



Armos QNLX 200

Quantum Key Distribution

Armos

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QNu's QNL-X200 Quantum Key Distribution (QKD) product is a system that provides a solution to securely exchanging the encryption keys between two ends of a Symmetric Key Encryption system.

The basic principle is to exploit the principles of Quantum mechanics by utilising encoded photons or "Qubits" to transmit the key from one end (Alice) to the other (Bob) over a single fibre called the quantum channel.

There are several ways or techniques to do this and all of them rely on the impossibility of anyone being able to tap or eavesdrop on the channel without getting detected.

KEY MARKETS



Financial Services Companies



Healthcare Organisations



Cloud Service Providers



Governments



Critical Infrastructure

KEY BENEFITS



Quantum-Safe Security



Performance



Scalability



Simplicity

MODEL	ARMOS (QNL-X-200)	
PHYSICAL	Dimensions	560 X 424 X 85 mm (Alice) 560 X 424 X 85 mm (Bob)
	Enclosure	19" rack mountable, with telescopic rails
	Weight	14 Kg each
OPERATING CONDITIONS	Temperature	20 deg C - 26 deg C
	Maximum Relative Humidity @25°C	80%
	Vibration	In-use vibration to be as low as possible
WEAK COHERENT SOURCE	Source	Laser with VOA
	Mean photon number	0.1
	Centre wavelength	DWDM channel 937
QKD PROTOCOL	Protocol	Distributed phase reference
	Fibre Type	SMF-28, G.652 compliant
QUANTUM CHANNEL	Fiber loss	0.2 db/km
	Maximum channel loss	12 dB for assured key rate
	Distance	40 - 60 km
	Minimum safe key rate	128 kbps for 40 kms
		5 kbps for 60 kms
	Connector type	ST
CLOCK SYNCHRONISATION	Fibre Type	SMF-28, G.652 compliant
	Connector	FC/APC
DETECTOR	Type	Integrated, Qnu proprietary
	Operation	Gated
RNG	TRNG	Internal, 1 Gbps
	QRNG	External *
INTERFACES	Key interface	RJ45, 1000BaseT Ethernet
	Key reconciliation	RJ45, 1000BaseT Ethernet
	Synchronization	Separate lambda, external combiner / splitter
	Management interface	RJ45, 1000BaseT Ethernet
QKD SOFTWARE	Authentication	QNu Proprietary Algorithms based on Information Theoretic Security
	Error Correction	
	Privacy Amplification	
	Reconciliation	
KEY INTERFACE	Method	RESTful API over HTTPS
		ETSI v2 key interface
	Security	Customer interface on request*** Self-signed certificate
SECURITY	Realistic attacks	
	Incoherent attacks	
	Coherent attacks	
	Monitoring Eve attacks	
MANAGEMENT & MONITORING FUNCTIONS	User and role based access control	Fine grained access control, with audit trail
	EMS	Web UI
	System configuration	Manual, SDN, REST based
	System recovery	Automatic
	Software upgrade	Manual, Web UI based
	Calibration	Automatic
	In-system health check	Automatic, user accessible logs
POWER	Input	Auto ranging 90-240VAC 50/60Hz
	Consumption	120W max, for each of Alice and Bob
	Noise level	Max 65dBA @1 meter
	Connector	EAC 309, power entry
	Power cord	Not supplied, to be locally procured

MODEL**ARMOS (QNL-X-200)****CERTIFICATIONS***

	CE, ROHS compliant
Regulatory compliance	EN 300 386, EN 55022, EN 505032 Class A
	CISPR-22, CISPR-32 Class A
Certified for CB - Scheme	EN 60950-1
Security certifications	Hardened OS, EAL-3, FIPS 140-2
Quantum channel	Academic review and demonstration

* In progress

** Specifications subject to change without notice

*** Contact sales for more details



QNu Labs is India's first & only company to develop Quantum Cyber-Security Products. The company provides quantum-safe data encryption, secure key generation and quantum key distribution solutions and services to the financial industry, enterprises and government organisations, worldwide.

QNu's Quantum Key Distribution and Quantum Random Number Generator offer quantum safe solutions to all current and future data security issues.

Additionally, the company's products are designed to plug-in and play with existing infrastructure and require no changes to current encryption tools or protocols and is hence the most viable cost effective quantum data security solution today.

With over 100 person years of experience working in close collaboration with the government and with public sector companies like DoT, TEC, ITI and DRDO, the leadership team at QNu brings with it experience and knowledge with having earlier contributed a major role in revolutionising the banking, telecom and IT sectors in India.

Today, QNu helps innovators, disrupt existing security paradigms by accelerating their transition to deploy Quantum-safe encryptions.