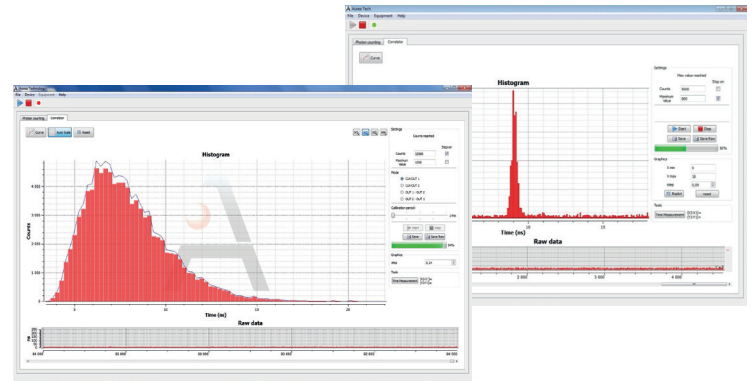


LYNXEA_NIR

Time Resolved Single Photon Counter

All integrated NIR photon counter and timing electronics

[900 nm - 1700 nm]



The LYNXEA is the first generation of self-contained Time-Resolved Single Photon Counting Instrument that brings a breakthrough in Quantum Key Distribution, photon sources characterization and any photon coincidence measurements of low-level-of-light and fast events in the near infrared range. **The LYNXEA performs both synchronous "gated" and asynchronous "free-running" detection modes.**

Its unique architecture integrates in the same box, up to four independent low-level-of-light InGaAs Geiger-mode single photon counting channels and a time correlator. Thus, the LYNXEA performs all time-correlated measurements such as photon coincidence, lifetime, time tagging or antibunching measurements without any additional module.

Very well-designed, the outstanding-performances and the modern interfaces make the LYNXEA an essential analytic tool for any time-correlated single photon counting measurements!

Features

- Integrated Counting Electronics
- Integrated 13 ps Time Correlator
- Calibrated QE up to 30%
- Dark Count Rate < 800 cps
- Free-running & Gated mode
- TTL & NIM compatibility
- Time Tagging & Lifetime
- Master/Slave operation
- Software for remote control
- DLL Libraries : Python, C++, LabVIEW

Applications

- Quantum Communications
- Quantum Key Distribution
- Photon sources characterization
- Coincidence measurements
- Geiger-mode LIDAR
- High resolution OTDR
- FLIM microscopy
- Optical fiber sensing

Accessories

- Power supply

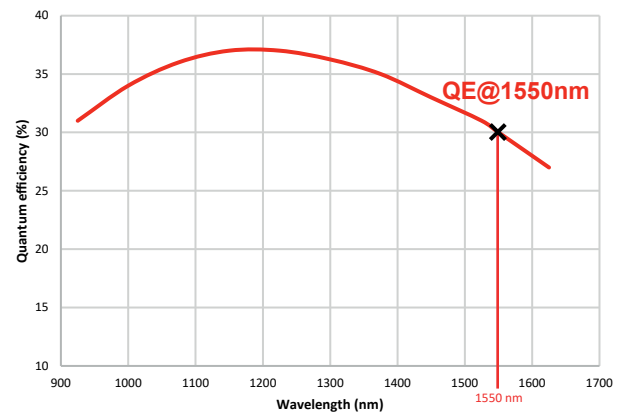
TECHNICAL SPECIFICATIONS

Single Photon Counting - Typical values measured @1550nm	
Spectral Range	900 nm to 1700 nm
Optical Fiber type	SMF or MMF
Detection mode	Free-running (FR) & Gated mode (GM)
Optical	
Dark Count Rate @10% QE	< 800 cps
Calibrated QE	10% - 30% [10% step]
Timing Jitter @max QE	150 ps
Deadtime range @10% QE	from 100 ns to 1 ms ¹
Afterpulsing probability²	< 0.1%
Synchronization	
External trigger	From CW up to 20 MHz
Internal trigger	From CW up to 20 MHz
Effective gate width	From 1 ns up to 100 ns [0.5 ns step]
Adjustable trigger delay	From 0 up to 128 ns [0.5 ns step]
Time Digital Converter	
Bin width	13 ps
Measurement window	from 0 to 1 sec
Max Event Counts	1 MHz/channel
Min Deadtime*	5 ns
Frequency Divider	1 to 1024 (factor 1 step)
Acquisition Time	From 0 sec to days
Measurement modes	Lifetime, Time Tagging, Cross-Correlation
Input/Output - Mechanical - Environmental	
Computer Connection	USB 2.0
Optical In	FC/PC optical fiber connector
Detection Out	SMA - LVTTTL - 20 ns width
Clock In/Clock Out	SMA - LVTTTL
Dimensions (LxWxH)	280 x 250 x 70 mm ³
Weight	4.5 kg
Power consumption	25 W

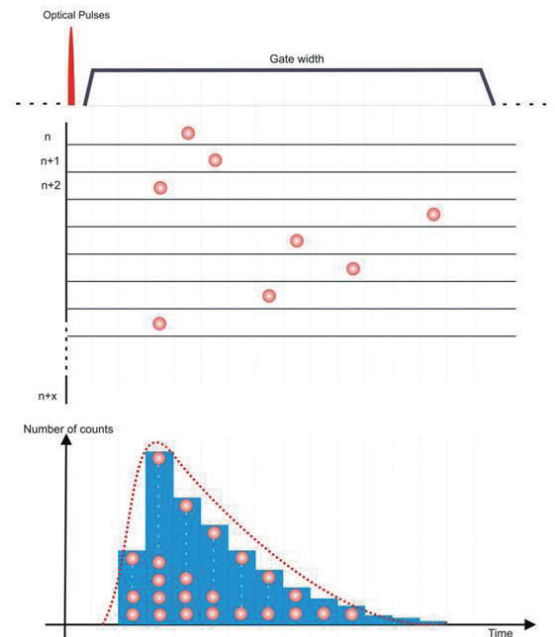
¹ Min deadtime GM : 100 ns | Min deadtime FR mode : 5 μs

² At 10 μs deadtime, 10% QE, 10 ns gate

*Min deadtime for a burst of 15 successive events

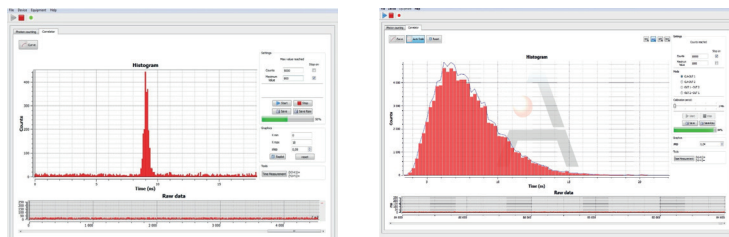


QE (%) vs Wavelength (nm)



Time histogram building representation

SOFTWARE INTERFACE & DLL LIBRARIES



The software interface allows adjusting the QE, deadtime, clock and displaying live photon counts. DLL libraries compatible to the most well-known programming languages are also provided.

ORDERING INFORMATION

LYNXEA_NIR_C_MX_YY_ZZ

MX M1 : 1 channel
M2 : 2 channels
YY SM: Single Mode Fiber
MM: Multi Mode Fiber
ZZ 01 : FC/PC

Please contact us for custom solutions and options

COMPLETE QUANTUM SYSTEMS

AUREA Technology also provides complete Quantum Optics systems with Entangled Photon Sources, Photon Counters, Timing Electronics and Software. Both 1550 nm and 810 nm versions are available.



Complete Quantum instruments suite

PAIRING PRODUCT



TPS_1550_TYPE_II
Quantum Photon Source

DISCLAIMER

The manufacture reserves the right to change this document at any time without notice and disclaims liability for editorial, pictorial and typological errors. © 2011-20 AUREA Technology SAS. All rights reserved.