



**Technolution**  
**Prime**

**PrimeLink**  
**5001**

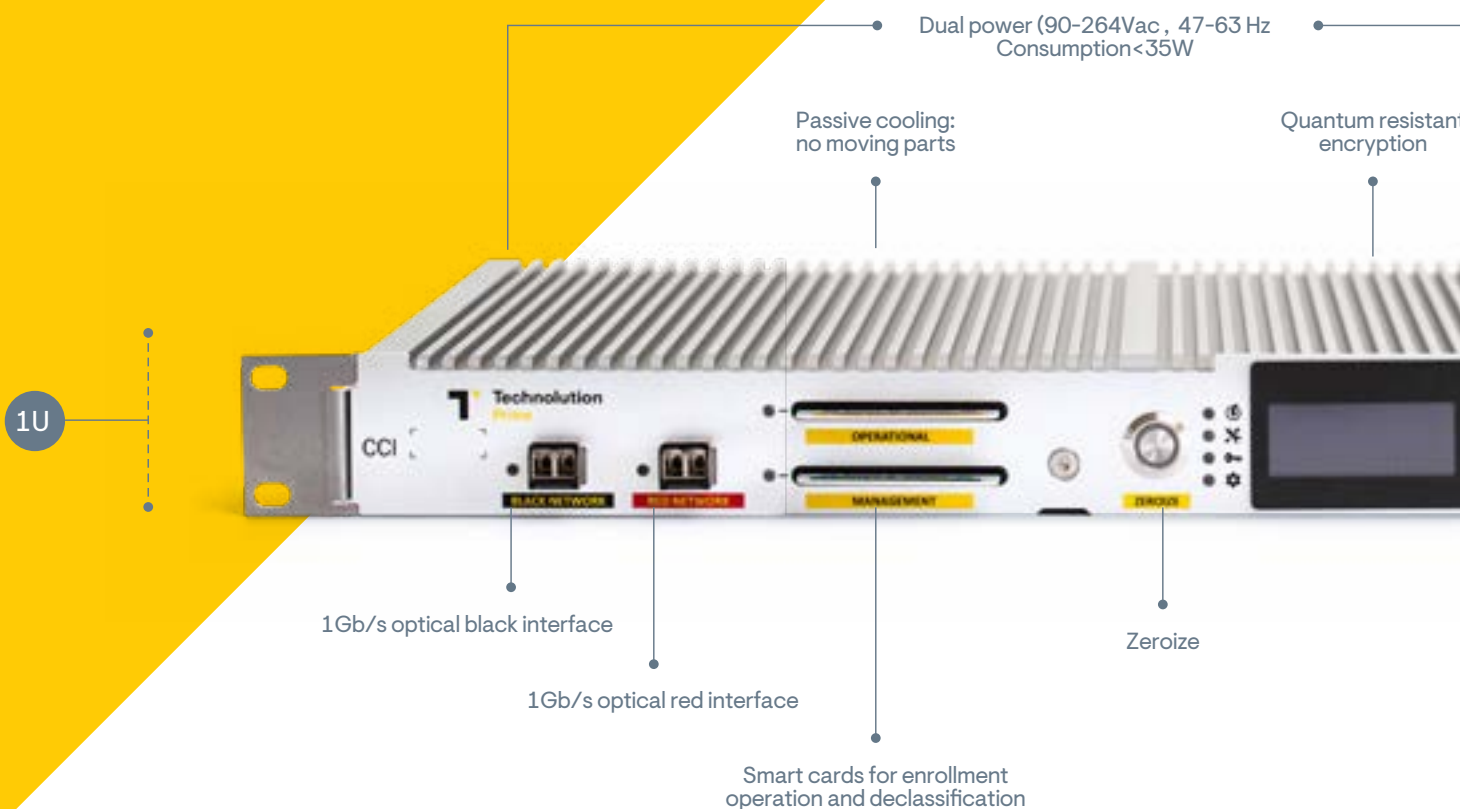
**User-friendly  
state-of-the-art  
IP encryptor**  
for Stg. (ZEER)  
GEHEIM



Redefining  
**solutions**

# Managed centrally, **widely applicable**, scalable and **quantum resistant**

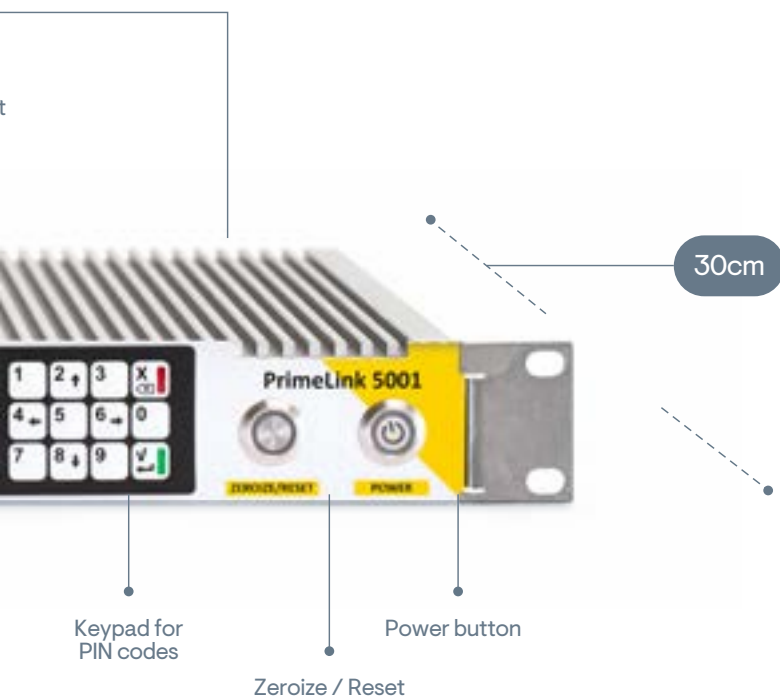
The PrimeLink 5001 sets a new standard for High Assurance line encryption: great user-friendliness combined with easy, centralized management. The PrimeLink 5001 allows you to create secure connections in no time for the highest classification levels in almost every network configuration. Management and configuration are very user-friendly due to the graphical management interface developed with input from end users. The optimized key plan makes deployment and stock management easy and simple.



### State-of-the-art line encryptor

The PrimeLink 5001 offers very strong data encryption developed for use at the highest classification levels up to and including NLD Top Secret level. Realize secure connections in your network by linking two or more PrimeLink 5001s. This always happens at layer 3, and because of this, the PrimeLink 5001 is also called an IP line encryptor.

The PrimeLink 5001 offers simple centralized management and is suitable for many network topologies. This makes it particularly scalable. In addition, it has been designed to meet the latest security requirements and is quantum-resistant. The PrimeLink 5001 has its place within a modern crypto strategy for information-driven organizations that work with classified data.



### The PrimeLink 5001 ecosystem

#### Management Server

Use the Management Server (MS) to manage and configure secure connections. The MS is a 19" 1U appliance that you place in your data center. Manage your PrimeLink 5001 Crypto Units remotely using a standard desktop that is connected to your management network.

#### Crypto Unit

The Crypto Units (CUs) are the PrimeLink 5001 units that build secure connections between each other. A network configuration will contain at least two CUs. More CUs can be added.

#### Management Crypto Unit

The Management Crypto Unit (MCU) is a dedicated PrimeLink 5001 that gives the MS access to the CUs within a network. It builds the connection from the MS to the Crypto Units in the field and ensures that all PrimeLinks in the field are alerted to any changes to the configuration from the MS.

#### Key Server

The Key Server (KS) is used to generate keys to manage CUs and their secure connections. These connection keys are distributed to the CUs automatically and securely. A second KS is required for the essential backup of the management keys.

### Simple centralized management

The PrimeLink 5001 Management Server offers a unique graphical interface for network configurations. Managers can quickly and easily create a secure network in just a few steps. Moreover, the system is very efficient; it automatically generates network configurations and IP routing tables. Deployment is easy, too: the new network configuration is automatically sent to all PrimeLinks through the network via the management PrimeLink.

Management environments

Version	Description	Scope of delivery
Standard	This is the minimally advised management environment. One management location will be set up, fitted with a Key Server, Management Server and two Management Crypto Units (MCUs) one of which will be redundant as a backup. The second Key Server will be stored offline in a safe as backup.	<div><div></div> 2x Key Server</div> <div><div></div> 1x Management Server</div> <div><div></div> 2x Management Crypto Unit</div>
Backup	For smaller and larger networks, the Management Server and Key Server will be implemented redundantly at one management location. This means you always have a complete secondary backup management environment ready for use.	<div><div></div> 2x Key Server</div> <div><div></div> 2x Management Server</div> <div><div></div> 2x Management Crypto Unit</div>
Redundant	The most extensive and most robust variant. A second management location is set up and fitted with a Key Server, Management Server and two Management Crypto Units. This means you always have a secondary management environment active and standby, in a different physical location than the first management environment.	<div><div></div> 2x Key Server</div> <div><div></div> 2x Management Server</div> <div><div></div> 4x Management Crypto Unit</div>

The security of management is guaranteed by a dedicated management PrimeLink 5001, which realizes the connection between the Management Server and the PrimeLinks in the network.

Key and stock management

Key management for your secure network is almost fully in your hands. After the initial delivery of keys and devices, interaction with the National Distribution Authority (NDA) is minimal. This means you have maximum control over the deployment of your PrimeLinks. You choose the best moment to assign PrimeLinks to the domain of your choice; no contact or alignment with the NDA is required. This means you can keep a large set of PrimeLink 5001s in stock centrally and then assign them to specific domains afterwards.

Minimal management effort thanks to optimized key plan

Every network configuration has at least two Management Crypto Units (MCUs). The MCUs are connected to the PrimeLinks in the field. Through the Management Server, they are also connected with the Key Server. This means key management requires very little management effort.

The PrimeLink network requires no further maintenance to keep functioning as it should.

# Technical specifications

## PrimeLink 5001

Security	
Certification	NLD SECRET NLD TOP SECRET
Hardware protection	Tamper evident and tamper responsive
Tempest	NATO SDIP-27/1 Level A
VPN	
Protocol	IKEv2 / IPsec - UDP
Number of tunnels	120 endpoint and 4 management tunnels
Tunnel routing	Longest Prefix Matching on source VLAN-ID and destination IP address
Operation behind NAT	Yes
Mode	Layer 3 with a maximum of 8 virtual Ethernet ports (VLANs)
Performance	
Maximum throughput	Optical > 950 Mbps
ICMP	ICMPv4 too big (automatic MTU tuning)
MTU size	Black: 12000 bytes, Red: 11900 bytes
Latency	Typical < 50 µs
Management	
Network diagnostics	VPN dead peer detection
Key management	PL5000 Key Server (KS)
Remote monitoring	Statistics via SNMP, support for syslog server
Remote management	PL5000 Management Server (MS)
Time synchronization	NTP (for log time stamps)
Interfaces	
Trusted network	1000Base-X, SFP cage (1G)
Untrusted network	1000Base-X, SFP cage (1G)
Operational smartcard slot	ISO7816-2, class A (5V)
Management smartcard slot	ISO7816-2, class A (5V)
Hardware	
Regularly compliance	RoHS, CE
Power	~24W typical (35W maximum)
Power input	90-264 V AC, 47-63 Hz (Redundant power supply)
Cooling	Passive
Weight	7,1 Kg
Dimensions	19" rack 1U: W 425 x D 300 x H 44 mm
Temperatures Operating	0°C - 40°C ambient
Storage	-20°C - 60°C ambient



# Technolution Prime

## About Technolution Prime

About Technolution Prime Technolution Prime is the leader in Netherlands in preventive high assurance solutions for classified data. We develop our products and solutions entirely in-house. We stand for high quality cyber security where it is needed most.

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