmission. Each component of the bundle is also available separately, and if an existing data diode is already in place to bridge the air gap between networks, the NEOX SecureFileTransmitter remains fully vendor-agnostic. This flexibility also applies to the PacketRoo itself.

DEPLOYMENT SCENARIO



KEY FEATURES

- **Unidirectional Data Flow with Galvanic Isolation:**
 - The NEOXPacketRoo enforces galvanic isolation, allowing data to flow only one way (OT to IT) and maintaining the air gap for maximum security.
- **Air Gap Assurance:**
 - Maintains a physical air gap between OT and IT networks, reducing the risk of cyber threats.
- **Real-Time Monitoring & Data Integrity:**
 - Supports integrity checks and real-time monitoring to detect anomalies during data transfers.
- **Hardware-Based Security:**
 - Hardware-enforced unidirectional data flow ensures OT network protection from external attacks.
- **Speed Sync Feature:**
 - Selects and maintains highest common speed for input and output port. Ports are always ensured to have same speed if possible.
- **Link Loss Detection (LLD):**
 - Link loss is propagated between input and output ports.
- **Vendor-Agnostic, Secure File Transfer:**
 - Comes with NEOXSecureFileTransmitter software for unidirectional file transfer, compatible with Windows, Linux, and third-party diodes.
- **Sealed Design for Harsh Environments:**
 - Tamper-proof and sealed, it's designed for military and civilian use in rugged conditions.
- **Fixed Configuration for Error Prevention:**
 - Pre-configured ports eliminate configuration errors and ensure a secure, error-free deployment.
- **PQC Encryption:**
 - Post Quantum Cryptography for Linux to Linux connections

TECHNICAL SPECIFICATIONS

HARDWARE		DIMENSIONS (WxHxD)	WEIGHT
1x 10M/100M/1000M LAN		70 mm x 32 mm x 145 mm	ca. 260 g
Redundant and hot-swappable DC power supplies		27.6" x 12.6" x 57.1"	ca. 573 lb

POWER SUPPLY		RELATIVE HUMIDITY	
2x DC 5V (included)	Operation	8% to 90% relative humidity (Rh), non-condensing	
1x DC 12-48 V	Storage	5% to 95% relative humidity (Rh), non-condensing	

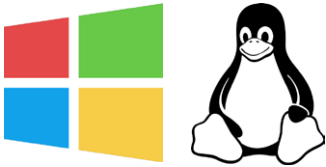
OPERATING TEMPERATURE	
10° to 85° C at sea level	
50° to 176° F at sea level	

OPTIONS

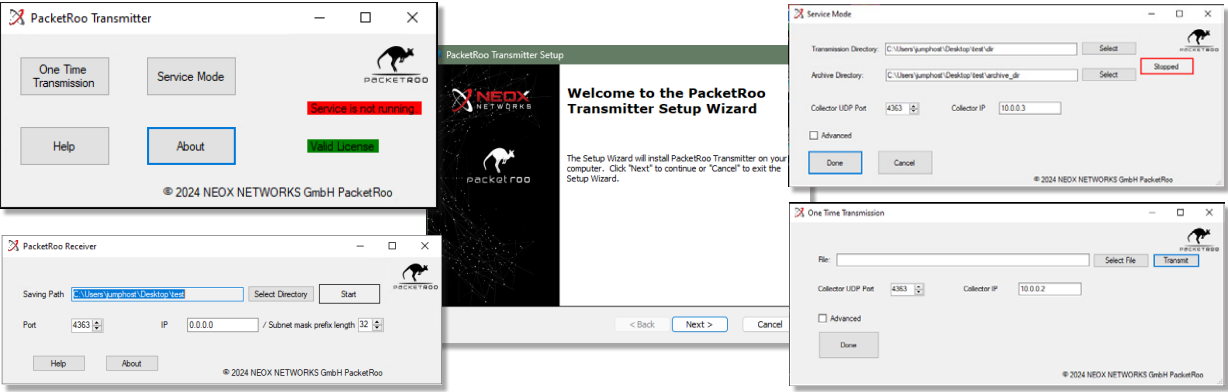
SKU	INTER-FACES	SPEED	PRODUCT TYPE
PRO-DD-1G	2x RJ45	10/100/1000 MBit	Hardware
PRO-SFT-SW	n/a	n/a	Software



PRO-DD-1G



PRO-SFT-SW



ACCESSORIES

INSTALLATION & MOUNTING

ITEM NO.	DESCRIPTION
PRP-1U3-V2	Server rack mounting frame for 3 PacketRoo
PRP-1U3-BP-V2	Blank plate for mounting frame PRP-1U3-V2
PRP-1U3-CLIP	Rackmount frame bracket for server rack mounting frame PRP-1U3-V2
PRP-DIN-CLIP	DIN rail mounting clip



PRP-1U3-CLIP



PRP-1U3-V2

PRP-1U3-BP-V2



PRP-DIN-CLIP

POWER SUPPLIES & ACCESSORIES

ITEM NO.	DESCRIPTION
PRP-PS-INT	PSU with EU, UK, and US plug head
PRP-PS-*A	Plug head *EU, *UK or *US
PRP-PS-EU	Power supply unit with EU plug (head)
PRP-PS-UK	Power supply unit with UK plug (head)
PRP-PS-US	Power supply unit with US plug (head)
PRP-PS-C14-25W	Power supply unit with C14 socket - connected to PSU via C13-C14 cable



PRP-PS-INT



PRP-PS-C14-25W

