



Powerful Layer-2-Encryption for Ethernet and Highspeed Services.

Companies in all sectors are dependent upon a rapid exchange of information between individual sites and also when linking data processing centres. If data security is not guaranteed an existential risk exists. The most effective means of protecting information in high performance networks is to employ Layer-2 encryption.

Networks are a lucrative target for white collar criminals

It is essential to provide protection for business-critical data and information. This applies as much to optical networks as to wired and wireless networks. If confidentiality, integrity and authenticity, as well as the availability of customer data, financial transactions or engineering data is not guaranteed, the company may be exposed to an existential risk. Renowned market research enterprises such as IDC¹ and Gartner² confirm this fact. The most secure and also cost-effective method of protecting information is encryption.

Compliance requirements encourage encryption

This measure is also encouraged by numerous regulators such as ISO 27001, PCI-DSS, SOX, Basel II, EU directives or data protection legislation. To avoid a tarnished image, a loss of confidence, and the resulting financial and legal repercussions, it is imperative that companies comply with legislation.

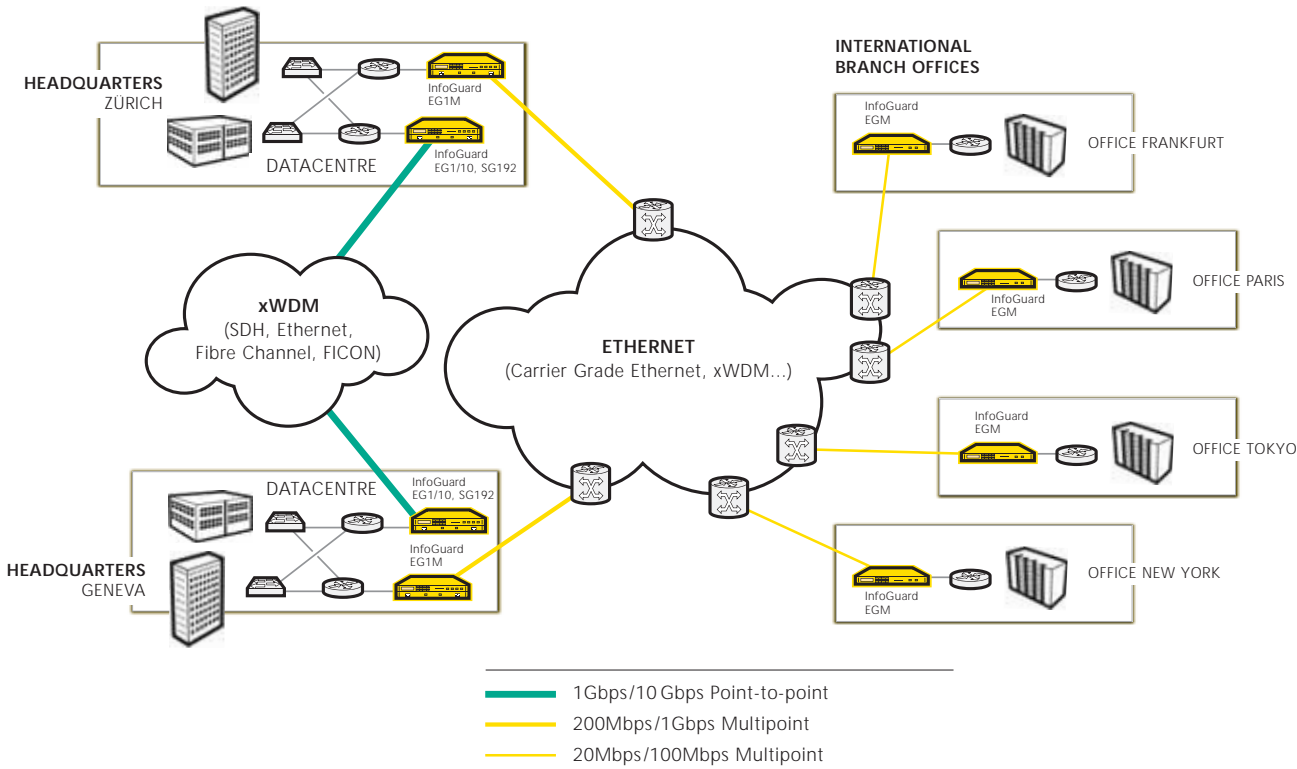
New EU directives demands mandatory data breach notification.

The legal pressure on companies is increasing. Enforcement of the e-Privacy Directive 2009/136/EC requires ISPs and telecom providers to publish data breaches from May 2011 onwards. Additionally, in the foreseeable future (expected in 2014), companies and organisations will be legally obliged to provide greater transparency. With the introduction of the revised EU data protection directive, all companies in the European Economic Area will be subjected to the mandatory disclosure of data breaches.



Fig. 1: Data theft in optical networks – only a very few incidents are acknowledged.

¹ IDC OPINION, 2009 | Fiber-Optic Networks: Is Safety Just an Optical Illusion?



Overhead-free Layer-2 encryption with minimum latency

InfoGuard focuses consistently on the Layer-2 approach. Thanks to the unique implementation encryption generates no overhead and thus guarantees complete data throughput with a minimum of latency – in contrast to IPSec, MACSec, etc.

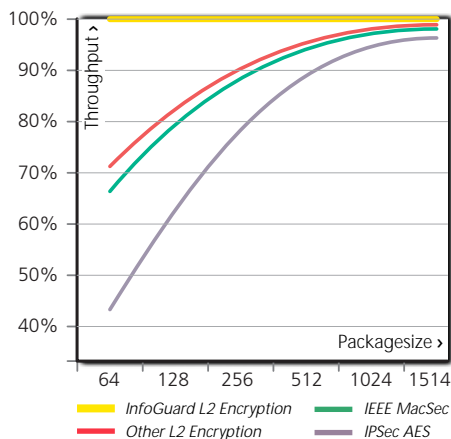


Fig. 3: InfoGuard Layer-2 encryption – comparing performance

Unique security architecture

InfoGuard's core competence is the development of security architectures. Encryption is accomplished using AES with a key length of 256 bits. The hardware based random generator calculates a new session key every few minutes. The eavesdropping and manipulation proof device architecture completes the state-of-the-art security design.

Swiss seal of quality

In order to meet today's high operational demands, the encryption devices set new standards in terms of reliability and endurance. The power supply and ventilation are configured redundantly and are hot-pluggable. All products are developed and manufactured in-house in Switzerland.

Network security from the hands of experts

The solutions

Ethernet – Point-to-Point

- Layer-2 encryption for 1 Gbps and 10 Gbps
- Flexible use in CWDM/DWDM networks
- Supports passive multiplexing
- Maximum availability and reliability
- Simple network integration and minimum operating effort



Ethernet – Multipoint

- Overhead-free encryption from 20 Mbps up to 10 Gbps
- Supports all Layer-2 ethernet topologies based on MEF 6/10 (Hub & Spoke, EPN)
- Encrypts Unicast, Multicast and Broadcast
- Supports Class of Service, VLAN-ID and Q-in-Q Tagging
- Investment protected thanks to optimal upgrades such as speed, number of peer units or class of services



Fibre Channel / FICON / Ethernet

- Multilink and multi-protocol-capable encryption
- Flexible and cost-effective solution up to 10 Gbps
- Investment protected thanks to a freely available combination of up to ten connections via a single secure link
- Supports Fast Ethernet, Gigabit Ethernet, 1/2/4/8 Gbps Fibre Channel/FICON



SDH/SONET

- Point-to-Point encryption for STM-1, STM-4, STM-16 and STM-64
- Simple and problem-free integration in existing SDH/SONET networks
- Can be used in Dark Fibre and CWDM/DWDM networks
- Flexibility in the choice of encryption modes
- Separate encryption of the overhead section



About InfoGuard

InfoGuard is the leading manufacturer of high performance Layer-2 encryption solutions designed to safeguard business processes in companies and public administrations. As a member of "The Crypto Group", one of the largest security providers in Europe with more than 300 employees, customers in over 130 countries benefit from the expertise and many years of experience.

In addition to its headquarters in Zug, Switzerland, the company has representative offices in London, Frankfurt and Dubai.

