



QRNG

Quantum Random Number Generator

Parsa quantum random number generator (QRNG) generates raw random numbers (RNs) at a rate of 800 Mbps and post-processed TRUE random numbers at a rate of 500 Mbps. The authenticity of the numbers produced by this device has been verified through NIST SP800-22 and DIEHARDER test suits. This system provides true random numbers essential for cryptography, secure communications, stochastic algorithms, simulation of stochastic processes, economic modeling, one-time passwords for bank transactions, and more.

500 Mbps



LAN Connection



Windows Software



NIST SP800-22



DIEHARDER



More Information

www.parsaqtech.com

021-29908737

Tehran



The importance of generating truly random numbers

All modern security and protection systems rely on symmetric or asymmetric cryptography, which operates using a secure key (an unpredictable code). The security of these cryptographic algorithms hinges on the key's security. In all human systems where security and data protection are discussed, a random number generation system is essential for creating encryption keys and maintaining security. Therefore, the security of a cryptographic system depends on the quality and security of the generated random numbers.

Today, security standards such as NIST SP 800-90B or BSI AIS-31 stress the need for mathematical and theoretical proof of system security. This level of importance is absent in classical random number generator systems and is only realized in quantum random number generator systems. The quantum random number generator product from Parsa Company provides users with access to genuinely random numbers, which, as explained, can significantly enhance security in cryptographic systems.

Applications

- ☐ Cryptography
- ☐ Secure Communication
- ☐ Quantum Key Distribution
- ☐ Simulation of Stochastic Processes
- ☐ Cryptocurrency and digital wallet
- ☐ One-time password for financial transactions



Specs

Random Number Generation Rate	800 Mbps (Raw), 500 Mbps (Post-processed)	Random Number Generation Disturbance Alarm	Yes
Certificates	NIST SP800-22 Test Suite DIHARDER Test Suite	Operating Temperature	0-35 (Active) 0-50 (Storage)
System Protocol Rate	LAN 1000 Mbps – UDP	Operating Humidity	<60% (Active) <90% (Storage)
Display Data Transfer Protocol	USART	Dimension (W*H*D)	45cm*4.4cm*15cm
Processing Board Programming Interface	USB	Weight	3 kg
Device-Computer Connection Watch-Dog	Yes	Power Consumption	50 W (Active) 10 W (Standby)
Computer-Software Start Watch-Dog	Yes	Input Voltage	220 V 120 V