

Intelligent Solutions for the Highest IT Security Demands



SINA® – Information security from the architects of modern cryptographic systems

SINA (Secure Inter-Network Architecture) enables the protected processing, storage, transfer and soon also a full audit trail of classified information and other sensitive data. The portfolio comprises various SINA clients, gateways and link encryptors as well as the SINA Management. All SINA products have successfully been in service with national and international customers over a number of years.

The idea for the project originally arose from the demand for secure communication within local networks in the context of the German federal government's move from Bonn to Berlin. Furthermore, there was a general need for encryption technology at Internet Protocol (IP) level for protecting secret material that would be suitable for use in secure communication across wide area networks (WAN).

The German Federal Office for Information Security (BSI) outlined the broad concept for SINA towards the end of the 1990s. In December 1999, the BSI awarded secunet Security Networks AG with the development of the SINA product series.

The essential idea behind this security architecture is the comprehensive protection of data classified at various levels, both locally and during transfer via open networks. SINA arose from the aspiration to create solutions that were consistent with the exceptional security requirements of national and international ministries, public authorities, the armed forces and private companies entrusted with classified materials. As a security partner of the Federal Republic of Germany, secunet takes these specifications fully into account in designing and manufacturing its product range. Our secure network architecture has made considerable advances over the past decade and has continued to set new standards in the high security market.

"All SINA products undergo a strict evaluation process conducted by the BSI. Before any product can be approved, all of its components are subjected to thorough and comprehensive testing. SINA products are consequently guaranteed to comply with the highest security standards."

Modular system architecture for high security

Holistic security

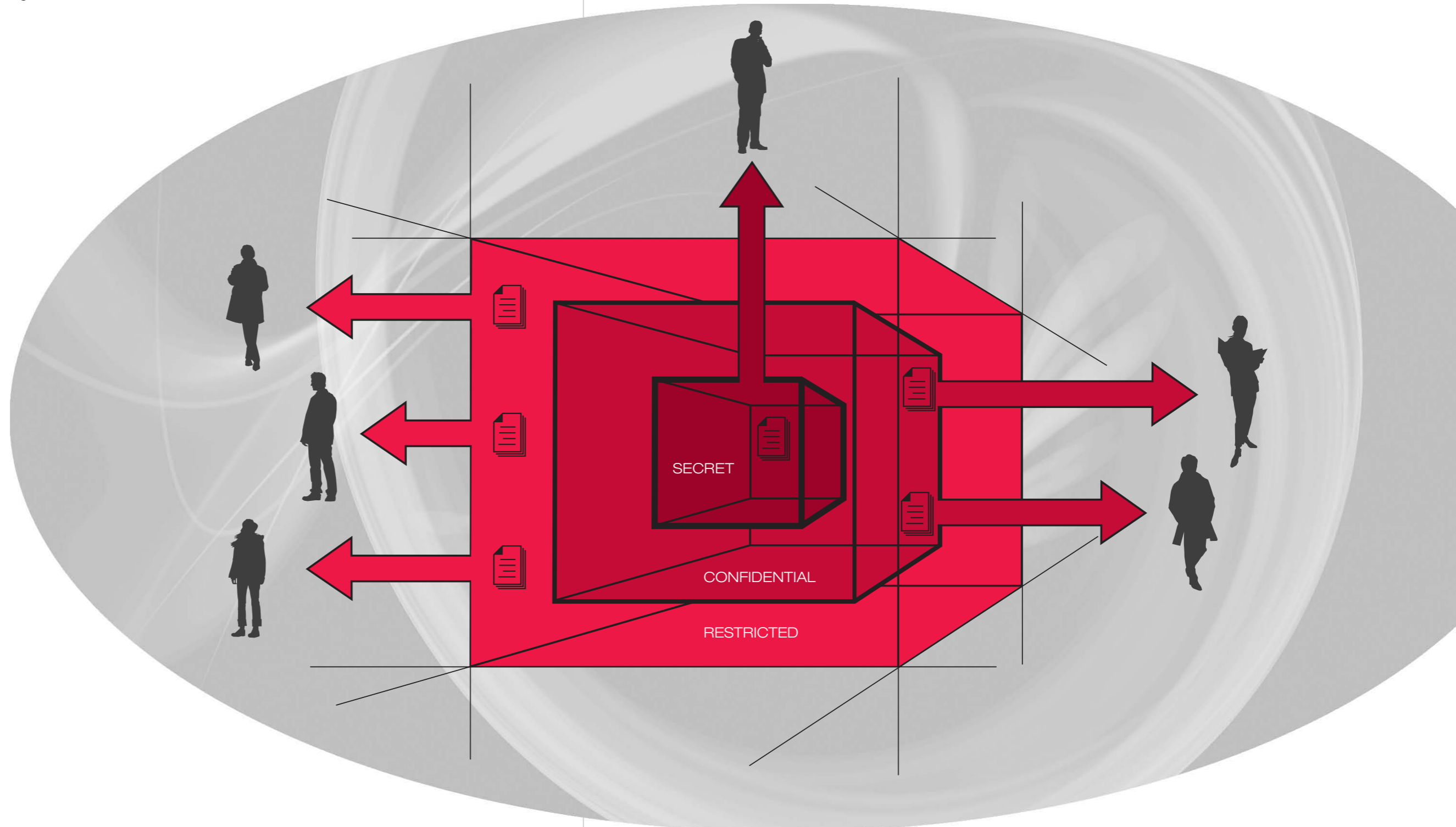
SINA's holistically designed architecture makes it the intelligent solution for virtually all requirements in the area of high security; with its sheer range of performance, it is uniquely positioned in the global market. All SINA products comply with the highest

reliability standards and are constantly undergoing further development. SINA ensures confidentiality of processing and communication at all national classification levels and for all conceivable scenarios.

Approved by the official authorising body

SINA is the only IPsec-based cryptographic system that has been approved for use up to the highest national classification level of **STRENG GEHEIM** by the ultimate authority in Germany for IT secu-

rity, the German Federal Office for Information Security (BSI). Furthermore SINA has also obtained approvals at international level up to and including **NATO SECRET** and **SECRET UE**.



Powerful encryption

Multiple levels of security

The decisive advantage of SINA is the processing and storage of differently classified data by a single device. The capacity for strict separation of multiple virtual sessions (Multi-Level Separation) is at the heart of this intelligent IT architecture. Data with different classifications can be used locally, having been cryptographically secured with virtualised operating systems, as well as centrally in server areas protected by SINA Box. All communication with central server or terminal server areas is always secured by means of a VPN (IPsec).

Confidentiality anywhere, any time

SINA technology is adaptable to individual requirements for protection. No matter where you may be or what time of day it is, you will always be able to work securely and effectively. In your office, at a remote terminal or while you are out and about. SINA provides maximum data security for almost all important communication channels, including IP telephony (VoIP), video conferencing, satellite links, WLAN and mobile telephony. Your confidential data is safe and secure at all times, wherever you may be. And regardless of how and where you are as a public authority or private sector company may wish to communicate.

Applications

At the top level of the SINA security layers are applications of varied classification that are strictly separated from each other. These contain widely available guest operating systems and applications encapsulated in virtual computers (PCs) on the one hand, and terminal-client functionalities on the other.

IT security functions

Numerous highly sophisticated security modules that have been staggered at multiple levels deep in the system (e.g. IPsec encryption, access control, firewall functionality, intrusion protection) guard SINA against external threats.

Secure system platform

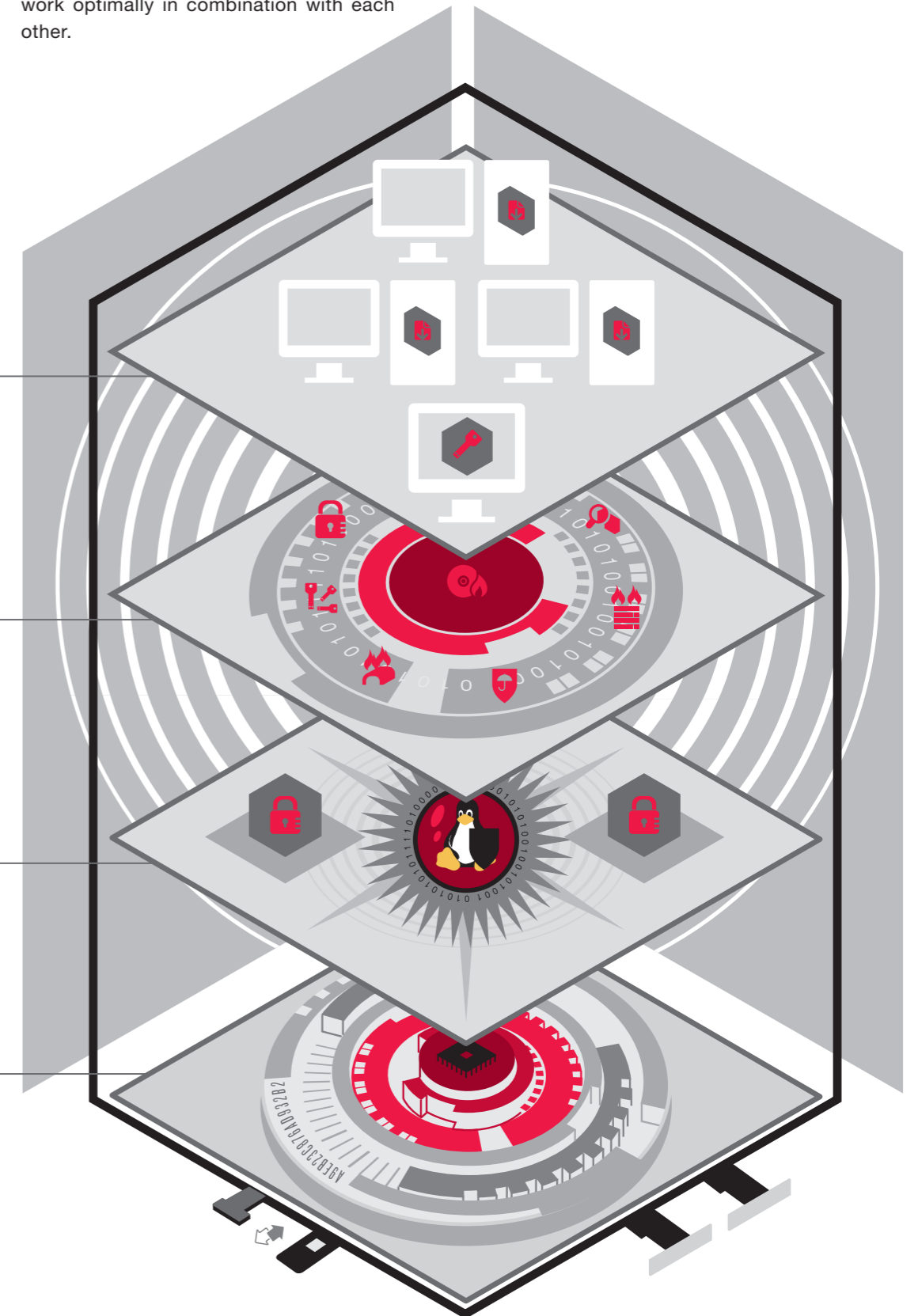
The software foundation of SINA technology is the severely pruned SINA Linux, which has been functionally hardened and intensely evaluated for security. Embedded in the system platform are a Smartcard as its cryptographic anchor and the cryptographic file systems.

Hardware platform

The hardware, which has been dimensioned and configured to conform to classified information approval standard, comes in special design types that offer protection against eavesdropping (TEMPEST) and manipulation, as well as cryptographic modules and appropriate hardening. It further contains firmware that has been evaluated for security.

What makes SINA so powerful?


SINA is a holistically sophisticated system technology with security components that work optimally in combination with each other.



SINA Box

SINA Box as a VPN gateway is the central core component in high-security networks. The data that is exchanged between SINA Boxes, or indeed between SINA clients and SINA Boxes, is transmitted securely via so-called 'cryptographic VPN tunnels'. SINA Boxes are used to connect government

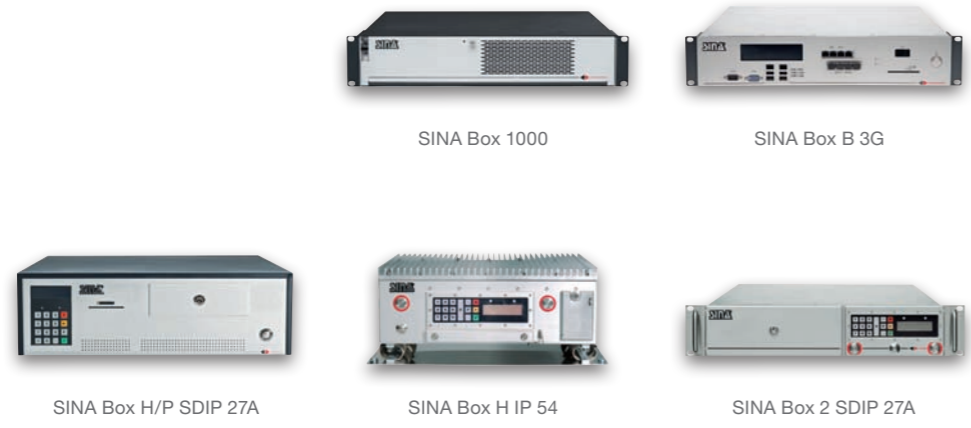
bodies and private company networks via public connections, e.g. the internet. SINA Boxes additionally serve as cryptographic network access points to permit access by SINA clients to (terminal-) server areas. SINA Box has been acknowledged as the standard solution for many years now.



- Established in complex high-security networks
- High performance
- High availability
- SINA Management in online operation

SINA Box 1 HE


Approval up to and including:
STRENG GEHEIM (Germany)
NATO SECRET (NATO)
SECRET UE (EU)



SINA Virtual Workstation

SINA Virtual Workstation (SINA VW) can be used as both a mobile or stationary client. SINA VW users can work anytime securely and conveniently in their familiar operating environment (e.g. MS Windows) – online as well as offline, at the office or on the way. Working in different security zones is made possible by the parallel operation of multiple guest systems (e.g. simultaneously in a classified network and the Internet).

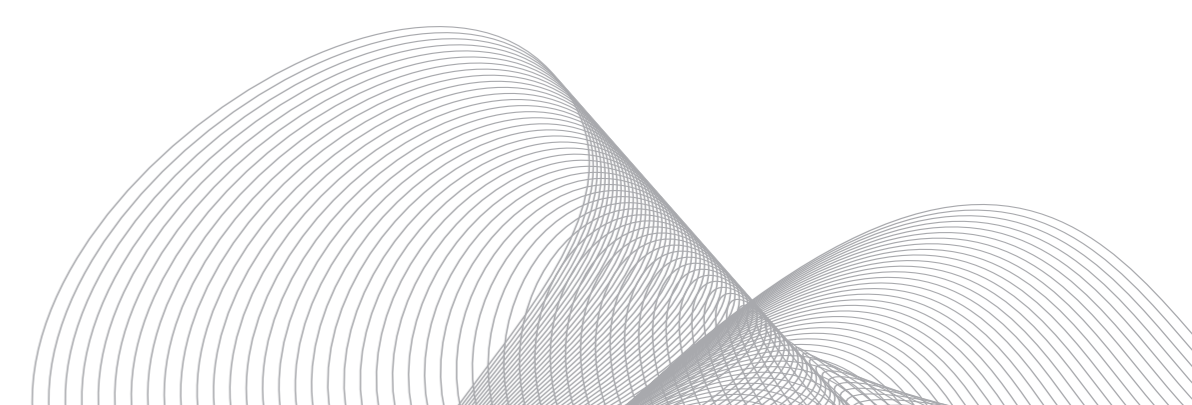
This all-round security concept means that SINA VW is able to offer considerably more than a conventional cryptographic device, i.e. Smartcard, VPN, hard drive encryption, interface control and a secure operating system. Guest operating systems such as Linux or MS Windows and all sensitive data are always separately and securely stored in their own cryptographic file systems.



- Parallel operation of virtualised and separately classified MS Windows or Linux guest systems
- Mobile, highly secure processing, transfer and storage of sensitive data
- Consolidating multiple PCs of different classified networks in one single work station
- Encryption of hard drives and networks


SINA Virtual Workstation
ThinkPad T410

Approval up to and including:
GEHEIM (Germany)
NATO CONFIDENTIAL (NATO)
RESTREINT UE (EU)



SINA Thin Client

SINA Thin Client is a client that does not use a hard drive. It communicates with servers via so-called 'Remote Desktop Protocols'. This exceptionally lean-dimensioned client is just an I/O-Device for graphics, mouse, keyboard and sound. Data is transferred encrypted to the terminal server, which then process the original data processing and saving.



- Established in complex high security networks
- Simultaneous processing of classified data in up to six thin client sessions with just one client
- Consolidating of work stations with multiple PCs of different classified networks in one single thin client

SINA Thin Client

Approval up to and including:
STRENG GEHEIM (Germany)
NATO SECRET (NATO)
SECRET UE (EU)




SINA Thin Client SDIP 27A

SINA L2

The SINA L2 link encryption series offers components of unprecedented performance for the secure exchange of information in networks on link layer. LAN connections via public links carry the risk of data being read


or manipulated by unauthorised persons. SINA L2 reliably encrypts data without impairing in any way the functioning or performance of the LAN applications. SINA L2 operates at transmission speeds of up to 10 GBit/s.



- High data throughput
- Readily integrated without any alteration to network infrastructure
- Maintenance-free operation

SINA L2 10000

Approval up to and including:
VS-NfD (Germany)
NATO RESTRICTED (NATO)
RESTREINT UE (EU)




SINA L2 1000 SINA L2 100

SINA One Way Gateway 2

SINA One Way Gateway 2 is a black/red gateway. It consists of a data diode together with a 'black' and a 'red' server. The gateway permits only unidirectional data transfer from a public or low-level source network (classified as 'black') to a higher-level destination network (classified as 'red').

The system thus facilitates the transfer of public data that has been sourced from the internet into a network classified as SECRET. The uniquely secure functionality of the SINA One Way Gateway 2 ensures that no information from a 'red' destination network flows in the opposite direction.

- Highly secure unidirectional data transfers in classified networks
- Automatic error correction allows the abandonment of a return channel
- High data throughput
- Common Criteria EAL 7+ Certification



SINA One Way Gateway 2

Approval up to and including:
GEHEIM (Germany)
NATO SECRET (NATO)

SINA CORE advances to a new dimension

In the ten years or so that SINA has been in development, we have supplied more than 26,000 SINA components to our customers. Almost 9,000 systems have been equipped with PEPP encryption technology based on the Pluto chip. In 2011, we will be incorporating SINA CORE – a new technology that is cryptographically interoperable with PEPP – into all relevant SINA products. The performance of the whole SINA product family will be significantly boosted by this new development.

What are the functional and operational benefits of this new encryption technology? SINA CORE is

■ more powerful:

- » Boosting approx 180 MBit/s, the new SINA Box H performs significantly better.
- » Security connections with other SINA components can be established more than ten times as fast.

■ more flexible:

- » New cryptoalgorithms can be loaded in the field.
- » Instead of just one class of device (e.g. H/P), three classes can now be supported on one SINA CORE module.
- » The encryption modules are enabled for online updating in respect of cryptographic device classes, algorithms and parameters.

■ more compact:

- » The compact design of the SINA CORE modules with integrated optical network card facilitates significantly smaller hardware platforms.

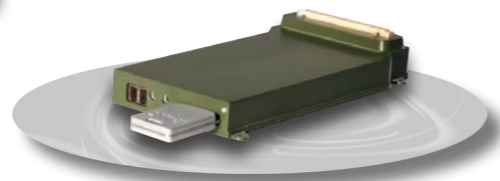
■ more robust:

- » We have incorporated our extensive experience of military application to make a product that is now suitable for use in more tough environments.

Obviously, we intend to continue providing servicing and product care for our existing PEPP technology.



SINA CORE 100 Fx SIMO



SINA CORE M100R with token

“Working closely together, BSI and secunet have performed outstanding development work on SINA and created a highly successful product series. As an official security partner of Germany, we focus our ongoing development activities stringently on the outstanding requirements and current needs of our customers.”

Dr. Rainer Baumgart, Chairman of the Board
secunet Security Networks AG

Have we sparked your interest in the SINA product range, and would you like to find out more about our high-security solutions? We will be very happy to advise you on how your public authority or private company can best use our products. Give us a call any time.

We will be delighted to arrange a personal consultation.



secunet

secunet Security Networks AG
Kronprinzenstraße 30
45128 Essen, Germany
Phone: +49-201-5454-0
Fax: +49-201-5454-1000
SINA-Sales-HoSi@secunet.com
www.secunet.com

