

## Global tender for Multi-channel Time Correlated Single Photon Counter (TCSPC)

### Summary

1.	Tender Number	IAP/CMC/23-24/03A-G
2.	Tender Date	19 December 2023
3.	Item Description	Multi-channel Time Correlated Single Photon Counter (TCSPC)
4.	Quantity	Two
5.	GTE approval number	IISc-GTE-2023-299 dated 06/12/2023
6.	Quotation to be addressed to	Prof. C. M. Chandrashekar Department of Instrumentation and Applied Physics, Indian Institute of Sciences, Bengaluru 560012  Email : <a href="mailto:chandracm@iisc.ac.in">chandracm@iisc.ac.in</a> <a href="mailto:nikithar@iisc.ac.in">nikithar@iisc.ac.in</a>
7.	Last Date and time for online submission of quotation	11 January 2024, 5:00 PM

## To whom it may concern

This is a **Request for global quote (RFQ)** for procurement of two quantity of **Time Correlated Single Photon Counter (TCSPC)** and associated software at the department of **Instrumentation and Applied Physics (IAP)**, Indian Institute of Science, Bangalore.

All interested vendors shall submit a response demonstrating their capabilities to produce the requested equipment to the primary point of contact listed below.

The deadline for submission of proposals is **11<sup>th</sup> January 2024 by 5:00 PM**. Proposals should be submitted online to the following email id's : [chandracm@iisc.ac.in](mailto:chandracm@iisc.ac.in) and [nikithar@iisc.ac.in](mailto:nikithar@iisc.ac.in) and should be addressed to Prof. **C. M. Chandrashekar, Department of Instrumentation and Applied Physics, Indian Institute of Science, Bangalore, Karnataka 560012, India.**

### General Terms and Conditions

1. Indian vendor's can submit quote on behalf of their foreign principle and in that case the quotation should be in foreign currency and should not include any custom duty charges and local tax.
2. The lead time for the delivery of the equipment should not be more than 3 months from the date of receipt of our purchase order. It should be clearly mentioned in the technical and commercial bids.
3. All the quotations must be valid for at least 90 days at the time of submission.
4. List of customers and references: **The Bidder should have supplied similar equipment in Central Universities preferably in centrally Funded Technical Institutes (IITs, IISc, IISER, NIT). Please provide the details and contact information.**
5. The Bidder must not be blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere. A declaration to this effect should be provided.
6. Items in addition to that listed in the technical table that you would like to bring to the attention of the committee, such as data sheets, technical plots etc. can be listed at the end of the compliance table.
7. Vendors are encouraged to highlight the advantage of their tools over comparable tools from the competitors.
8. If needed, a meeting for any technical clarifications can be scheduled with the undersigned by sending an email.
9. The Institute reserves the right to accept or reject any bid, or to annul the bidding process and reject all bids, at any time prior to the award of contract without thereby incurring any liability of the affected bidder or bidders.

10. Warranty terms and additional warranty options is a must for all the components. Please specify the service plan like whether the local distributor will address the issue or the parent company.
11. Terms and conditions for the annual maintenance contract beyond the warranty period should be mentioned.
12. After the award of purchase order, the vendor must provide an Order Acknowledgement within 30 days from the receipt of the Purchase Order.
13. Please quote the price of each optional line item, separately.

**Technical requirements:** Please note that the requirements listed below are only guidelines. It does not disbar bids that do not meet the criteria listed. Vendors are requested to quote for equipment that meet the criteria to the best extent possible and list deviations. Deviations are NOT an automatic reason for disqualification. They will be discussed by the technical committee prior to making an informed decision.

### **Time-correlated single-photon counter (TCSPC)**

<b>Sl. No.</b>	<b>Technical Specification</b>	<b>Value / Range</b>
1.	Number of Channels	8 (inputs), 4 (outputs for ext. trig.)
2.	Clock rate	$\geq 1$ GHz
3.	Time bin width	10-100 picoseconds
4.	Timing jitter	$< 50$ picoseconds
5.	Dead time	$< 8$ nanoseconds
6.	Minimum data processing	$> 8$ Million Events/second per channel
7.	Input voltage range	$\pm 2.5$ V maximum
8.	Input pulse delay	1 picosecond to 1 millisecond (step size to be specified)
9.	Discriminator levels	$\pm 2$ V maximum (step size to be specified)
10.	Output pulse format	TTL/ NIM (pulse width to be specified)
11.	Output pulse frequency	$\geq 125$ MHz
12.	Output pulse delay	100 picoseconds to 1 millisecond (step size to be specified)
13.	Maximum data transfer rate	$\geq 100$ M Events/sec
14.	Latency between input and output	Any latency between input and output to be specified
15.	Software to control and process data from the TCSPC	Must be included with capabilities for controlling, time-stamping, histogramming and programming
16.	Any cables, connectors or other accessories required to connect the TCSPC to the single-photon detectors	Must be included
17.	Warranty	Minimum of one year

### Other requirements:

1.	Compatible operating system(s) for the interface software should be specified. Suitable software drivers available should be specified.
2.	Please include other options currently available which can be added on in the future.
3.	Training and installation: Different options for training and installation by service engineer to be listed and quoted.
4.	The cost of shipping to IISc should be included.
5.	List of acceptance tests for on-site (vendor) inspection and after installation at IISc.
6.	A set of basic experiments for performing routine checks of acceptable operation with clear instructions to be provided.
7.	The payment terms will be specified in the commercial proposal and is subject to negotiations.
8.	Please provide details of the number of trained personnel in India, number in southern region or in Bangalore who can service the instrument.

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