QCicada

USB Quantum Random Number Generator

Lightweight. Low Power. High Quality Entropy.

Crypta Labs introduces QCicada - a USB Quantum Random Number Generator (QRNG) device used to provide the highest quality source of entropy possible in an easily adoptable solution.

Cutting edge QRNG Technology

Crypta Labs Quantum Optics Module (QOM) utilises a light source and photon detector which is calibrated to measure quantum noise. This raw noise is then passed through our **QEngine technology,** which performs Real-time Health Tests and Post Processing functions which were designed from the ground up to limit performance loss from point of photon capture to delivery of a random number. **Our output has been independently verified to pass tests from both NIST as well as the demanding TESTU01 suites.**

Quantum Powered
Equipped with our Quantum Optics Module

Robust & Reliable
NIST Compliant output in real world environments

Multi Platform
Compatible with Linux and Windows OS.

Easily Adoptable
Small form factor and easy to use interface

Tomorrows technology for a safer today

Current Pseudorandom (PRNG) and hardware True (TRNG) number generation technologies have intrinsic vulnerabilities. PRNG's can be subject to algorithmic attacks. TRNGs have throughput speed limitations, especially in different environmental conditions, which leave a question mark over their suitability for deployment in demanding networks and operations requiring the highest levels of entropy.

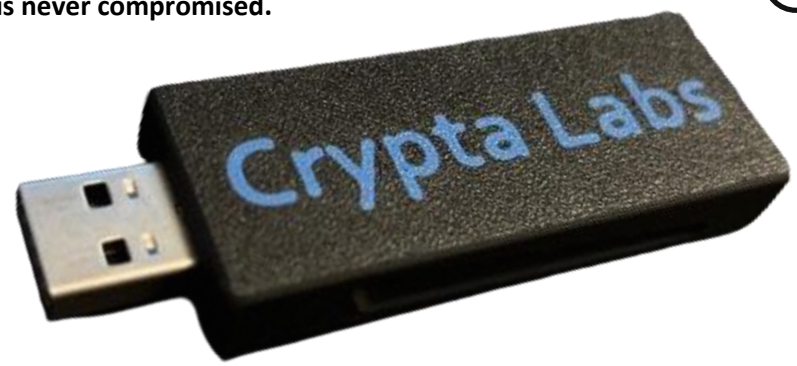
Our QRNG technology is robust in any environment and contains health monitoring and in-the-field calibration techniques to ensure output quality is never compromised.

QEngine Technology

QRNG

Health Monitoring

NIST Compliant



Market leading adoptability

With a specification which meets the need for the future of connected devices and IoT, our QRNG is deployed via a USB interface – making retrofitting to your host a breeze!

Our Quantum Optics Module (QOM) technology, coupled with onboard processing capabilities in an easily integratable package to produce a usable random output which betters our competitors in both quality and robustness.

Why Choose Crypta Labs?

- **Best quality RNG output in the market - proven by independent testing Universities**
- **Designed and built for tomorrows threats**
- **Designed for use in the real world**
- **Tamper protection and health monitoring at the core**
- **Configurable in clusters for greater performance**
- **Built in line with NIST standards**

Device Specification

Model	QCicada QRNG
Performance	0.5Mbps (~1,950 Random Numbers per second*)
NIST Compliant output	Yes
Quality Independently verified	Yes
OS Support	Linux / Windows
Entropy Source	1 x Quantum Optics Module
Size	2cm x 7cm
Power	
Single Input Voltage	5V
Normal operation draw	48mW
Idle Mode draw	12mW
Startup from Idle	<1ms
Recommended operating Temperature	-30°C ~ +85°C
Max operating Temperature	-40°C ~ +125°C
Interface	
USB	1Mbps

*Assumes random number of 256bits