SINA® L3 Box S

VPN Gateway approved for RESTRICTED Communication

Benefits:

» **German National (VS-NfD) NATO RESTRICTED RESTREINT UE**

» **Frequently used in complex security networks**

» **Network interfaces can be equipped as required**

» **IPv6 and QoS**

» **High availability**

» **Remote updates**

As a VPN gateway, the SINA L3 Box is a key component of the central IT infrastructure in high-security networks. The data exchanged between the SINA components is securely transmitted via encrypted VPN tunnels. SINA L3 Boxes connect public authority or corporate networks via the Internet. In addition, access to (terminal) servers by SINA clients is provided via pre-switched SINA L3 Boxes, which serve as cryptographic network access points.

The SINA L3 Box S is an IP-based encryption system approved by the Federal Office for Information Security (BSI) for transmitting confidential documents classified as German National (VS-NfD), NATO RESTRICTED and RESTREINT UE. The various hardware formats enable national and international security networks to be easily set up.

With their integrated touch screen displays, comparably low weight and moderate power consumption, the SINA L3 S 30M, 200M and 1G Boxes can be flexibly configured. As the network interfaces are partially equipped with SFP modules, every device model in this range can be adapted to the respective network environment as required.

The two versions of the SINA L3 Box S 5G that are each equipped with ten network interfaces are intended for use in complex, central network hubs. Furthermore this device, the most powerful model, is capable of an encryption rate of up to 5 Gbit/s.

IPv6 and QoS

The current software version 3.7 guarantees that SINA L3 S Boxes are IPv6-enabled. This software version replaces the previous version 2.2 in the S range. Both SINA software versions also support Quality of Service. Hence traffic classes (such as the Internet, VoIP telephony, video conferencing and data traffic) can be used or forwarded within SINA. Furthermore, with the implementation in the 3.x versions, it is possible for different traffic classes to be transmitted within **a single VPN tunnel.**

IT security concept

The SINA L3 Box S is based on a holistic IT security concept. It comprises the following:

■ An annealed, tested SINA OS system platform
■ Smart Card technology
■ IPsec-based Virtual Private Network, and
■ software configured according to approval.

Secure system start and operation

The SINA L3 Box S software is loaded by the flash memory during system start. All the initial configuration data and security associations are stored in a protected area of the SINA Smart Card. The security associations to the SINA Management and the primary communications-related SINA L3 Boxes are set up as IPSec VPN tunnels. If necessary, additional security associations or configuration data can be downloaded from SINA Management.

This greatly simplifies configuration, installation and hardware replacement with the SINA L3 Box S. The SINA L3 S Boxes can be operated using several thousand security associations.
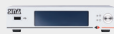
High availability

It is possible to increase the availability and reliability of SINA L3 Boxes by means of redundant configurations. This means for example that, in hot standby mode, an automatic switchover triggers a second SINA L3 Box to take on the functions of the failed SINA L3 Box that was previously active without interruption.

Furthermore SINA L3 Boxes also support georedundant and load distribution configurations. With georedundant scenarios, alternative communication paths can be prioritised and run via SINA L3 Boxes that are positioned in different locations. With specific load distribution configurations, the SINA L3 Boxes interact with conventional load balancers.

Satellite communication

Use of SINA L3 Boxes requires IP-enabled transport networks, including satellite communication lines. The available bandwidth of the satellite lines is used effectively in tandem with satellite optimisers.

Approval-related construction classes

	SINA L3 Box S
Approval	German National (VS-NfD), NATO RESTRICTED RESTREINT UE
Software version	3.7
Authentication token	SINA Smart Card

Systems monitoring

The SINA L3 Boxes 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. In addition, the SINA L3 Box S supports the SNMP v2c management protocol.

Management

SINA Management is used centrally for system administration, remote configuration and SINA software updates for all SINA L3 Boxes in the network. The configuration updates include network configurations and security associations. Integrated Public Key Infrastructure (PKI) with the associated user management supports critical administrative processes involving SINA L3 Box Smart Cards. This specifically includes customisation, generation and updating of keys and cryptographic parameters, and administration of the associated PINs and PUKs.

Additional performance data

	SINA L3 Box S 30M-2	SINA L3 Box S 200M-2	SINA L3 Box S 1G-2	SINA L3 Box S 5G
General technical data				
Design	Desktop unit*, 220.5 × 182 × 43.6 mm	19" 1HE	19" 1HE	19" 2HE
Weight	1.8 kg	5.6 kg	6.8 kg	10 kg
Power consumption	37 W	50 W	95 W	104 W
Cryptography				
Encryption performance**	approx. 30 Mbit/s	approx. 200 Mbit/s	approx. 1000 Mbit/s	approx. 5000 Mbit/s
Symmetrical process	AES	AES	AES	AES
Asymmetrical process	EC-GDSA, EC-DH	EC-GDSA, EC-DH	EC-GDSA, EC-DH	EC-GDSA, EC-DH
LAN connections				
Network interfaces***	4 × 10/100/1000 Mbit Cu	4 × 10/100/1000 Mbit Cu 2 × 1000 Mbit SFP	4 × 10/100/1000 Mbit Cu 2 × 1000 Mbit SFP	6 × 10/100/1000 Mbit Cu 4 × 1000/10000 Mbit SFP
Temperature				
Operation	+5 °C to +40 °C	+5 °C to +40 °C	+5 °C to +40 °C	+5 °C to +40 °C
Transport	-20 °C to +60 °C	-20 °C to +60 °C	-20 °C to +60 °C	-20 °C to +60 °C

* Double-sided installation next to each other using a rack mount kit for 19" 1U and expandable with 2 redundant external power supply units per device.

** Bidirectional L2 performance measurement with Spirent CHS N4U (10G) acc. RFC2544. (Software version 3.x – AES-256 (NI) SHA-256, no feature configuration, 2 SINA L3 boxes S in direct connection – detailed measurement results only on request)

*** Because of the large number of product variants relating to different manufacturers, SFP modules are not included in the scope of delivery. Examples of use are: Finisar FTLF8519P3BNL (LWL, Short Range, Multi Mode), Source SP-GB-LX-IDFN (LWL, Long Range, Single Mode) or Finisar FCLF-8521-3 (RJ45).

More information:

www.secunet.com/en/sina