SINA® L3 Box E*

(SINA® Box S)

VPN Gateway for Confidential Communication

Benefits:

» **Approved up to CONFIDENTIAL**

» **High performance**

» **High availability**

» **Increased temperature ranges**

» **Switchable optical fibre network interfaces**

» **SINA Management in online operation**

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 public lines such as the Internet. Additionally, SINA L3 Boxes can be configured as cryptographic network access points for SINA clients to (terminal) servers.

The SINA L3 Box E and its predecessor, SINA Box S Zone 1, are the only IP-based encryption systems approved for transmitting classified information for CONFIDENTIAL, NATO CONFIDENTIAL and CONFIDENTIEL UE classification levels. Just like its predecessor, the SINA L3 Box E also serves national and international high security networks for public authorities.

In direct comparison with the SINA Box S Zone 1 (19" 3U), the SINA L3 Box E is substantially more powerful and lighter with a more compact 19", 2U design. Due to the increased temperature ranges the SINA L3 Box E is more flexible to use. The fibre optic network interfaces can be switched between 100 MBit/s and 1 GBit/s – this allows a flexible reaction in case of network infrastructure changes. A new device variant now supports copper network interfaces as well. More service-friendly features include rechargeable batteries that can be replaced without the need for subsequent re-tempestation.

IT security concept

The SINA L3 Box E is based on an integrated IT security concept.
In particular, this concept includes:

- A hardened and intensively evaluated Linux system platform
- Smart card technology
- IPsec-based virtual private networks
- Hardware, firmware and software scaled and configured according to approval requirements

Secure system boot and operation

Depending on the actual conditions of the IT infrastructure and project-specific communications requirements, it is possible to use the SINA L3 Boxes E with thousands of simultaneous security associations. Upon system start-up, the SINA L3 Box software is securely loaded from flash memory using Coreboot (SINA BIOS). All initial configuration data and

security associations for the SINA L3 Box are stored in a protected area of the SINA smart card. When a SINA L3 Box is started, the security associations to the SINA Management and the communications-related SINA L3 Boxes are set up as IPsec VPN tunnels. If necessary, additional security associations or configuration data can be downloaded from the SINA Management. This greatly simplifies configuration, installation and hardware replacement with the SINA L3 Box.

Systems monitoring

The SINA L3 Boxes log all system-monitoring relevant data during operation. The syslog data can be imported into network management systems for further processing and/or displayed as required.

High availability

Using redundant configurations it is possible to increase availability and safeguard against failure of SINA L3 Boxes. An automatic switchover mode triggers a second SINA L3 Box to take over the functions of the failed, once active SINA L3 Box.
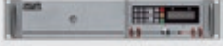
Satellite communication

The use of SINA L3 Boxes requires IP-enabled transport networks, including satellite communication lines. Satellite optimisers support the effective use of the available bandwidth of the satellite lines.

Management

The SINA Management is used for central configuration of all SINA L3 Boxes in the network. An integrated public key infrastructure (PKI) with the corresponding user management supports the main administrative processes, particularly the personalisation, generation and/or updating of keys and cryptographic parameters as well as the administration of associated PINs and PUKs on the smart cards.

Approval-related construction classes

SINA L3 Box E 400M Z1	
Approval level	CONFIDENTIAL, NATO CONFIDENTIAL; CONFIDENTIEL UE
Firmware	SINA BIOS (Coreboot)
Software versions	2.2
Manipulation protection	Integrated
Tempest	Zone 1 (SDIP 27 Level B)
Authentication token	SINA smart card
Network interfaces	optical fibre, Cu**
Item number	SB50.25; SB50.26

Additional details and performance data

General technical data	
Size	19" 2 U
Weight	12 kg
Power consumption	80 W
Crypto hardware	
Encryption performance	400 MBit/s
Symmetric cryptography	Chiasmus, AES
Asymmetric cryptography	EC-GDSA, EC-DH
LAN connections	
Network interfaces	4 x 100/1000 MBit optical NICs (switchable) (SB50.25) 4 x 10/100/1000 MBit Cu (SB50.26**)
Connector type	LC
Adapter cables	For LC to SC plugs or for LC to ST plugs respectively
Miscellaneous	
Service bay	For rechargeable battery replacement (subsequent re-tempestation **not** required)
Temperature	
Operation	+5 °C to +45 °C
Transport	-25 °C to +60 °C

* For further information about the new naming concept refer to: www.secunet.com/en/sina.

** The use of this device variant which is equipped with copper network interfaces and is approved for up to CONFIDENTIEL UE requires additional network infrastructural protection measures (as per IASG-04-01 and IASG-04-02). The use of nationally approved SINA L3 Boxes E (Germany) requires FO network interfaces.

About SINA

secunet developed SINA – the Secure Inter-Network Architecture – for the German Federal Office for Information Security (BSI). The product family of crypto systems enables the secure processing, storage and transmission of classified information as well as other sensitive data – according to approval requirements.

The product portfolio covers different gateways, line encryptors, clients and management systems which have been in use in the public sector, armed forces and companies handling classified information for many years. Selected SINA components are approved for processing and transmitting classified information up to and including the classification levels NATO SECRET and SECRET UE.

More information:
www.secunet.com/en/sina

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