Fraunhofer IIS

FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS
DIVISION ENGINEERING OF ADAPTIVE SYSTEMS

A MINIATURIZED HIGH-PERFORMANCE TIME TAGGER FOR QUANTUM TECHNOLOGIES

Since June 2022, the Application Center for the "Design of Scalable Electronic Systems for Quantum Communication" at the Fraunhofer IIS site in Dresden provides companies and researchers with access to flexible experimental test environments for the development of electronics for quantum communication systems.

A particular focus is the design of **compact time taggers**. In combination with detectors, time taggers are used to register the detection time of single photon events. As an essential building block for QKD systems, we design our time taggers with the requirements of quantum communications in mind.

Technical Features:

- <10 ps RMS Jitter
- up to 9 channels
- dimensions: 6 cm x 6 cm
- Gigabit Ethernet
- MEMS-based Super-TCXO (frequency stability: ±5 ppb)
- MMCX or SMA connectors

Customer Benefits:

- compact design
- cost-effective solution for photonic quantum technologies
- flexibility in use (network interface, multi-platform support)
- Rust / Python / C API

Interested in a test device?

A limited number of test devices will be available in Q4 2025. Please follow the QR code for more information:

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