

SINA[®]

Intelligent Solutions for the Highest IT Security Requirements



secunet



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

SINA (Secure Inter-Network Architecture) enables the protected processing, storage, transfer and also a full audit trail of classified information and other sensitive data. The portfolio comprises various SINA clients, gateways, link encryptors, SINA Workflow as well as the SINA Management. All SINA products have successfully been used by with national and international customers for 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 the Internet Protocol (IP) level for protecting secret material that would be suitable for use in secure communication across wide area networks (WAN).

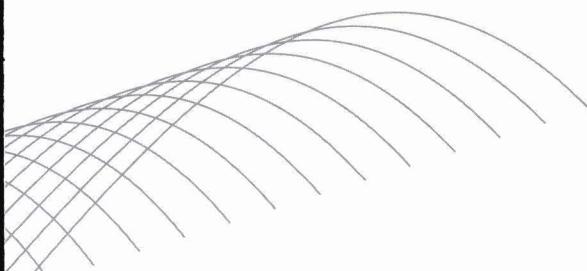
The German Federal Office for Information Security (BSI) outlined the broad concept for SINA towards the end of the 1990s. In December 1999, the BSI awarded secunet Security Networks AG with the development of the SINA product series.

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.”



Federal Office
for Information Security

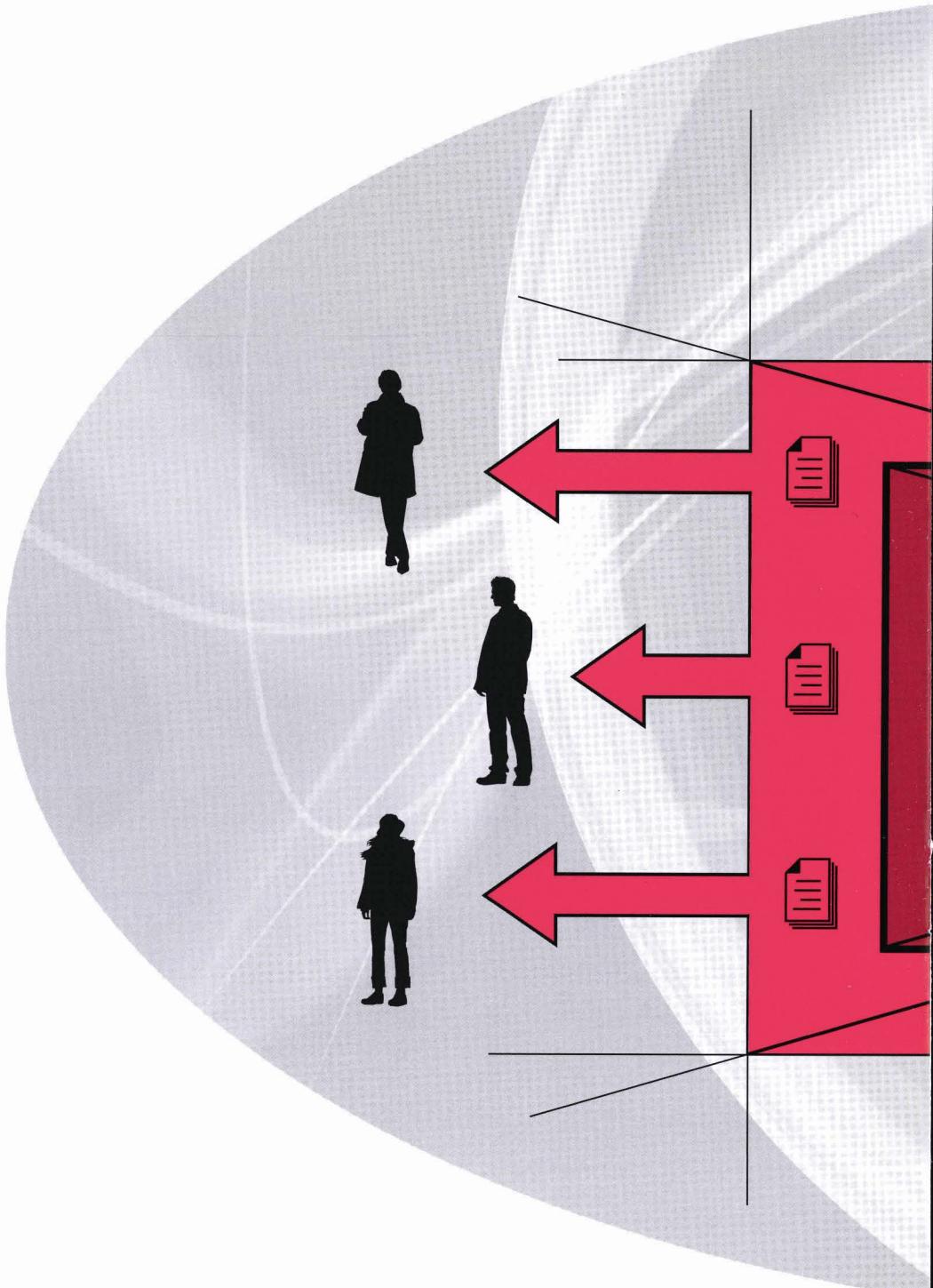


Modular system architecture for high security

Holistic security

SINA's holistically designed architecture makes it the intelligent solution for virtually any requirement 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

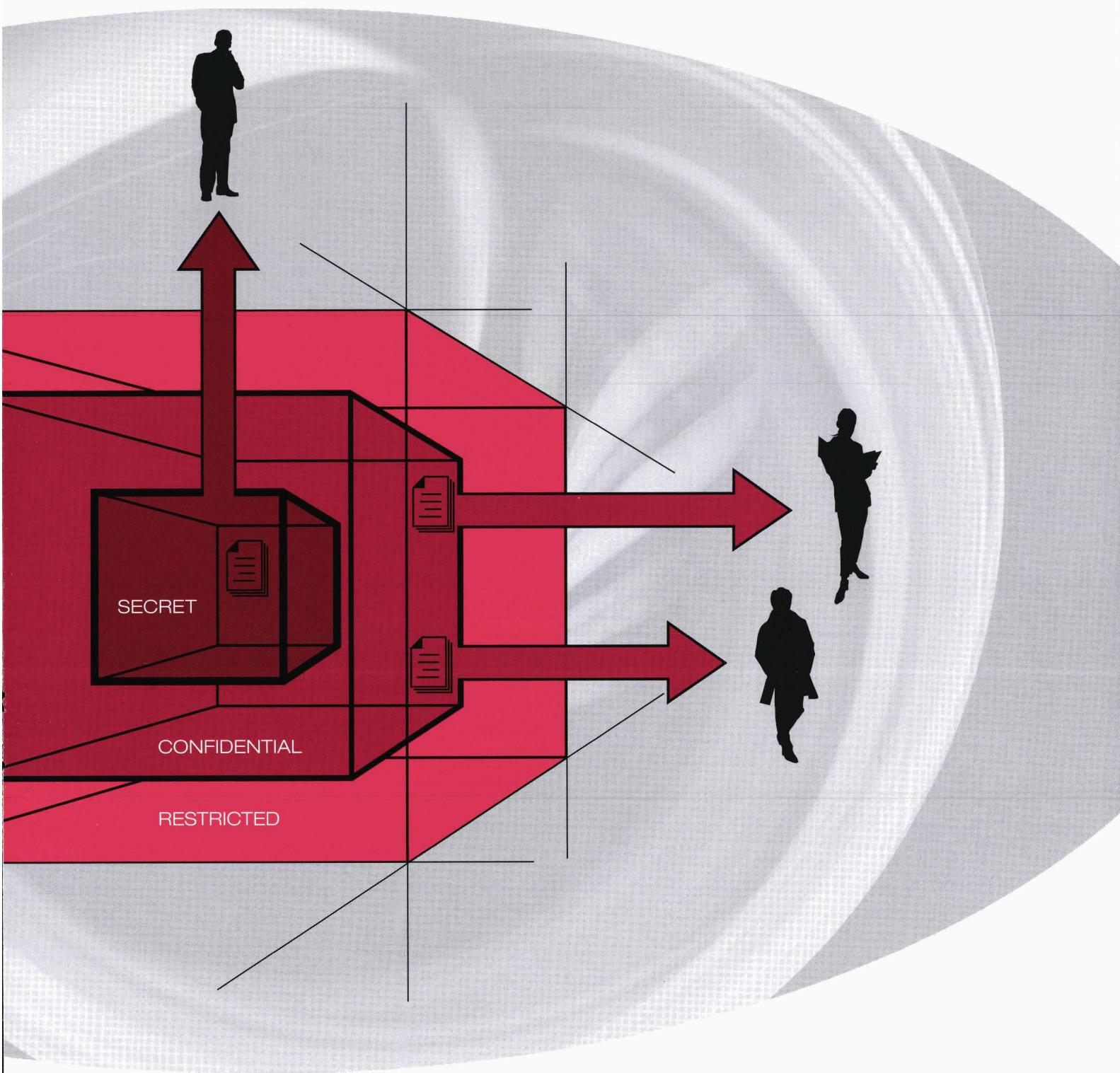
reliability standards and are constantly undergoing further development. SINA ensures confidentiality of processing and communication at all national classification levels and for every conceivable scenario.



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 security, 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

Multilevel Security

The decisive advantage of SINA is the processing and storage of differently classified data using 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 can be adapted to specific protection requirements. No matter where you are 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 every significant communication channel, 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 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 different levels of 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 thin-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

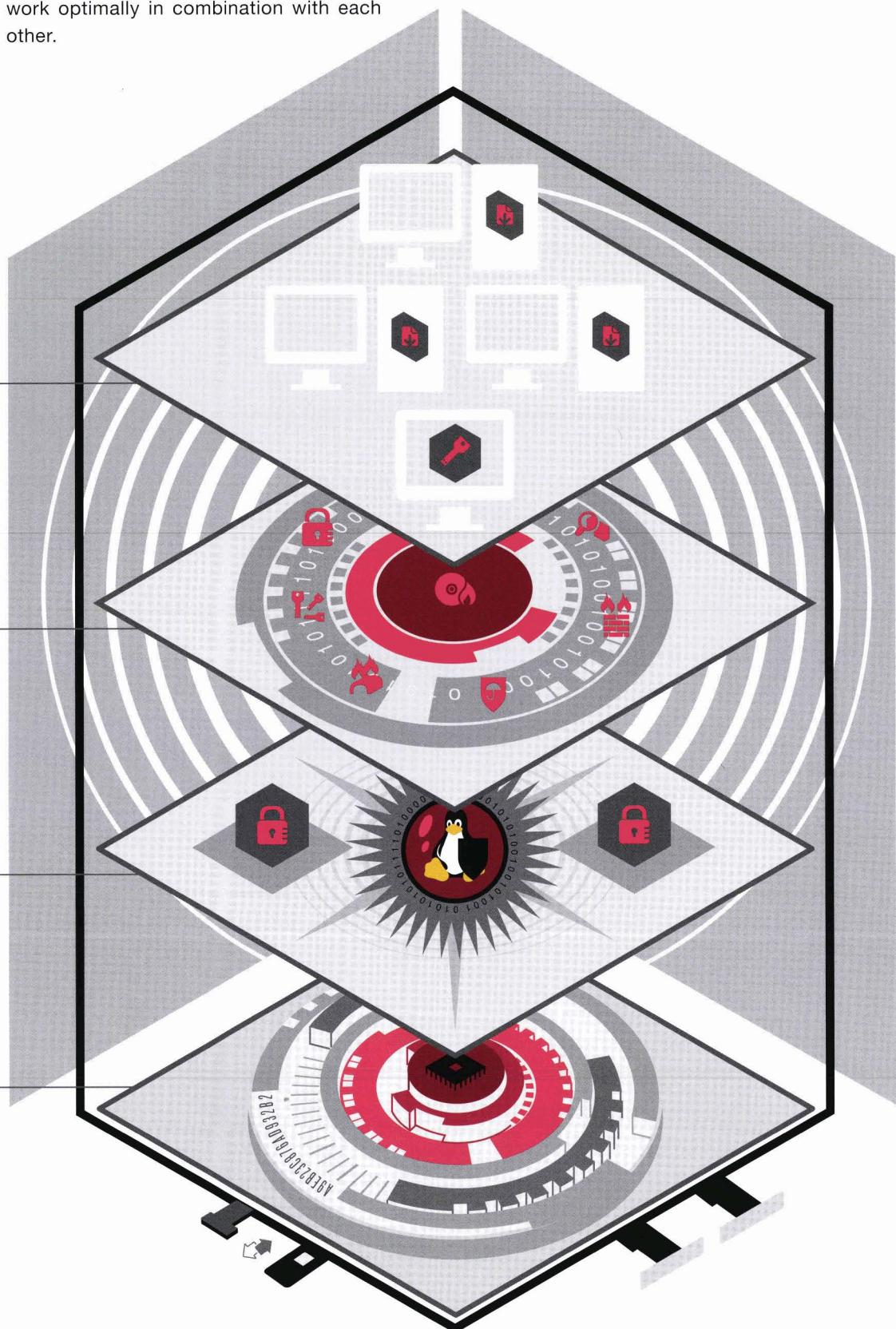
The software foundation of SINA technology is the severely pruned SINA Linux, which has been functionally hardened and intensely evaluated for security. Embedded in the system platform are a Smartcard – the cryptographic anchor – and the cryptographic file systems.

Hardware platform

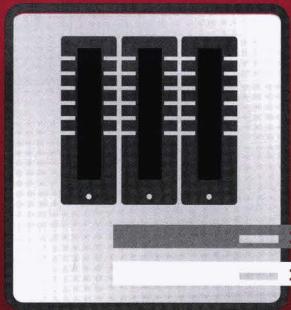
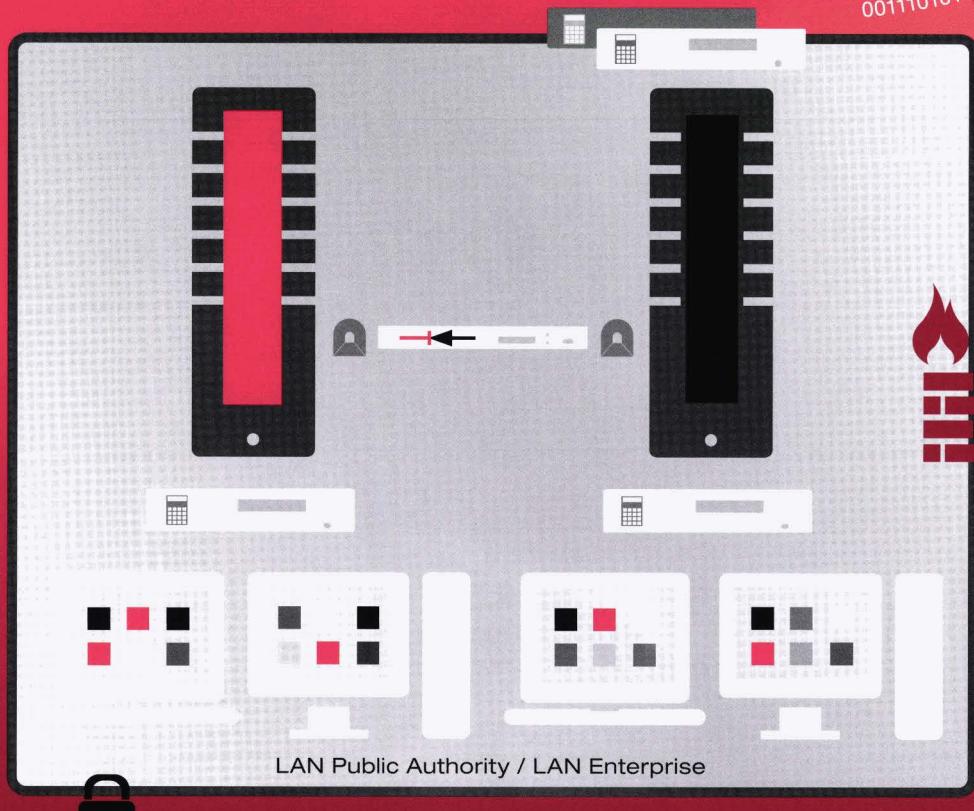
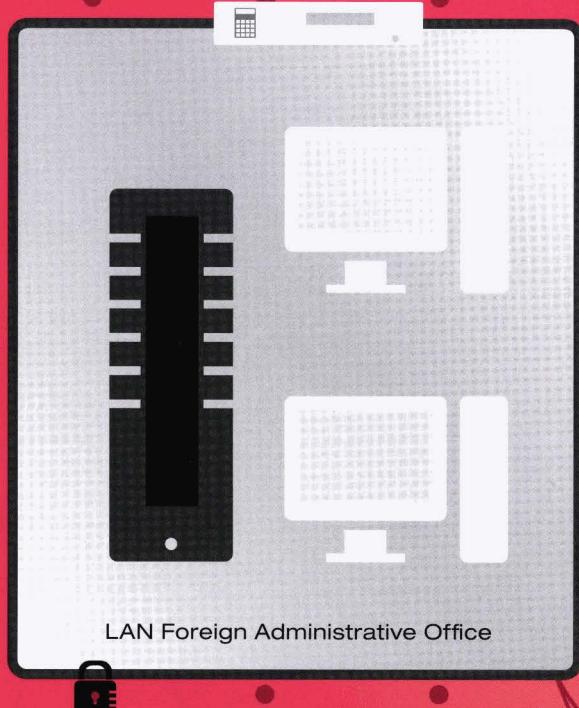
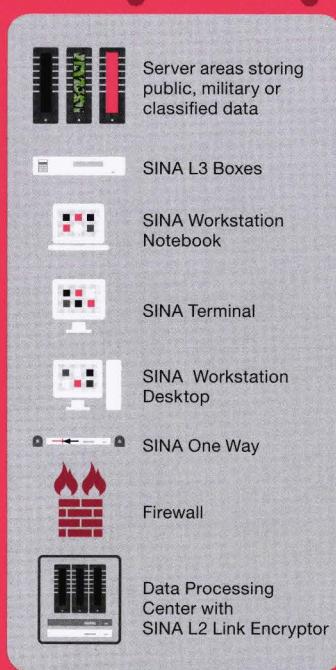
The hardware, which has been dimensioned and configured to conform to classified information approval standards, comes in special design types that offer protection against eavesdropping (TEMPEST) and manipulation, as well as cryptographic modules and appropriate hardening. Furthermore it contains firmware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

What makes SINA so powerful?

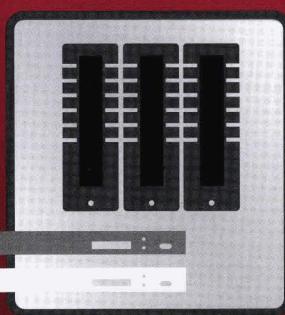
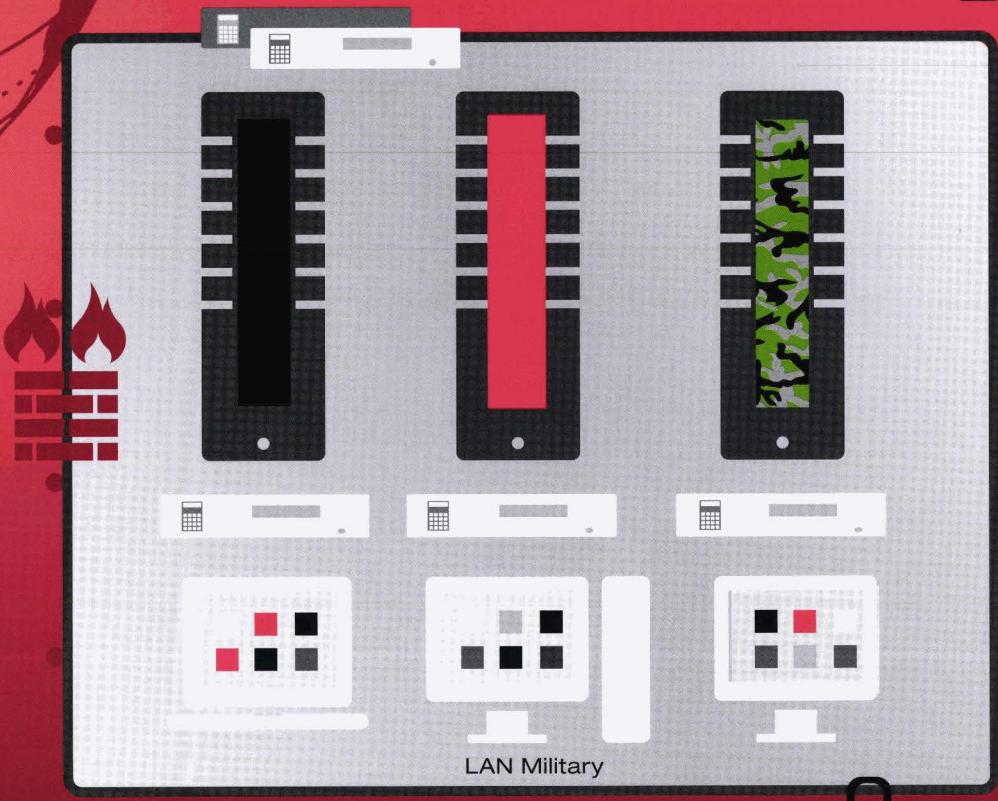
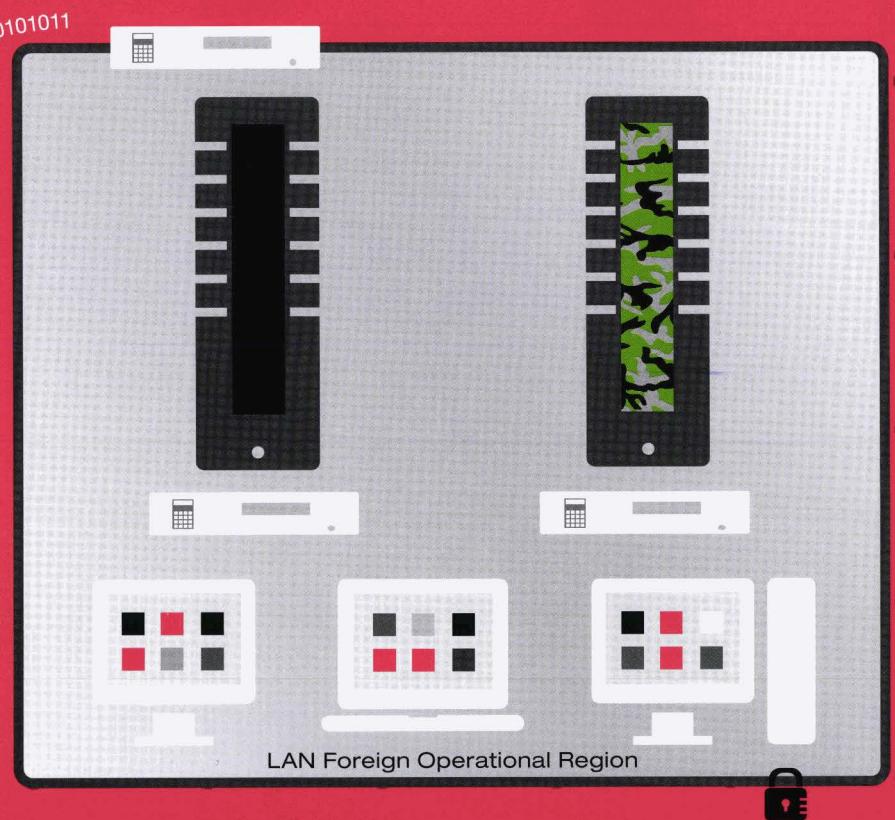
SINA is a holistically sophisticated system technology with security components that work optimally in combination with each other.



Scenarios for use



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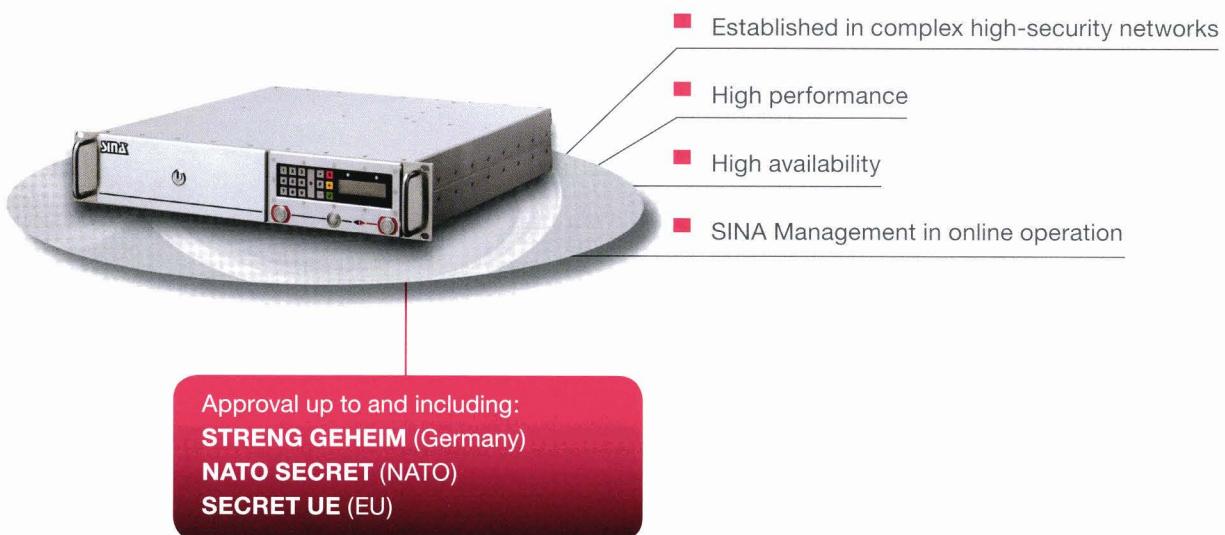


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SINA L3 Box

SINA L3 Box as a VPN gateway is the central core component in high-security networks. The data that is exchanged between SINA L3 Boxes, or indeed between SINA clients and SINA L3 Boxes, is transmitted securely via so-called 'cryptographic VPN tunnels'. SINA L3 Boxes are used to connect government bodies and private com-

pany networks via public connections, e.g. the internet. SINA L3 Boxes additionally serve as cryptographic network access points to permit access by SINA clients to (terminal) server areas. SINA L3 Box has been acknowledged as the standard solution for many years now.



SINA L3 Box S 30M



SINA L3 Box S 200M
SINA L3 Box S 1G



SINA L3 Box S 3G



SINA L3 Box H R 200M SDIP 27A
(planned for 2013)



SINA L3 Box E 400M Zone 1
SINA L3 Box H 200M Zone 1
SINA L3 Box H 200M SDIP 27A

SINA Workstation

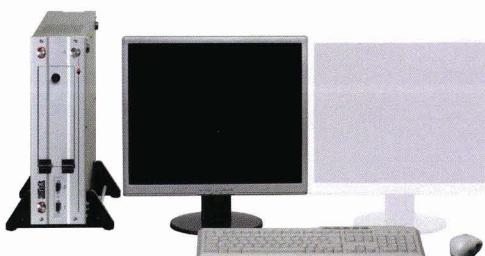
SINA Workstation can be used as both a mobile or stationary crypto-client. SINA Workstation users can work when they need to, using their usual operating environment (e.g. MS Windows), with complete security and convenience, online as well as offline, in the office or on the road. Working in different security zones is made possible by operating multiple guest systems in parallel (e.g. simultaneously in a classified network and the internet).

This all-round security concept means that SINA Workstation is able to offer considerably more than a conventional cryptographic device, i.e. Smartcard, VPN, hard drive encryption, interface control or 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 on different classified networks in one single work station
- Encryption of hard drives and networks

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



SINA Workstation E Desktop Zone 1
SINA Workstation H Desktop Zone 1
SINA Workstation H Desktop SDIP 27A



SINA Workstation H R Notebook Zone 1

SINA Terminal

SINA Terminal is a crypto-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 in encrypted form to the terminal server, where the actual data processing and storing is carried out.



- Established in complex high security networks
- Simultaneous processing of classified data in up to six thin client sessions using just one client
- Work stations with multiple PCs in differently classified networks consolidated in one single thin client

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



SINA Terminal E Desktop Zone 1
SINA Terminal H Desktop Zone 1

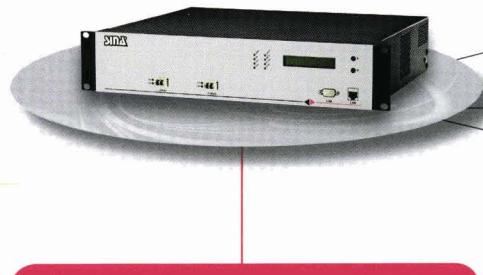


SINA Terminal H Desktop SDIP 27A

SINA L2 Box

The SINA L2 Box series offers components of unprecedented performance for the secure exchange of information in networks at the link level. LAN connections via public links carry the risk of data being read or manipulated by unauthorised persons.

SINA L2 Boxees reliably encrypt data without in any way impairing the functioning or performance of the LAN applications. SINA L2 Boxes operate at transmission speeds of up to 10 GBit/s.



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

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



SINA L2 Box S 10G



SINA L2 Box S 1G



SINA L2 Box S 100M

SINA One Way

SINA One Way 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 sys-

tem 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 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 enables the elimination of a return channel
- High data throughput
- Common Criteria EAL 7+ Certification



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

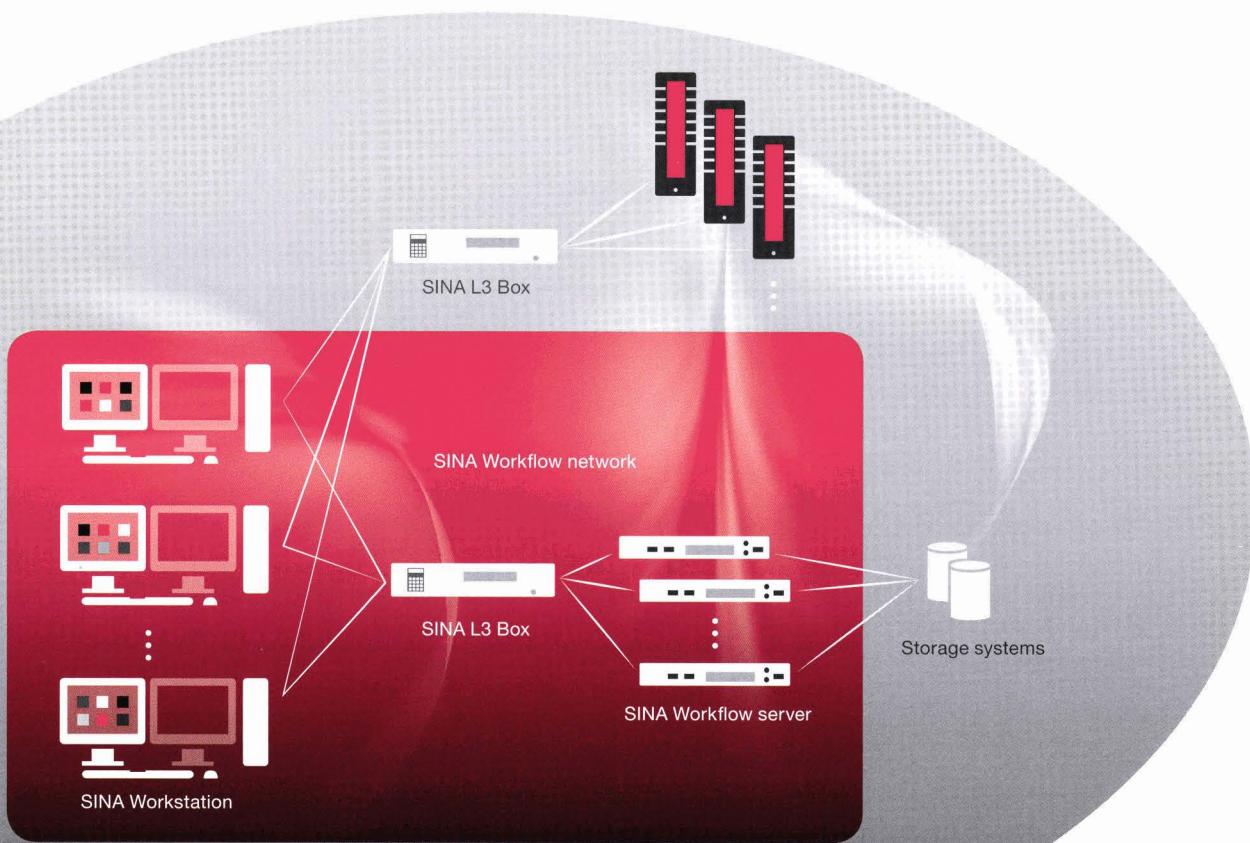
SINA Workflow

Previous registries for classified information only addressed the classic, paper-based classified document world. This meant that, while it was possible to create classified documents by electronic means, it was only possible to collect them in the form of printouts because there were no approved electronic registries for classified information. In addition, there was a lack of a consistent cryptographically supported implementation of the “need to know” principle in classified information processing.

Until now, the market has not offered any solutions that met the requirements of the encryption instructions for classified information. This means that, for example, approval and co-signatory processes (workflows) are almost all implemented through organizational measures.

The SINA Workflow system solution ensures a secure, consistent and compliant implementation of specific businesses processes involving classified information. SINA Workflow applies as soon as the data is generated and stays with the process right up to document destruction.

This modular system solution also supports the import and export of classified data and is prepared for the exchange of classified data across all domains. SINA Workflow is a network of secure workplaces with SINA Workstations and scalable SINA Workflow servers with integrated electronic registry for classified data.



"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? 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 make best use of our products. Give us a call at 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