

SECURE KEY LOADER



Securely generate, provision, and manage encryption keys across the Neous matrix.

High Sec Labs' KL01H-M Secure Key Loader securely generates, provisions, and manages encryption keys for Neous™ Encrypted Isolators. It establishes unique encryption relationships between paired Transmitters and Receivers while ensuring that encryption keys remain protected throughout their lifecycle. Administrators can replace and periodically rotate keys to reduce long-term key exposure and strengthen security across the Neous matrix.

FEATURES

Unique Key Generation

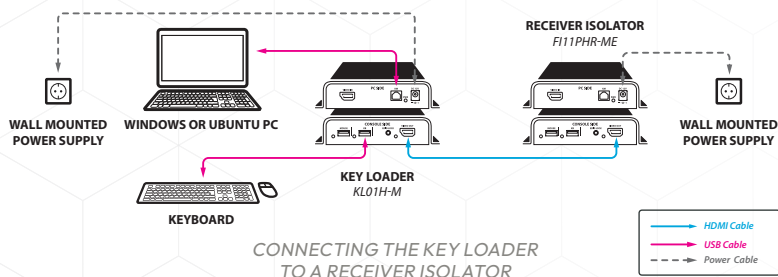
- > The Key Loader generates a unique encryption key for each encrypted endpoint pair in the Neous matrix. Keys are generated using a NIST Certified True Random Number Generator (TRNG) to ensure unpredictable cryptographic keys. Encryption keys are never displayed to administrators and cannot be copied, exported, or replicated.

Internal Key Storage

- > Generated encryption keys are stored in protected internal memory that cannot be accessed, even through physical tampering attempts.

Key Protection

- > Encryption keys are never displayed to users or administrators and cannot be copied, exported, or replicated. Only the relevant Encrypted Isolators receive the key data, keeping encryption keys inaccessible to users, administrators, and external systems.



SECURITY FEATURES

Security and Cryptography

- > NIST Certified True Random Number Generator (TRNG) for unpredictable cryptographic keys.
- > Encryption keys are never displayed to users or administrators and cannot be copied, exported, or replicated.
- > Protected internal memory prevents access to stored keys, even through physical tampering attempts.

Lifecycle Key Management

- > Enables administrator-driven key replacement and periodic rotation.
- > Supports regular refresh of encryption keys across the Neous matrix, reducing long-term key exposure.

Tampering-Evident Labels

- > Holographic labels indicate if the product has been opened or compromised.

Firmware Protection

- > Firmware is stored in non-reprogrammable ROM and inaccessible through any port. A power-up self-test verifies firmware integrity and disables operation if a critical failure is detected.

MODEL NUMBER		KLO1H-M		
HOST/PC CONNECTIVITY				
Video	1xDP/HDMI (IN)			
Keyboard/Mouse	1xUSB Type B			
CONSOLE CONNECTIVITY				
Video	1xDP/HDMI (OUT)			
Keyboard/Mouse	2xUSB Type A			
PHYSICAL				
Dimensions	145x105x28 mm / 5.8x4.2x1.1 in			
Weight	0.3 kg / 0.64 lbs.			
POWER				
Power Requirements	DC input 12V/1.5A Maximum			
AC Input	External power supply unit, 90V-240V AC			
ENVIRONMENTAL				
Operating Temperature	0°C to 40°C / 32°F to 104°F			
Storage Temperature	-20°C to 60°C / -4°F to 140°F			
Humidity	0%-80% RH, non-condensing			
COMPLIANCE				
Manufacturing	TAA/BAA Compliant			
GENERAL INFO				
Product Lifecycle	10 Years			
Product Warranty	2 Years			

ORDERING INFORMATION

MODEL NUMBER	PRODUCT NUMBER	COMPONENT	QTY
KL01H-M	CPN39325	Key Loader for Neous Encrypted Isolators	1
		Wall-Mounted 12V DC Power Source	1
		HDMI Retention Kit	1