R&S®SITLine IP10G
R&S®SITLine IP1G
R&S®SITLine IP100M
IP Encryptor

Specifications

Network and management interfaces

Each R&S®SITLine IP encryption device is equipped with two different data ports to connect to the public (WAN) and the private (LAN) network. The device shows transparent behavior in the network. When R&S®SITLine IP receives network traffic on the LAN port, it decrypts the traffic and forwards it through the WAN port. When R&S®SITLine IP receives encrypted network traffic on the WAN port, it decrypts it and forwards it through the LAN port.

Network interfaces		
LAN 1 to WAN P / WAN S	R&S®SITLine IP10G 1 × 10 Gbit/s line, optical	optical SFP+ transceiver (optional, see ordering options)
	R&S®SITLine IP1G 1 x 1 Gbit/s line, optical, electrical or optical-electrical (cross media)	optical or electrical SFP transceiver (optional, see ordering options)
	R&S®SITLine IP100M 1 × 100 Mbit/s line, electrical	electrical SFP transceiver (optional, see ordering options)
Management interfaces		
Local	Ethernet port for local management of the device	electrical SFP transceiver (included with the device) or optical SFP transceiver (optional)
Smart card	smart card slot to insert CIKs to initialize and activate the encryption device	OCIK, SCIK and TCIK as ID1 smart cards
UL	local USB interface for on-site firmware updates	
ECB	emergency-clear button to clear the configuration and security parameters off the device	embedded in the outer case (push with pointy item)

ROHDE&SCHWARZ
Cybersecurity

Security features and cryptographic parameters

Authentication and key exchange		
Device certificates		- the security management system creates and signs X.509 certificates - initially assigned offline with the CIK smart card; renewed online through a secure channel to the security management system
Authentication algorithm		signature with elliptic curves (ANSI X9.62) with 384-bit keys (for PKI_P) or 512-bit keys (for PKI_M)
Key exchange for symmetric encryption		Diffie-Hellman with elliptic curves (ECKAS DH) and 384-bit keys
Random number generation		internal PTG.3 class generator
Data encryption		
Algorithm and key length		AES with 256-bit keys
Encryption mode		
Maintaining integrity and protecting against replay attacks		GCM (Galois Counter Mode)
Network architecture		
Any-to-any architecture		- fully meshed networks with up to 4096 locations - connections are established on-demand or proactively - simultaneous IPv4/IPv6 operation supported
Jumbo frame support		up to 9,216 bytes

General information

Performance and reliability		
Throughput (full duplex: specifications apply per direction)	R&S®SITLine IP10G	max. 9.9 Gbit/s
	R&S®SITLine IP1G	max. 0.99 Gbit/s
	R&S®SITLine IP100M	max. 99 Gbit/s
Latency (with an MTU of max. 1500 bytes)	R&S®SITLine IP10G	max. 0.010 ms
	R&S®SITLine IP1G	max. 0.035 ms
	R&S®SITLine IP100M	max. 0.150 ms
Mean Time Between Failures (MTBF)		min. 60 000 h
Installation		
Measurements (W × H × D)	R&S®SITLine IP10G	435 × 44 × 505 mm
	R&S®SITLine IP1G	435 × 44 × 305 mm
	R&S®SITLine IP100M	240 × 57 × 250 mm
Rack-mount	R&S®SITLine IP10G R&S®SITLine IP1G fasteners required (rack-mount server rails included with the device)	19", 1 HU rack depth: 360 mm to 850 mm
Stand-alone	R&S®SITLine IP100M	
Weight (device only)	R&S®SITLine IP10G	max. 9.4 kg
	R&S®SITLine IP1G	max. 5.8 kg
	R&S®SITLine IP100M	max. 3.5 kg

Shipping		
Shipping weight incl. packaging, supplies, manuals	R&S®SITLine IP10G	max. 20.3 kg
	R&S®SITLine IP1G	max. 12 kg
	R&S®SITLine IP100M	max. 6 kg
Packaging dimensions (W × H × D)	R&S®SITLine IP10G	max. 705 mm × 295 mm × 625 mm
	R&S®SITLine IP1G	max. 615 mm × 220 mm × 610 mm
	R&S®SITLine IP100M	max. 365 mm × 265 mm × 340 mm

Power supply and ventilation		
AC power supply	R&S®SITLine IP10G integrated power supply unit	110 V to 240 V AC (50 Hz/60 Hz), redundant, hot swap
	R&S®SITLine IP1G built-in power supply unit	
	R&S®SITLine IP100M external power supply unit	
DC power supply	R&S®SITLine IP10G integrated power supply unit	40 V to 72 V DC, redundant, hot swap
Power consumption	R&S®SITLine IP10G	max. 130 W
	R&S®SITLine IP1G	max. 60 W
	R&S®SITLine IP100M	max. 40 W
Battery	R&S®SITLine IP10G R&S®SITLine IP1G	lithium AA, hot swap
	R&S®SITLine IP100M	lithium AA
Air flow	R&S®SITLine IP10G R&S®SITLine IP1G	from front to back (cold-isle ventilation)
	R&S®SITLine IP100M	from the sides to the back
Fans	R&S®SITLine IP10G R&S®SITLine IP1G	2 fan modules, hot swap
	R&S®SITLine IP100M	2 internal fans

Environmental conditions		
Temperature	operating temperature	+5 °C to +50 °C
	bearing temperature	−20 °C to +70 °C
Air pressure	transport	566 hPa (corresponds to 4500 m)
	operation	795 hPa (corresponds to 2000 m)

Certified Quality Management
ISO 9001