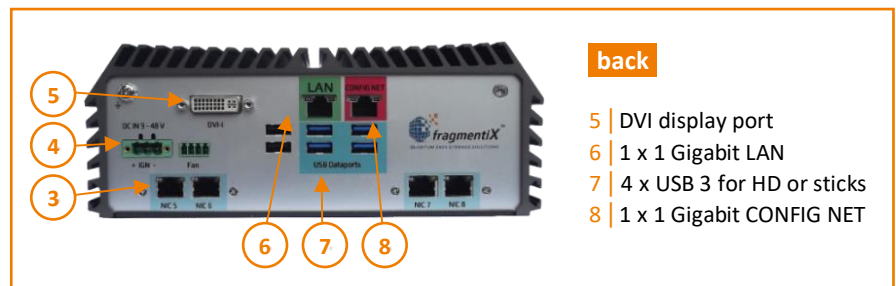
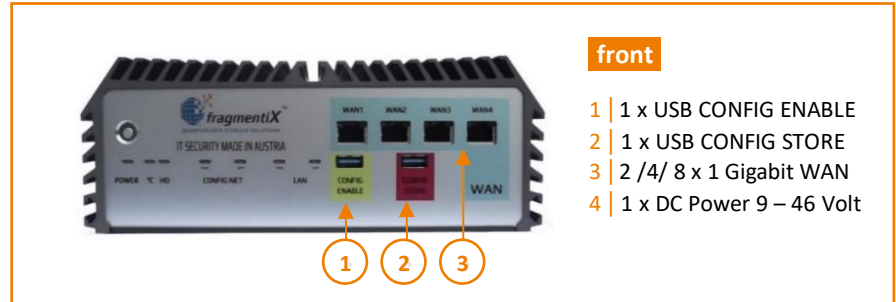


Digital Sovereignty with fragmentiX[®] Storage Appliances

Your Advantages:

- Cryptographic guarantee through Secret Sharing and thereby Quantum Safe
- Secure end-to-end storage solution
- Hardened appliance with simplest use and full integration in Windows, Linux and Apple environments
- You no longer have to trust any provider



fragmentiX[®] Storage Appliances ensure that your data is securely distributed and stored on storage locations of your choice and completely transparent to the users. The frXOS operating system provides network drives for all common network protocols at the green marked "LAN port" of the device. Even in mixed environments, the appropriate drive shares for Windows, Apple and Linux devices can be provided simultaneously.

Directories and files that are copied or moved to these "fragmentiX[®] drives" are divided into several FRAGMENTS after a short processing time and stored on the storage locations defined for them. These FRAGMENTS are then made available to the users at the network drive/share by these storage locations for "reading" or editing.

To the users it is not obvious that sensitive data is stored with fragmentiX[®] and not on the local file server.

SECRET SHARING – Safety through sharing

A separate configuration can be created for each conceivable use case. By specifying the "frX Ratio" you determine how many of the generated FRAGMENTS are required to restore the original data. The smallest "frX Ratio" of 2/3 or "2 out of 3" means that out of 3 generated FRAGMENTS at least 2 are required to restore the data.

It does not matter "which 2" files from the set of 3 FRAGMENTS are available - all FRAGMENTS are equal.

INFORMATION-THEORETICAL SECURITY

Thanks to their secure and hardened architecture and the use of secret sharing algorithms that have been tested over many years, fragmentiX[™] storage appliances offer a solution with a cryptographic guarantee. No single FRAGMENT contains usable information for an attacker or data thief. No part of the original file can be restored or cracked. By the self-determined number of the generated and the necessary number of FRAGMENTS again for reading can be guaranteed that only the possession of this minimum number of FRAGMENTS makes a READ possible.

Supported system environments

fragmentiX[®] Storage Appliances can be integrated into existing IT environments with the following protocols:

- SMB Samba Shares for Windows Networks incl. AD
- NFS versions 3 and 4 for Linux and Unix operating systems
- AFP for current Apple MacOS environments
- Apple Time Machine Backup & Restore
- Numerous commercial and open source backup solutions
- S3 based storage solutions

Storage locations

All data stored "on" a fragmentiX[®] Storage Appliance is stored after the cryptographic division in FRAGMENTS on the defined storage locations - NO DATA LOCALLY remains on the Storage Appliance.

Three storage types can be selected as storage locations:

- S3 compatible cloud storage on the Internet
- Local S3 compatible memory available in LAN / VPN
- USB hard disks or USB sticks connected locally to the storage appliance

The different memory types can be combined in any way and thus enable a multitude of possible effects such as extreme resilience or digital long-term availability.

Due to the increased redundancy provided by the fragmentiX[®] Storage Appliance, cheaper storage providers can be combined with premium providers and/or local S3 storage.

It is also possible, for example, to split sensitive data for individual applications only on USB sticks and thus work completely without cloud services.

Configuration and protection mechanisms

Changes to the configuration can only be made by an administrator via a specially protected WEB interface. The use of state-of-the-art Crypto-USB sticks ensures that all safety-relevant data can only be read on the respective fragmentiX[®] box and modified by the authorized admin.

Without the YELLOW "CONFIG ENABLE" USB stick, no one can access the sensitive information.

Industrial Hardware

The fragmentiX[®] boxes, finished in Austria, are designed for long-term stable operation without hardware maintenance. For protection against theft and manipulation by unauthorized persons, the devices are prepared for installation in protected rooms with mounting rails. Optionally, they can also be ordered ex works with a suitable safe and the necessary connection cables for all network connections and the power supply.

Hardened frXOS software environment

frXOS - the hardened operating system of the fragmentiX[®] Storage Appliances - was developed to make the use for users and administrators both secure and simple. All functions are kept up to date through regular updates, which can be carried out either via the Internet or via USB sticks sent to you. A valid maintenance contract is required to receive the latest frXOS updates at the end of the first year.

Multi WAN and fragmentiX[®] Cluster & Paranoia

In order to make it more difficult for attackers to intercept FRAGMENTS, several WAN connections and ISPs should be used if possible. The CLUSTER and PARANOIA models will soon be available for use in data centers or with tempest shielding against radiation emissions.

Technical Features:

	fragmentiX [®] ONE	fragmentiX [®] THREE	fragmentiX [®] FOUR	fragmentiX [®] CLUSTER	fragmentiX [®] TEMPEST
Max. number of memory locations	8	16	26	26	26
Number of LAN interfaces	1 x GBit	1 x GBit	1 x GBit	8 x 10 GBit	1 x GBit
Number of WAN interfaces	2 x GBit	4 x GBit	8 x GBit	8 x 10 GBit	4 x GBit
Size (W x D x H) in mm	227 x 261 x 88	227 x 261 x 88	227 x 261 x 88	19 Zoll 4U	tbd
Weight (kg)	4,7	4,7	4,7	about 60	about 8
Application environments	Personal & SME Office environments	Department Office environments	Large groups and authorities	Datacenter	Army and Law Enforcement Mobile USE
Power					
AC Input	100-230V AC	100-230 V AC	100-230 V AC	100-230 V AC	AC & DC
Power supply capacity	120 W	120 W	120 W	2 x 1000 W	ca. 60 W

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