



### Request for Quotation for **Supply, Installation, Testing & Commissioning of Smoke, Fire detection and VESDA system**

- The GEECI (Gallium Nitride Ecosystem Enabling Centre and Incubator) at SID-Indian Institute of Science is seeking bids from qualified agencies for Supply, Installation, Testing & Commissioning of Smoke, Fire detection and VESDA system for NNFC at CeNSE, IISc
- Companies need to submit two bids, a technical bid and a commercial bid, in two separate sealed envelopes. The bids should be submitted no later than 21 days from the date of posting of this tender, as listed on the website date/time stamp, and by 5 pm on the 21st day or next weekday in case the 21st day falls on a weekend or a national holiday.
- Both technical and commercial bids should be addressed to “The Chief Executive, SID, IISc, Bangalore 560012.”
- The envelopes should be addressed to “Prof. Srinivasan Raghavan, CeNSE, IISc, Bangalore, 560012” and submitted to the office at CeNSE, IISc in Room No. GF 15 between 9 am and 5 pm.
- All questions regarding this tender should be addressed to Prof. Srinivasan Raghavan at the email address [sraghavan@iisc.ac.in](mailto:sraghavan@iisc.ac.in)
- Post such submission all vendors should send an email to [sraghavan@iisc.ac.in](mailto:sraghavan@iisc.ac.in) with the subject line: “GEECI\_Bidder’s name Tool Name” to intimate him of the submission within one day.
- Deviations from the technical specifications requested are allowed. Such deviations must be highlighted and justified. Their acceptance or rejection will be left to the discretion of the technical committee.
- The equipment sought will be placed at the Centre for Nano Science and Engineering (CeNSE), Indian Institute of Science (IISc). IISc is India’s No. 1 institution on higher learning and the Center for Nano Science and Engineering is home to one of the best academic fabs in the world.
- The technical response, corresponding to the system being offered, should be in the form of a compliance table with at least 5 columns.  
Serial number in column 1. Each of the numbered technical items below should be addressed in a separate row of the table in column 2. Compliance to this requirement, in Yes/No, deviation from it and justification should be provided in the neighboring columns 3-5. Post the opening of a hard copy of the technical bid the committee will request for a soft copy of the files for further processing. Companies should NOT mail soft copies of the files unless specifically requested for.
- Detailed technical specifications of the system being offered should be included.
- Any additional capabilities or technical details, that you would like to bring to the attention of the purchase committee, can be listed at the end of the technical table.
- If multiple systems can fulfill the requirements, vendors can submit multiple bids.
- Vendors are encouraged to highlight the advantages of their tools over comparable tools from the competitors.
- The commercial bid should be broken up to the maximum extent possible into separate items with a cost against each to enable better comparison of price for various configurations across the bidders. As an option, please provide itemized cost for any suggested accessories/addons that may enhance the usability, capability, accuracy or reliability of the system. Vendors are encouraged to quote for as many add-ons as their System portfolio permits.



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The quotes should be split into a line item indicating the base price and then each optional item should be listed separately with its pricing.

### Procedure

1. Only vendors who are compliant with the technical requirements will be considered for commercial comparison. The bid is awarded to the lowest cost vendors (referred as L1).
2. The commercial comparison is made as per Government of India rules, specifically GFR 2017. Note that GFR has recently been amended. As per recent edits to the GFR, there are three classes of vendors distinguished by their “local content”. In the cover letter, vendors must mention which applies to them:
  - Class 1 supplier: Goods and services have a local content of equal to or more than 50%.
  - Class 2 supplier: Goods and services have a local content more than 20% but less than 50%
  - Non-local supplier: Goods and services have a local content of equal to or less than 20%
3. This tender will only apply entertain Class 1 or Class 2 suppliers. Vendors must provide a self-declaration of what Class they belong to.
4. The vendors must carry out thorough site survey for panel, detector, hooter locations, routing of cables etc. And submit the GA and P&ID drawings with the technical bid.
5. In the commercial bid, please provide an itemized cost of the system and required accessories, such as controlpanel, detectors,hooters,cablings etc.,
6. As an option, please provide itemized cost for any suggested accessories/add-ons that may enhance the usability, capability, accuracy or reliability of the system. Vendors are encouraged to quote for as many add-ons as their tool portfolio permits.
7. Quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor. The quotations should be in INR only and must include shipping cost.
8. Mention GST separately. IISc will be taxed at 5%. IISc will provide the GST exemption certificate against invoice.
9. Please indicate the warranty provided with the Equipment/System. Warrant of 3 years or more is required.
10. As an option, provide itemized cost for required spares and consumables for 2 years of operation from the time of installation.
11. Clarify if periodic (preventive) maintenance be done by a trained on-site engineer or requires a specialist from the OEM.
12. If maintenance requires OEM, as an additional option, provide cost of an annual maintenance contract (AMC) for 3 years, post-warranty. The AMC must cover 4 scheduled and 12 emergency visit per year. The AMC cost must also include an itemized list of spares that are essential for the scheduled visits.
13. The technical proposal must include references from 5 previous installations in India. Please provide the names and contact addresses of the referees so that the committee can contact them independently.
14. The products of the applicant should have latest UL certification (UL 268 -7th edition).
15. The products should be based on latest technology for the specific requirement.

16. The applicant should submit a "Satisfactory Performance Certificate" from two Companies/Entities where the applicant has done installation/maintenance of Fire systems.

### Technical Requirements

1.	Application	Smoke and Fire detection system for a semi-conductor cleanroom.
2.	Industry type	Semiconductor cleanroom class 100 and class 1000
3.	Make and Model	The make and model recommended is <b>SCHRACK/NOTIFIER</b> . Since most of the new fire alarm systems installed in the IISc campus are <b>SCHRACK/NOTIFIER</b> make. Keeping in mind the future expansion and inter building integration it is decided by the technical experts that the <b>SCHRACK/NOTIFIER</b> is most suitable Fire Alarm and control system.
4.	System type	A 32 bit microprocessor based Intelligent Addressable Fire Alarm Control panel with 1 loop with battery back up to 24 hours, The control panel, batteries, battery charger etc., shall be Vds approved and as per EN-54 standard. The panel shall consist with minimum 240 character LCD display. Panel should be able to record at least 10000 events history. Each loop should be capable to have at least 250 elements / devices out of which min. 200 nos. shall be detectors. The Panel Shall have on board TCP/IP Lan port to facilitate remote operation of the panel. The system should be Vds approved It is possible to Commissioning the System through LAN Network.
5.	Detectors	Analogue Addressable Flash scan multi-sensing, low-profile detector (Acclimate type) having Rotary, decimal addressing system with standard base, junction box and other accessories as required. The detector shall be with Visible bi-color LEDs for 360 deg viewing and shall blink green every time the detector is addressed, and illuminate steady red on alarm. <b>Detector shall comply UL 268, 7th edition requirements</b>
6.	Manual call point	Addressable manual call point which is used for manually trigger a fire alarm suitable for interconnecting to the loop technology directly. The built-in LED indicates its triggered state. This must have inbuilt short circuit isolator; The ambient temperature range shall be -20°C to +50°C. The quoted item shall completely comply to the technical specification. Shall be Vds approved.
7.	Sounder/Hooter	Addressable Loop Powered multi tone sounder with integrated short circuit isolator (in case short circuit isolator is not inbuilt, the price of this item shall be inclusive of an independent short-circuit isolator along with each loop powered sounder) & having operating temperature - 10°C to + 55°C shall be Vds approved. As per NFPA the hooter shall deliver output up to 90 db at 1 m from source (adjustable at site or from



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		the panel) and candela setting from 15 to 130 cd from its installed location and 75cd flashing at 1 Hz for visual indication.
8.	Flashing Light	Addressable loop powered flashing light for visual notification of a fire alarm in interior areas, should have inbuilt fault isolator. The operating Temperature should be -10° to +55°C. The module must be VDS approved.
9.	Control module	Vds approved Analogue Addressable Input / Output module with IP66 casing containing 2 inputs for monitored querying of potential free contacts and one Relay Output with in-built short circuit isolator (in case short circuit isolator is not inbuilt, the price of this item shall be inclusive of an independent short-circuit isolator along with each monitor module), it must be VdS approved and as per EN-54 standard. The ambient temperature range shall be -20°C to +60°C. The quoted item must completely comply to the technical specification.
10.	Aspiration system	Vds approved High Power LED based active Aspiration type smoke detector having Double line up to 200 mtr & up to 24 sampling points depending upon loop topology, IP54 protection category, ambient temperature -20°C to +60°C, separate pipe break & blockage detection and 3 freely programmable potential free contacts. Every aspirating line shall have programmable 3 pre-alarm & 1 alarm. The ventilator shall have 5 adjustable speeds. The pre signal sensitivity range shall be 0.002 to 10%/m. The aspiration detector shall be Addressable directly on the loop and part of Loop devices so that operation, configuration and querying of data from aspiration detector cab be carried out directly on the main addressable fire alarm panel. (Kindly Note :- Monitor / Control Module will not be used for Integration, the system should be directly communicable on the loop )
11.	Sensors	Highly sensitive HD sensor using the scattered light principle for use in the various ASD Panel. The sensor should optimally fulfil the requirements of a smoke detection in conjunction with a aspirating smoke detector. The threshold sensitivity of the smoke sensor can be set anywhere in the given range of 0.02 to 10 %/m - High power LED with lowest air resistance and highest resistance against contamination. - Compares sample parameters for fires - Intelligent alarm buffering - Alarm threshold tracking with two level contamination indicator - Dynamic particle suppression for detection and fading out of dust particles - Auto learning function for critical atmospheric conditions.

12.	Filters	Dust filter DFU 911 incl. Filter
13.	Interface Module	Interface Module XLM 35, for ASD 535 & various special detectors
14.	Power supply	Power Supply - 24 v ,3 Amps SMPS type
15.	Fittings/Accessories for Aspiration smoke detection.	Suitable Size PVC medium grade conduit, Joints, T , Bends , Elbows and other related accessories for Aspiration Smoke Detection must be included.
16.	Cables	2C x 1 Sq.mm twisted multistranded FRLS shielded Armored cable for FAS System must be included. <b>Make: Polycab or equivalent make.</b>
17.	Documentation	<ul style="list-style-type: none"> <li>• Complete P &amp; ID diagram of the system</li> <li>• Complete user manual including product description, operation principle, user information, and troubleshooting.</li> <li>• SOP for regular preventive maintenance that can be done by in-house engineer.</li> <li>• SOP for monitoring during operation.</li> <li>• SOP for troubleshooting</li> <li>• All necessary Certificates on request shall be provided</li> </ul>
18.	Services	<ul style="list-style-type: none"> <li>• Installation,supervision,drawing, programming, testing, commissioning and training at customer site, by the experts from principals should be part of the package.</li> <li>• During the installation all the specifications of the processes should be verified for acceptance by the customer.</li> </ul>
19.	Standards	ISO 7240-14 andNFPA 72
20.	Recommendation	<ul style="list-style-type: none"> <li>• The vendor must submit references from at least 3 previous installations</li> <li>• The names and contact addresses of the references must be submitted with the proposal, so the purchase committee can contact them independently.</li> </ul>

Thanking you,