safe and smart

ECOS

Remote Work

ECOS SecureSecureBootStick®

ECOS **SecureBootStick®**

Highly Secure Remote Access to Data and Applications

For home office, mobile use or external service providers

- ◆ **BSI-approved for VS-NfD, EU/NATO RESTRICTED**
- ◆ **For enterprise, third-party and private PCs**
- ◆ **Easy, flexible, highly secure**

IT Security Solutions
Made in Germany

BSI
approved
VS-NfD
EU/NATO RESTRICTED

ECOS TECHNOLOGY

ECOS **SecureBootStick®**
Remote access—easy, flexible, highly secure

With the outbreak of the Corona pandemic, jobs shifted from workplaces to homes.

IT departments had to provide appropriate solutions within a very short time—a Herculean task, with IT security often falling by the wayside. The current threat landscape shows more than ever: Protection against cyber attacks and espionage is vital.

While a great deal of effort is put into protecting IT infrastructures, home offices are all too often still the weak point. Even seemingly nonrelevant data or uncritical user behavior may provide important information for an attacker to target the organization as part of a long-term attack.

This is where the ECOS SecureBootStick (SBS) enters the picture: The underlying security concept is designed to allow the SBS to operate securely even on a malware-infected PC in a vulnerable network.

However, the solution still provides highly effective protection against attacks and espionage. The SX and ZX are BSI-approved for processing data classified VS-NfD and EU/NATO RESTRICTED even when used with a personal notebook or PC.

ECOS **SecureBootStick® product family**

◆ The ECOS SecureBootStick CL offers customers a high level of security at a particularly attractive price.

◆ The ECOS SecureBootStick HE takes the proven solution to a new level of security thanks to a custom-designed and hardware-encrypted USB stick equipped with numerous security features.

◆ Like the HE, the ECOS SecureBootStick FX provides a range of security features molded into hardware. It is equipped with an integrated smart-card and a PIN pad for direct PIN entry.

◆ The ECOS SecureBootStick SX is largely identical to the FX, but additionally BSI-approved and specifically designed to provide access to data and applications classified VS-NfD, EU/NATO RESTRICTED—even on a private PC.

◆ The ECOS SecureBootStick ZX is identical to the SX in design and software. Equipped with an ID-1 card slot, it supports PKI and ID cards for user authentification.

Benefits

◆ **Flexible** to use with any common enterprise notebook or private PC

◆ **Easy** administration and seamless integration into IT infrastructure

◆ **Highly secure,** thanks to the cascading of numerous security mechanisms

◆ **Guaranteed,** with BSI approval for VS-NfD, EU/NATO RESTRICTED

ECOS SecureBootStick product family

CL   HE   FX   SX   ZX

Perfect for enterprises and government agencies requiring a high level of security

Connect to government/enterprise networks with high security
The ECOS SecureBootStick provides highly secure access to terminal server/virtual desktop infrastructures and web applications from a secured and encapsulated environment.

Any conventional PC can boot the specially hardened ECOS Secure Linux operating system on the Secure Boot Stick (SBS). The internal hard drive stays deactivated, so potential malware on the hard drive will never get any chance.

Disconnecting the internal hard drive ensures 100% separation of business and private use of the PC. The government or enterprise SBS contains all firmware and applications. The private PC is thus only a private peripheral.

One SBS, all of the software
The SBS includes all clients that are required for a highly secure access to Microsoft RDSH (formerly known as Windows Terminal Server), Citrix Virtual Apps and Desktops (formerly known as XenApp and XenDesktop), VMware Horizon (formerly known as VMware View), and PCs with Remote Desktop Sharing. The SBS has built-in Firefox and Chromium browsers for access to web applications.

Easy to implement and administrate
The integrated VPN clients interface with any existing VPN gateway through IPsec or OpenVPN. An HTTPS connection is possible in conjunction with Citrix ADC (formerly Citrix NetScaler). A

Cisco AnyConnect client (over SSL) and clients for Juniper and F5 are available alternatives to the integrated VPN client (subject to additional manufacturer licenses). In accordance with the SecOps, the BSI-approved ECOS SecureBootStick SX/ZX requires a genua genuscreen as VPN gateway.

ECOS Easy Enrollment allows to roll out a large number of accesses in a very short time. Each user is equipped with an identically pre-configured SBS. The central management generates personal activation codes or, in the case of the FX/SX variants, issues personal smartcards to provide the SBS with the user-specific configuration. The ZX variant is coupled to an already existing PKI card or a personal ID card through the synchronization of public keys. All SBS can be centrally managed and remotely updated with the ECOS SystemManagementAppliance.
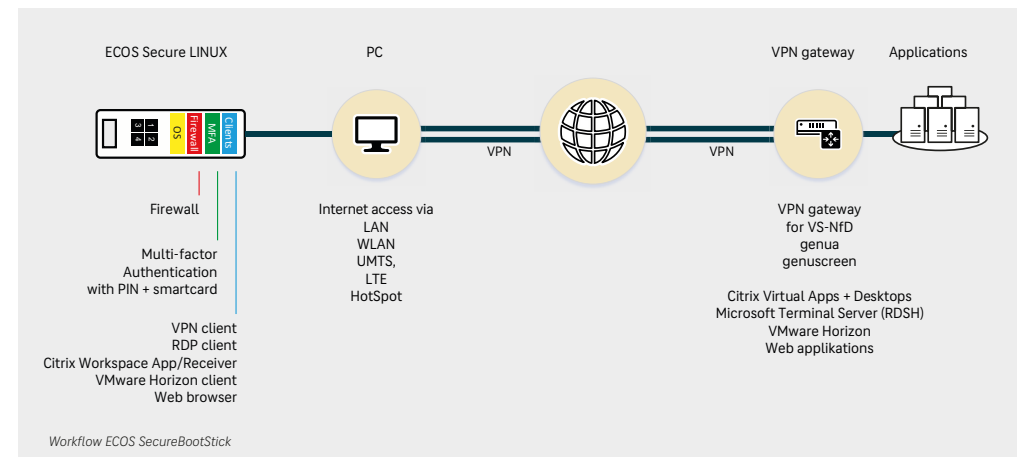
Multi-factor authentication
In addition to the security of a protected and encapsulated environment, the Secure Boot Stick also provides strong multi-factor authentication. In the CL product variant, the SBS is personalized using a certificate that is tied to the SBS hardware ID. From the HE variant on, the SBS is coupled through a cryptographic key in the hardware. The FX/SX/ZX variants add a smartcard for authentication.

User-friendly and flexible
The Secure Boot Stick is very easy to use. After start-up and PIN entry, the PC or Mac boots up

and directs the user to a selection of released systems or applications. For WLAN operation, the key entry is just as simple as on a smartphone and the key is encrypted and stored for future logins. After selecting the desired system or application, users have access to their accustomed environment.

ECOS Secure LINUX	PC		VPN gateway	Applications

Firewall

Multi-factor
Authentication
with PIN + smartcard

VPN client
RDP client
Citrix Workspace App/Receiver
VMware Horizon client
Web browser

Internet access via
LAN
WLAN
UMTS,
LTE
HotSpot

VPN
VPN

VPN gateway
for VS-NfD
genua
genuscreen

Citrix Virtual Apps + Desktops
Microsoft Terminal Server (RDSH)
VMware Horizon
Web applikations

Workflow ECOS SecureBootStick

safe and smart

Features of the ECOS SecureBootStick®	CL	HE	FX	SX	ZX
BSI approval					
Approved for processing data with classification level VS-NfD, EU/NATO RESTRICTED				√	√
Applications					
RDP client, Citrix Workspace App, VMware Horizon (per RDP, PCoIP, BLAST), Firefox, Chromium, VPN client for IPsec	√	√	√	√	√
Citrix HDX RealTime Media Engine for optimizing audio/video for Skype for Business & Microsoft Teams	√	√	√	√	√
Microsoft RemoteFX for optimizing audio quality with RDP	√	√	√	√	√
Supported destination systems					
Microsoft RDSH, WTS 2000 and later, RDS, RD sharing, Citrix Virtual Apps & Desktops, VMware Horizon or web server	√	√	√	√	√
VPN					
Connection to any gateway via IPsec, OpenVPN or https | Connection to genua genuscreen via IPsec	√ | -	√ | -	√ | -	- | √	- | √
Additional VPN clients: Cisco AnyConnect, Juniper, F5 (additional licenses may be required)	√	√	√		
Compatibility					
Integrated smartcard reader for PKI cards with CardOS 5.X and JCOP in ID-1 format (service ID card, military ID card)			√ | -	√ | -	- | √
Compatible with all common 64-bit PCs and tablets with x86 architecture	√	√	√	√	√
UEFI Secure Boot support	√	√	√	√	√
Multi-factor authentication					
Software certificate, tied to the SBS hardware ID | Hardware anchor | Smartcard	√ | - | -	√ | √ | -	√ | - | √	√ | - | √	√ | - | √
Password input on-screen | Integrated pinpad for PIN entry on SBS	√ | -	√ | -	- | √	- | √	- | √
Security					
Hardened ECOS Secure Linux operating system	√	√	√	√	√
Digitally signed bootloader, firmware and applications with verification in chain of trust procedure	√	√	√	√	√
Integrated firewall for protection against attacks within the same network and blocking of ping requests	√	√	√	√	√

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For detailed information on the ECOS SecureBootStick®, a brochure is available for download.