

InfoGuard Multilink Encryption – High-Performance Encryption for Ethernet, Fibre Channel and FICON Links!



- Flexible and cost-effective data encryption using AES for Ethernet-, Fibre Channel- and FICON connections
- 100% encryption performance and minimal latency < 1 μ s
- Transmits up to ten different signals using STM-64/OC-192 links
- Supports Gigabit Ethernet, 1/2/4 Gbps Fibre Channel and 1/2 Gbps FICON
- Easy network integration and minimal maintenance

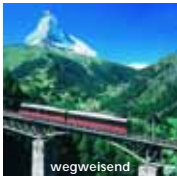
Using optical networks and different network protocols for transferring business-critical information has become quite commonplace. What is often overlooked, however, is that such fiber optic links can be tapped and manipulated, too. Also, it is possible for third parties to gain access to a company's internal structure. The only appropriate and reliable measure to protect information and to meet existing compliance requirements is to encrypt the data.

Two companies, InfoGuard and ADVA Optical Networking, have risen to this challenge, developing a flexible and cost-efficient encryption solution for up to 10 Ethernet, Fibre Channel and FICON connections over a single STM-64 Link.

InfoGuard Multilink Encryption – High-Performance Encryption Solutions bearing the Swiss Seal of Quality!

In day-to-day business, data transfer over fiber optic networks has become 'de rigueur'. In more and more networks, bandwidths of up to 10 Gbps are the order of the day when linking various sites e.g. server farms and computer centers as well as for backup and disaster recovery infrastructures. Unfortunately, the prevailing opinion according to which fiber optic lines, compared with regular copper cables, are especially secure, does not hold true in practice. On the contrary: Just bending the fiber is all it takes to listen secretly to information exchange. The only reasonable and secure measure for protecting yourself against attacks of any kind is the encryption of that information without, however, jeopardizing performance in any way. InfoGuard products have been developed – in accordance with international security standards – exactly for this demanding task using an approach that is truly exemplary and innovative.

Maximum Performance



InfoGuard encryption devices are fully transparent within the network. Their

outstanding performance, i.e. 100% encryption throughput, and their minimal latency of <math><5\mu\text{s}</math> make it possible to use the devices even in time-critical applications and in heavy-load links.

Great Flexibility

Their flexible and modular architecture allows them to be used perfectly tap-proof in various protocols (Ethernet, SONET/SDH, Fibre Channel) in conjunction with different MAN, WAN and SAN applications at data rates of 10 GbE.

Powerful Data Encryption

All security solutions have been developed strictly in accordance with the Common Criteria and FIPS 140-2 level 3 requirements. Data encryption is done using the public Advanced Encryption Standard (AES) with a key length of 128 or 256 bits.

Easy Handling

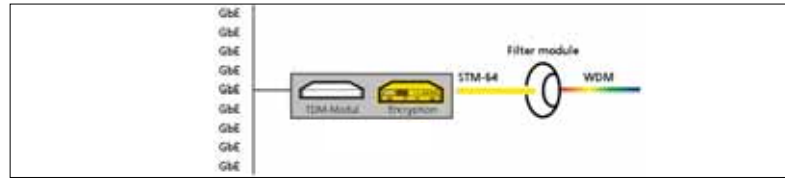
Simplicity and ease of use to the benefit of security are guaranteed. The devices can be managed locally via the internal user interface or via a graphic PC user interface or remotely via a secure SSH port.

High Availability

InfoGuard products have been explicitly designed for longevity and require almost no maintenance. In order to guarantee uninterrupted service at all times, the devices are equipped with a redundant power supply. In order that users can depend on the high availability of the devices, InfoGuard provides individually tailorable maintenance services.

A Swiss Product

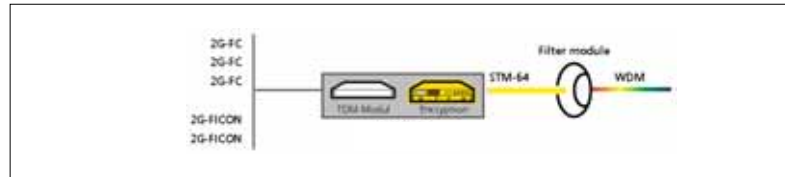
A Swiss company, we can guarantee the highest quality of our products and absolute independence when implementing our security features. All security-relevant modules are developed and manufactured by our certified security specialists in Switzerland.



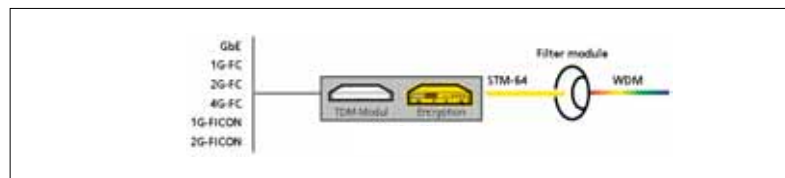
Ethernet

Ethernet

Our encryption solution allows up to 9 Gigabit Ethernet signals to be fed in on the client side, mapped into an STM-64 signal and subsequently encrypted. It is in particular companies operating several Gigabit Ethernet channels between two sites that will find InfoGuard Multilink Encryption a cost-efficient solution.



Fibre Channel / FICON



Heterogeneous Networks

Fibre Channel / FICON

It is quite common to connect two SAN islands via several Fibre Channels and/or FICON links. It is here, where encrypting the individual channels is often impossible at reasonable cost, that the encryption solution provides a perfect alternative. On the client side, any number of Fibre Channels (1/2/4 Gbps) or FICON (1/2 Gbps) signals up to a total speed of 10 Gbps (STM-64) can be fed in, converted to an SDH/SONET container and subsequently encrypted.

Heterogeneous Networks

Many companies employ a mix of different network and storage links between two sites. The possibility of combining different protocols on the input side (Gigabit Ethernet, Fibre Channel, FICON) at a total speed of up to 10 Gbps makes the encryption device a universal, scalable and flexible encryption solution.

Don't hesitate to protect your information today. Using InfoGuard Multilink Encryption, the technology of tomorrow!

InfoGuard Multilink Encryption – The Powerful Security Platform for Ethernet, Fibre Channel and FICON Links.

MuxGuard 10 Port	
Encryption Unit	
Security	<ul style="list-style-type: none"> · Full-duplex AES (128/256 Bit) · Data encryption at the SDH level at 9.953 Gbps (STM-64/OC-192) · Keys generated by a hardware random number generator · Automatic key change after configurable interval without link loss · Designed in accordance with the EAL3 Common Criteria Security Standard · Meets the FIPS 140-2 Level 3 requirements
Management	<ul style="list-style-type: none"> · Password protection, user-based access rights · Secure remote management (SSH v2 CLI) · Inter-unit management via SecurityCard – SDC-1100 · Local management via browser-based user interface or via keypad and display · Standard Network Management (SNMPv1/Standard MIB-II) · Audit and event logging
Hardware	<ul style="list-style-type: none"> · Manipulation-proof hardware design · Network port: XFP module with LC connector: Single Mode 1310/1550 nm, CWDM and DWDM · 19" rack-mounting – 2 units high · Redundant hot-swap power supply, 100V–240 V AC 50...60 Hz, 48V DC, 100 W max. power consumption · MTBF 50,000 hours
TDM Module	
Protocols	<ul style="list-style-type: none"> · Gigabit Ethernet · Fibre Channel 1/2/4 Gbps · FICON 1/2 Gbps · 10Gbps max. bandwidth (STM-61/OC-192)
Interface	<ul style="list-style-type: none"> · SFP module: 850/1310 nm single mode and multi mode · Supports all common connector types · Laser class 1
Hardware	<ul style="list-style-type: none"> · 19" rack-mounting – 1 unit high · Power supply -36 V DC to -72 V DC or 120/230 V AC

InfoGuard InfoGuard – Your Partner for Effective Security Solutions bearing
the Swiss Seal of Quality!

We have many years of experience in planning and developing security solutions for demanding applications. All security-relevant features are developed, manufactured and implemented by InfoGuard's certified security specialists in Switzerland.



ADVA Optical Networking

ADVA Optical Networking (FSE:ADV) is a leading provider of optical and Ethernet transport solutions accelerating the introduction of high-performance networks for advanced data, data storage, voice and video services. The company's innovative Fiber Service Platform (FSP) and strong customer orientation enable network operators and companies to scale their networks and to provide intelligent, competitive new services. www.advaoptical.com

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