



# EUROPHOTON

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Quotation:

## Time and Space Correlated Single Photon Counting (TSCSPC) MCP based with delay line anode FLIM Detector

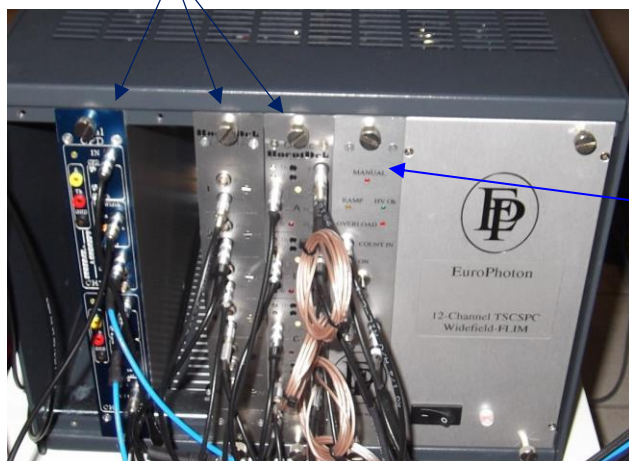
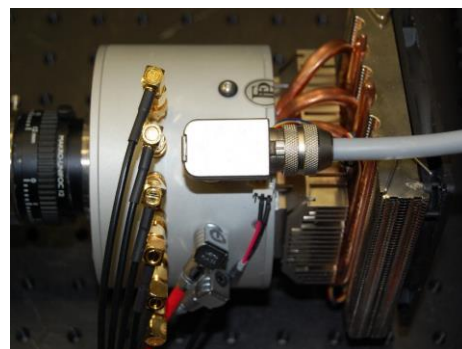
1) **Detector-Head with Detector-Electronics**

(see specifications on the next page).

Readout electronics is required

(example is below):

35.000 €

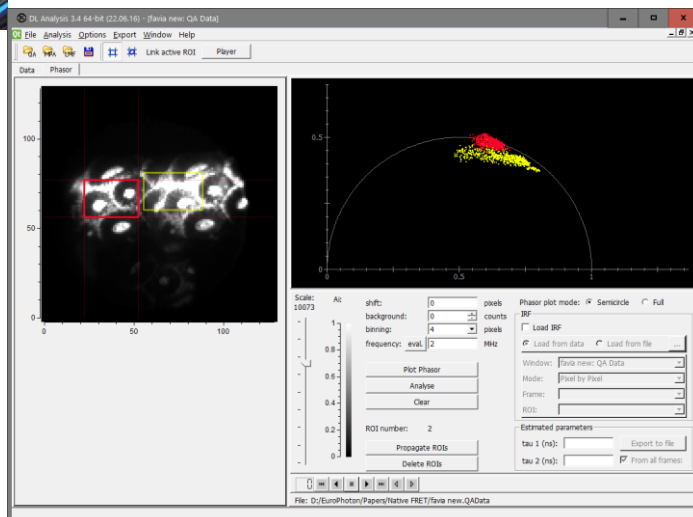


2) **Automatic protection high voltage shutoff NIM module.** Programmable high voltage settings and shutoff threshold (in max number of counts per second). Shutoff time – less than 75 ms after overflow:

2.500 €

3) **System acquisition, data management, data visualization and analysis (fast estimation of lifetime, FLIM, Phazor) software** (Roentdek and Fast Comtec dataformats are currently supported):

5.000 €



The detector has a 25 mm diameter Photec germanium-anode MCP-detector head (LNS20 photocathode with < 500 cps dark counts) with crossed-delay line (DL) XY photon position readout und low-noise proprietary detector electronics (timing amplifier and high voltage divider). Additional information can be found at [www.europhoton.de](http://www.europhoton.de).

Assistance with interfacing detector head and readout electronics is provided.

Test and acceptance measurement can be performed at EuroPhoton.

Limited warranty is 1 year, *excess-light-damage is not covered*.

**Delivery Time:** 1 month

**Payment:** 2 weeks after acceptance measurement

### Specifications of TSCSPC system:

- (i) IRF(time) < 80 ps FWHM (with 10 ps FWHM laser)
- (ii) IRF (space) < 100  $\mu\text{m}$  FWHM
- (iii)  $1 \times 10^5$  cps throughput
- (iv) dark signal: < 500 cps, full area
- (v) dynamic range:  $> 10^5$
- (vi)  $Q(\text{eff}) = 10\%$  (550 nm) and  $20\%$  (450 nm)
- (vii) single molecules (SM): SM of R6G/H<sub>2</sub>O could be observed at  $\text{ex} = 532$  nm and  $\text{em} > 532$  nm (TIRF with external prism).

**Best values at EP:** IRF (time) =  $28 \pm 3$  ps FWHM, IRF (space) =  $60 \pm 5$   $\mu\text{m}$  FWHM,  $> 10^6$  cps throughput, see S. Stepanov et al., Proc. SPIE, 7376 (2010) 73760Z, 1-20.

