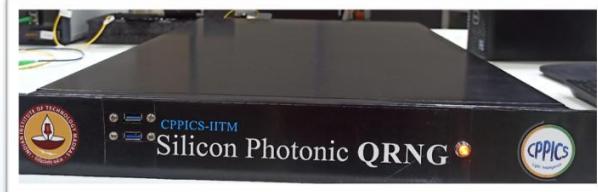


Silicon Photonics QRNG Module

A full-stack field-deployable Module



Designed and Developed by CoE-CPPICS IIT Madras
(Funded by MeitY, Govt. of India)



Features

- Silicon Photonics Chip Inside
- Mass Manufacturable
- Robust and Stable
- USB and Ethernet Interface

Applications

- IT security for military and defence
- Cryptographic algorithms
- Financial transactions/ Blockchain/ OTP
- Scientific simulation and Gaming applications

Technical Specifications

S. No.	Element/Parameters	Specification
1.	Source of entropy	Vacuum fluctuation
2.	Detection technique	Balanced homodyne
3.	Platform	Silicon Photonics
4.	Raw data acquisition rate	4 Gbps
5.	Real-time read-out speed	100 Mbps (Upgradable)
6.	PIC operating wavelength	C-band (~1550 nm)
7.	Temperature controlling range (0.01°C)	15°C to 40°C
8.	Test compliance	NIST SP 800-22 STS, NIST 800-90 B, ENT
9.	Interfacing	USB and Ethernet
10.	Dimensions	48 cm × 58 cm × 6 cm

