

Ethernet encryptor

High-performance for German national SECRET



The SINA L2 Box H product line provides high-performance encryptors for the secure exchange of information in networks at OSI layer 2 (Ethernet).

The SINA L2 Box H 1G currently offers the best performance of any Ethernet encryptor approved for up to German national SECRET (GEHEIM). This device is ideal for securing backbones and securely connecting sites and data-processing centres.

The SINA L2 Box H 1G is an Ethernet encryptor developed for national and international high-security networks. Based on the confidentiality type approval for German national SECRET (GEHEIM), market-relevant international secondary evaluations have been initiated.

The features of the SINA L2 Box H 1G are designed for usage scenarios in which large volumes of data need to be sent with a high level of security but also with high speed. This includes high-bandwidth networks between sites, backbone network security, data mirroring in high-availability architectures and security in data-processing centres.

The SINA L2 Box H 1G supports point-to-point connections. Because of the low latency, the SINA L2 Box H 1G is especially suitable for usage scenarios with high quality of service or real time requirements. The devices are also recommended for satellite-based communication thanks to their efficiency in data transmission. With a throughput of 1Gbit/s full duplex, the SINA L2 Box H 1G offers a new dimension in high-performance communication at SECRET level.

IT security concept

The devices of the SINA L2 Box H product line are based on a holistic IT security concept. This comprises in particular:

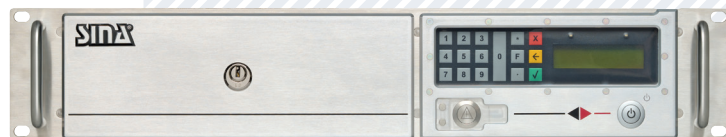
- extensively reinforced SINA system platform
- SINA CORE cryptography module
- Smartcard technology
- Hardware, firmware and software scaled and configured in conformity with approval requirements

Secure system start and operation

The software of a SINA L2 Box H is – securely using coreboot – loaded from trusted flash storage upon system boot. All initial configuration data and security associations for the SINA L2 Box H are stored in a protected area of the SINA smartcard. When a SINA L2 Box H is started, the security associations are set up in point-to-point mode. This greatly simplifies configuration, installation and hardware replacement with the SINA L2 Box H.

Benefits

- Approved for German national SECRET (GEHEIM) and SECRET UE/EU SECRET
- 1 GBit/s full duplex
- Tunnel mode
- QoS and real time
- Support for online updates
- Easy network integration
- SINA management



Systems monitoring

The SINA L2 Box H devices log all data related to monitoring during operation. This can be imported into network management systems where it can be processed and/or displayed as required.

Management

SINA Management is used for the central configuration of all SINA L2 Box H devices in a network. An integrated Public Key Infrastructure (PKI) and associated user management system provides support with critical administrative processes involving SINA smartcards. This includes in particular the customisation of these, the generation and updating of keys and cryptographic parameters, and the administration of the associated PINs and PUKs.

Continued development

The continued development of the product line focuses in particular on a more robust hardware platform, multi-point support and high data throughput rates.

About SINA

secunet developed the “secure internetwork architecture” – SINA – on behalf of the German Federal Office for Information Security (BSI). The cryptographic system product range enables compliant and secure processing storage and transfer of confidential information and other sensitive data as necessary. The product portfolio encompasses a variety of clients, gateways and Ethernet encryptors as well as a management system. The SINA Workflow network, the first confidential registry and confidential collaborative platform for use with SECRET (GEHEIM) classification, provides the finishing touch to this product range. SINA has been used by armed forces, public authorities and companies subject to security oversight for many years. Several SINA components are approved for the processing and transfer of classified information up to and including classification levels German national SECRET (GEHEIM), NATO SECRET and SECRET UE/EU SECRET.

Approval-related construction classes



SINA L2 Box H 1G 27A



Performance data	
Approval level	German national SECRET (GEHEIM), SECRET UE/EU SECRET
	Secondary evaluations for NATO SECRET are already under way
Boot integrity protection	coreboot
SINA CORE device classes	National 1.x, EU and SDC
Manipulation protection	Integrated
Emission protection	SDIP 27 Level A
Authentication tokens	SINA smartcard

Technical data

General technical data	
Design	19" 2 HE
Dimensions (W x H x D)	482.6 x 88.1 x 502.0 mm
Weight	11.5 kg
Power consumption	65 W
BTU/h	221,8
Cryptographic hardware	
Module	SINA CORE 2 L2
Encryption performance	1 GBit/s full duplex
Symmetric cryptographic methods	VEGAS
Asymmetric encryption methods	EC-GDSA, EC-DH
LAN connections	
Network interfaces	3 x 1000BASE-SX MM 850 nm
Connector type	LC / PC
Temperature ranges	
Operation	+5 °C to +45 °C
Transport and storage	-25 °C to +60 °C
Miscellaneous	
SINA CORE power supply	Long-term battery for 8 years

Sources

Public authority customers can acquire SINA components via the framework contract with the Procurement Office of the German Federal Ministry of the Interior, or through the SINA supplemental contract with the German Federal Armed Forces. secunet would also be pleased to serve all other national and international customers.

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