AUREA TECHNOLOGY

CHRONOXEA

Time Tagger Unit for SPAD

Picosecond resolution

The CHRONOXEA is a stand-alone and easy to use Time Tagging unit compatible with all commercial Single Photon Avalanche photodiode Detectors (SPAD). The CHRONOXEA features internal & external clock capabilities and multiple independent event inputs channels with adjustable delay to perform time tagging measurements with a resolution of few ps.

In addition, the CHRONOXEA is provided with its ergonomic Graphical User Interface for control as well as its Software Development Kit with examples for the most well-known programming languages, such as Python C, C++ and LabVIEW .

Very well-designed, the CHRONOXEA features a small footprint and custom housing for integration in standard 19'' rack. The modern interface and the flexibility of the CHRONOXEA makes it your essential tool for QKD application.

Features

- Commercial SPADs compatibility
- Time Tagging capabilities
- Picosecond resolution
- Adjustable internal clock frequency
- External synchronisation
- Adjustable time delay
- Graphical User Interface for control
- Examples for Python, C++, LabVIEW

Applications

- Quantum Communications
- Quantum Internet Network
- Entanglement Swapping

Options

- Industrial housing
- White brand

RoHS compliant

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TECHNICAL SPECIFICATIONS

Signal	
Sync Input (External Start)	1 Sync In channel
Events Input (Stop)	4 independant Event stop channels
Signal level	TTL/CMOS/LVTTL/LVCMOS & NIM
Delay	Adjustable from 0 - 10 ns with 10 ps step

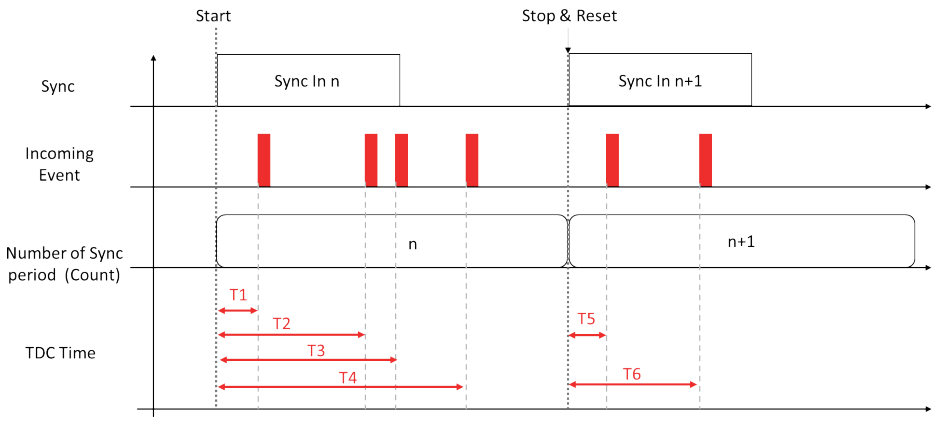
Time Tagging capabilities	
Digital resolution	13 ps
Timing Jitter RMS	8 ps
Timing Jitter FWHM	20 ps
Max Event In - Continuous	1 M tags/channel
Max Event In - Burst*	200 M tags/channel
Data transfer rate	4 M tags

Synchronization	
Internal Clock Frequency	Adjustable from 18 Hz to 4 MHz
Max External Frequency	100 MHz
Frequency Divider	Adjustable from 1 to 255

Software	
Programming Examples	Python, C, C++, LabVIEW
Graphical User Interface	Proprietary software interface
Operating System	Windows

Input/Output - Mechanical - Environmental	
Computer Connection	USB 2.0
Inputs/Outputs	standard SMA
Dimension (LxWxH)	163 x 195 x 55 mm³
Weight	< 2 kg
Power consumption	< 12 W

**for a burst of 15 succesive events*



Tag Value	TDC Time
n	T1
n	T2
n	T3
n	T4
n+1	T5
n+1	T6

QUANTUM PLATFORM

Build your custom quantum communication system now !

AUREA Technology provides a complete Quantum platform :
- TPS_1550_II : The Narrow bandwidth EPS Source
- CHRONOXEA : The picosecond Time Tagger
- SPD_OEM_NIR : The best-in-class NIR Photon Counter

For an easy integration, all these instruments are provided with their GUI and DLL for remote control !

CUSTOMER SUPPORT

Integration of high-end technologies can be challenging but AUREA Technology is here to help you reach your objectives!

Work with AUREA Technology and benefit from the help of our dedicated technical support team. Our team of experts can be reached any time !

Contact our technical support team and receive an aswer within a day at sales@aureatechnology.com

ORDERING INFORMATION

CHRONOXEA

Please contact us for custom solutions and housing

PAIRING PRODUCT

SPD_OEM_NIR
Compact NIR Single Photon Counter

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