REDEFINING SECURITY | QUANTUM-SAFE CRYPTO

CENTAURIS

Quantum-safe network encryption platform

ID Quantique's Centauris network encryptors ensure the protection of data in transit, offering the ultimate combination of high network performance with quantum-safe security. The Centauris platform encrypts Ethernet traffic up to an aggregated throughput of 10Gbps on local and storage area networks for data back-up and recovery, as well as on fully meshed global WAN networks for international operations.

QUANTUM-SAFE SECURITY

The Centauris encryptors may be upgraded to "quantum cryptography" through the addition of the Cerberis Quantum Key Distribution (QKD) server to ensure that the solutions are quantum-safe for the long-term protection of sensitive data. This also ensures investment-protection of the encryptors. Such quantum cryptography is provably secure, ensures anti-eavesdropping detection and provides long-term forward secrecy against brute force hacking and attacks by quantum computers.

Additional security is provided by advanced anti-tamper proofing and physical protections, as well as best-practice separation of duties.

PERFORMANCE & NETWORK MANAGEABILITY

Encryption with ultra-low latency and no packet expansion or packet loss (so-called "bump in the wire") is made possible by operating at the Layer 2 of the OSI model. Layer 2 encryption ensures protection of all traffic on the network as well as concealing the network architecture. Centauris devices use state-of-the-art AES 256 bit encryption, with the optional GCM mode providing data integrity on a per-packet level as well as confidentiality. The transport security feature masks the data flows on the network to ensure that traffic patterns do not reveal critical information.

Ethernet protocol is supported. The devices have (or are pending) Common Criteria and FIPS security accreditations.

Centauris encryptors are agnostic to network-equipment and integrate seamlessly into existing network infrastructures. The simple installation procedure, smart network discovery and set-and-forget operation ensures rapid deployment and minimal ongoing maintenance requirements.

MANAGEMENT & MONITORING

CypherManager allows the easy implementation and monitoring of enterprise-wide security policies for audit and compliance. Simple provisioning and scalable management are enabled, either locally or remotely via secure connections (inband or out-of-band). CypherManager acts as the Certificate Authority by signing and distributing X.509 certificates to the encryptors, as well as accepting third party certificates. It is compatible with SNMPv3 compliant network management tools (eg NetView, OpenView, Tivoli).

FEATURES & BENEFITS

- Quantum-safe for long-term protection of mission-critical data (selected encryptors)

- Combines security & unparalleled network performance up to 10Gbps

- Offers flexibility, extensibility & investment protection for future network growth

- Compatible with P2P and multi-point architectures

- Low cost of ownership

- Agnostic to network equipment - no lock-in

- Full interoperability with all Centauris encryptors for enterpise-wide encryption

IDQ CN6000 & CN4000 SERIES ENCRYPTORS AT A GLANCE

MODEL	CN6100	CN6010	CN4010	CN4020
Ethernet encryption: point-point, hub & spoke, fully meshed	1 - 10Gbps	100Mbps-1Gbps	100Mbps-1Gbps	100Mbps-1Gbps
Fibre Channel encryption: point-point	N/A	N/A	N/A	N/A
Maximum Chassis Throughput	10 Gbps	1 Gbps	1 Gbps	1 Gbps
Protocol and application transparent	✓	✓	✓	✓
Encrypts Unicast, Multicast and Broadcast traffic	✓	✓	✓	✓
Automatic network discovery & connection. Resilience to network outages	✓	✓	✓	✓
Network interfaces	XFP	RJ45, SFP	RJ45	SFP

SECURITY & ENCRYPTION

	CN6100	CN6010	CN4010	CN4020
Tamper resistance & anti probing barriers	✓	✓	✓	✓
AES-GCM mode for integrity	✓	✓	✓	✓
AES 128 or 256 bit keys	128/256	128/256	128/256	128/256
IDQ Quantum Random Generator	N/A	N/A	N/A	N/A
Support for Quantum Key Distribution	✓	✓	N/A	N/A
Automatic seamless key management	✓	✓	✓	✓
Policy based on MAC address or VLAN ID	✓	✓	✓	✓
Encryption modes	CTR, GCM	CFB, CTR, GCM	CFB, CTR, GCM	CFB, CTR, GCM
Certification	CC & FIPS	FIPS, CC pending	FIPS, CC pending	Pending

PERFORMANCE

	CN6100	CN6010	CN4010	CN4020
Low overhead full duplex line rate encryption	✓	✓	✓	✓
Latency (microseconds per encryptor)	<8	<8	<8	<8

MANAGEMENT

	CN6100	CN6010	CN4010	CN4020
Flexible policy engine with secure local & remote provisioning & management (SNMP v3)	✓	✓	✓	✓
In-field firmware upgrades	✓	✓	✓	✓
SNMPv1/2 monitoring (read-only))	✓	✓	✓	✓
Support for external (X.509v3) CAs	✓	✓	✓	✓
CRL and OCSP (certificate) server support	✓	✓	✓	✓

PHYSICAL & MAINTENANCE

	CN6100	CN6010	CN4010	CN4020
Dual hot swappable power supplies & fans	✓	✓	N/A	N/A
Form factor (W, D, H) mm	1U, rack mount 436,328,43	1U, rack mount 436,328,43	bench, rack kit 180,126,32	bench, rack kit 180,126,32
Weight	8.5Kg	8.5Kg	500g	500g
Power voltage	100-240 VAC, 50-60 Hz	100-240 VAC, 50-60 Hz	9-15 VDC (AC plug pack)	12 VDC (AC plug pack)
Power consumption	38W (mains)	38W (mains)	10W (AC plug pack	11W (AC plug pack)
Maximum operating temperature	50°C 0-80% RH at 40°C	50°C 0-80% RH at 40°C	40°C 0-80% RH at 40°C	40°C 0-80% RH at 40°C