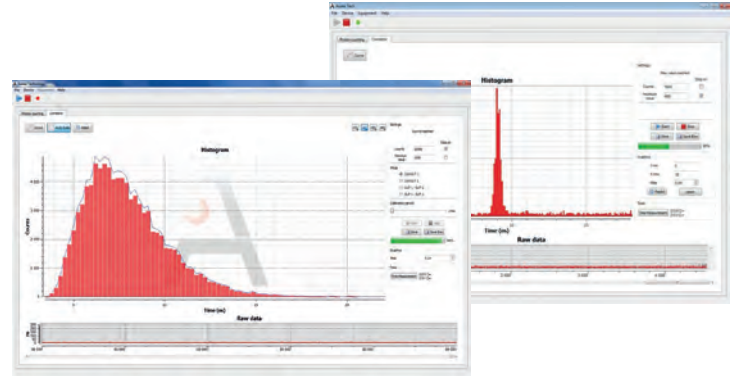


## LYNXEA\_VIS

# Time Resolved Single Photon Counter

All integrated TCSPC instrument  
[400 nm - 1060 nm]



The LYNXEA is a new generation of self-contained TCSPC instrument that brings a major breakthrough for lifetime measurements, photon sources characterization, coincidence measurements or any very-low-level-of-light measurements in the 400 nm to 1060 nm visible range. **The LYNXEA is the first generation of time correlated single photon detector that performs both synchronous "gated" and asynchronous "free-running" detection modes.**

Its original architecture integrates in the same box, up to two independent silicon Geiger-mode single photon counting channels and a time correlator. Thus, the LYNXEA performs all time-correlated measurements such as lifetime, time tagging or antibunching measurements without any additional module.

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

### Features

- 1 or 2 detection channels
- Integrated Counting Electronics
- Integrated Time Correlator
- Calibrated QE up to 75%
- Dark Count Rate < 100 cps
- Free-running & Gated mode
- Time Tagging & Lifetime
- Master/Slave operation
- Software for remote control
- DLL Libraries : LabVIEW, C++, Python

### Applications

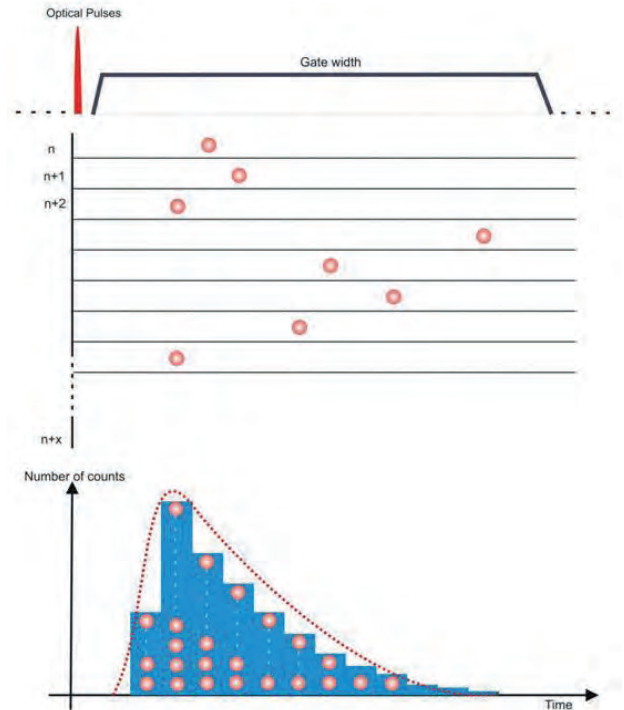
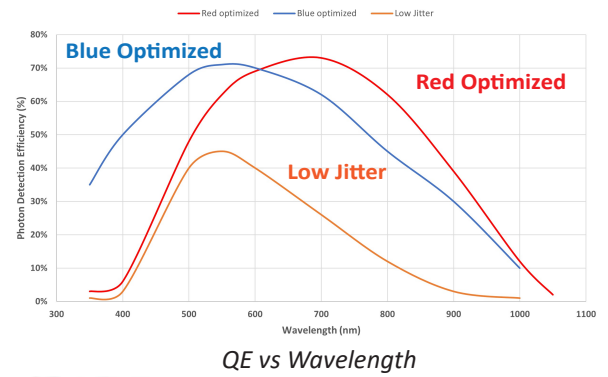
- TCSPC measurements
- Lifetime measurements
- FLIM microscopy
- Photon source characterization
- Geiger-mode Lidar
- Optical fiber sensing
- Particule sizing

### Options

- Low timing jitter
- Red optimized
- Blue optimized

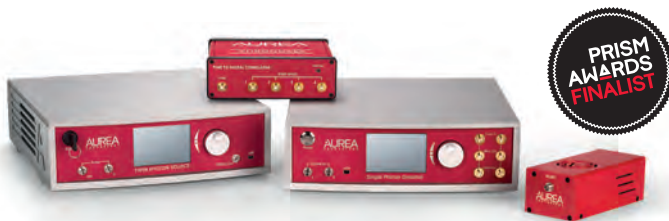
## TECHNICAL SPECIFICATION

Single Photon Counting - Typical values	
Spectral Range	400 nm to 1060 nm (Silicon APD)
Optical Fiber type	SMF or MMF
Detection mode	Free-running (FR) & Gated mode (GM) - User selectable
Dark Count Rate	Grade C < 100 cps
Quantum Efficiency	> 60% [550 nm - 700 nm]
Timing Jitter	< 350 ps (< 50 ps in option)
Min Deadtime	20 ns - 40 ns
Free-running mode	
Max Count Rate	40 Mcounts/s
Gated mode	
External trigger	From CW up to 15 MHz
Internal trigger	From CW up to 15 MHz
Effective gate width	From 1 ns up to 80 ns [0.5 ns step]
Trigger delay	From 0 up to 128 ns [0.5 ns step]
Time Correlation	
Timing resolution	13 ps from 0 to 1 sec measurement range
Data transfert	1 x 10 <sup>6</sup> correlations/channel/sec
Max event. rate :	
- Continuous mode	4 MHz
- Burst mode	200 MHz (burst of 15 successive events)
Input/Output - Mechanical - Environmental	
Computer Connection	Mini USB 2.0 type B
Optical In	FC/PC optical fiber connector
Detection Out	SMA - LVTTTL - 20 ns width
Clock In	SMA - LVTTTL
Clock Out	SMA - LVTTTL
Dimensions (LxWxH)	70 x 250 x 280 mm <sup>3</sup>
Weight	4.5 kg
Cooling time	< 1 min @ 25°C
Power consumption	15 W



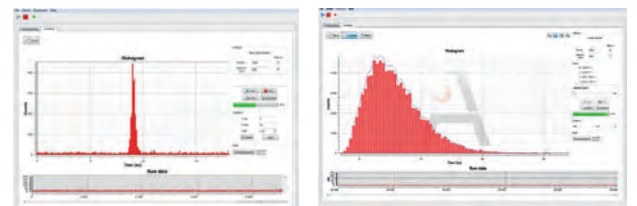
## OTHER PRODUCTS : COMPLETE QUANTUM SYSTEMS

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

## SOFTWARE INTERFACE



The software interface allows adjusting the synchronization, the parameters and displaying the live photon count. DLL libraries compatible to the most well-known programming languages are also provided.

## ORDERING INFORMATION

MX M1 : 1 channel  
 M2 : 2 channels  
 YY SM : Single Mode Optical Fiber  
 MM : Multimode Optical Fiber  
 LYNXEA\_VIS\_MX\_YY\_ZZ ZZ 01 : FC/PC

Please contact us for custom solutions and options

## NOTE

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