

Tender Details

Tender No: SCL/PS/2018E0091701

Tender Date: 23/01/2018

Purchase Entity: Purchase& Stores

Tender Notice

E-Procurement Tender No. SCL/PS/2018E0091701 dated January 25, 2018, SEMI-CONDUCTOR LABORATORY [SCL] invites ONLINE offers in TWO part system through e-tender portal <https://eprocure.isro.gov.in> for Yield Management Software. Tender Documents can be downloaded from January 25, 2018 -1401 hrs. to February 26, 2018 upto 1030 hrs. The vendors need to get enrolled in the e-tender portal to access tender and submit their offer online. Vendors need to have Digital Signature Certificate as detailed on our e-portal and corporate e-mail ID to register on the above portal. Only online tenders will be accepted. No Manual/Postal/courier/e-mail/fax tender will be entertained. Please note Tender fee shall not be applicable for tenders submitted on-line through this portal.

Vendors interested to participate in this e-Tender are required to register themselves as vendors, if not already registered, in our e-procurement portal <https://eprocure.isro.gov.in> by downloading plugins and help demos listed on the home page of the e-procurement link mentioned above to complete the vendor registration process. They can seek help from help desk +91 20 2531 5555/ Mobile No.91679 69601 (Email: support.isro@nextenders.com) also the home page of e-procurement portal may be accessed for any technical help for registration and subsequent process. Vendors may please note that without registering in our E-procurement portal they will not be able to quote for this tender.

Tender Attachments

Technical Write-up/Drawings

Attachment - I:

IDT0015750000000000isro05401.pdf

Attachment - II:

Attachment - III:

Attachment - IV:

Attachment - V:

Instructions to Tenderers (PT)

1. Interested tenderers may, at their option, login to <http://eprocure.isro.gov.in> and submit offers as per details in the tender notification.
2. This being two part Tender-Technical and Commercial parts separate, the bidder should not attach any document(s) containing pricing information alongwith Technical Part. The tenders containing price information in Technical Part will be treated as unsolicited offers and rejected. Prices should be indicated in the Price Bid format only .
3. Request for the extension of the due date will not be considered.
4. SCL reserves the right to accept or reject any/or all the tenders in part or full without assigning any reasons thereof. The bidder is at liberty to seek information related to bidding conditions, bidding process and/or rejection of its bid.
5. In this tender either the Indian Agent on behalf of the Principal/OEM or the Principal/OEM itself can bid, but both cannot bid simultaneously for the same item. Indian agents while quoting on behalf of their principals shall provide necessary latest authorization letter obtained from their Principals/Manufacturers in their bid.

6. If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the tender for the same item. If submitted, all offers submitted by the said agent shall be excluded from the procurement process.
7. Bids submitted other than EGPS mode shall not be considered..
8. SCL reserves the right to verify all claims made by the bidder.
9. SCL reserves the right to change any milestone date of the tendering activity / tender schedule.
10. Tender which is not submitted in terms of instructions mentioned herein is liable to be rejected.
11. If tender opening date happens to be a public holiday, tender will be opened on the next working day and interested bidders may depute their representatives to attend the Tender Opening, with proper authorization.
12. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderers shall supply the same at the rates quoted.
13. It is expressly agreed that the acceptance of the Stores Contracted for is subject to final approval in writing by the Purchaser.
14. It is to be noted that the drawings, specifications, end-use, etc., given by the purchaser, are confidential and shall not be disclosed to any third party.
15. Prices are required to be quoted according to the units indicated in the Price bid. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
16. The quote should indicate quantity wise unit rate separately which have to be Price bid. The Prices are to be mentioned both in figures as well as in words. The taxes, duties etc. are to be calculated and indicated in the column provided in online forms explicitly.
17. Bidders are expected to comply with commercial and other terms and conditions given in vendor specified terms of this tender. In case of any deviation, the reasons thereof should be clearly specified in the vendor specified terms column.
18. All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.
19. Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his bid. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all

such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.

20. The tenderer would provide, the name of his bankers as well as the latest Income-Tax clearance certificate duly countersigned by the Income-Tax Officer of the Circle concerned under the seal of his office, if required by the Purchaser during evaluation of tender.

21. Subletting and Assignment: The contractor/supplier cannot sublet, transfer or assign the order/Contract or any part thereof or interests therein or benefit or advantage thereof in any manner whatsoever, to any other party save with the previous written consent of the purchaser. Such consent by the purchaser, however, shall not relieve or discharge the contractor/supplier from any obligation, duty or responsibility under the Purchase Order/ Contract.

22. The contractor/supplier shall indemnify the purchaser against Workmen Compensation Act.

23. The authority of the person submitting the tender, if called for, should be produced.

24. The bids shall be opened on 1st day of opening schedule as indicated in the Tender Notice in the presence of the bidders/their authorized representatives who may like to attend the tender opening against presentation of Authorization letter.

Due to any breakdown in server/link, bid opening will be continued on the following datesThe schedule of opening of Price bids shall be intimated separately to the technically qualified bidders only.

25. PROCEDURE FOR EVALUATION OF TENDERS:

Technical Evaluation Criteria:

Vendor meeting the eligibility criteria and basic technical specifications mentioned in SCL Tender shall be considered to be technically qualified.

Evaluation of Price Bids

The following elements shall be considered for evaluation of Priced Commercial offer:

a. Price quoted by the bidder in the price bid template for meeting the functionalities given in the Tender and Technical Specifications sheet. Bid shall be evaluated on overall cost basis. AMC charges and recommended spares & consumables charges sought in this tender shall not be taken into account for evaluation of price bid.

b. Compliance with the Payment Terms prescribed in this tender document. In the event, the bidder offers Payment Terms stringent than SCL prescribed Payment Terms, the bid of the bidder shall be loaded based on Base Rate of SBI prevailing on the date of opening of price bids.

c. In the event of the bidder requiring SCL to bear bank charges outside India (foreign bank charges), the bidders bid shall be loaded at the rate 0.5percent of the value towards bank charges outside India.

26. The bid should contain the following information:-

a. Agency Commission: Bidders are required to provide the following information in respect of their authorised Indian Agent, if any, alongwith technical bid as the same is mandatory as is required for consideration of the bid. Name, Address, Telephone no. , fax no., email of the Indian Agent including the contact person. A letter from the Manufacturer/supplier in the current date certifying that the said Indian Agent is their authorised Indian Agent and also indicating the responsibilities/role of the Indian Agent under the proposed purchase. Remuneration/service charges payable to the Indian Agent under the proposed purchase. The amount of agency commission included in the price and payable to Indian Agent of the contractor shall be paid directly to the Indian Agents by the Purchasers in equivalent in Indian rupees on the basis of an invoice from him applying TT buying rate of exchange ruling on the date of placement of the Purchase Order and which shall not be subject to any further exchange variations. The payment will be released to the Indian Agents within 30 days from the date of acceptance of the goods.

b. Recommended spares for satisfactory operation for a minimum period of one year.

c. Details of any technical service, if required for erection, assembly, commissioning and demonstration.

27. The FOB/FCA prices quoted should be inclusive of all taxes, levies, duties arising in the tenderer country.

28. The details of Import License if any, will be furnished in the Purchase Order.

29. Instruction/operation manual containing all assembly details including wiring diagrams should be sent wherever necessary in duplicate. All documents/correspondence should be in English Language only.

30. Part shipment is not allowed unless specifically agreed to by us.

31. EXTENSION OF TIME :

If the completion of supply of stores is delayed due to reason of force majeure such as acts of god, acts of public enemy, acts of Government, fires, floods, epidemics, quarantine restriction, strikes, freight embargoes, etc., the Contractor shall give notice within 15 days to the purchaser in writing of his claim for an extension of time. The purchaser on receipt of such notice after verification, if necessary, may agree to extend the Contract delivery date as may be reasonable but without prejudice to other terms and conditions of the Contract.32. RECOVERY OF SUM DUE:

Whenever any claim for the payment of, whether liquidated or not, money arising out of or under this Contract against the Contractor, the purchaser shall be entitled to recover such sum by appropriating in part or whole, the security deposited by the Contractor, if a security is taken against the Contract. In the event of the security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other Contract with

the purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the purchaser on demand the remaining balance due. Similarly, if the purchaser has or makes any claim, whether liquidated or not, against the Contractor under any other Contract with the purchaser, the payment of all moneys payable under the Contract to the Contractor including the security deposit shall be withheld till such claims of the purchaser are finally adjudicated upon and paid by the Contractor.33. PACKING:

- a) The Contractor wherever applicable shall pack and crate all stores for sea /air/road shipment as applicable in a manner suitable for export to a tropical humid climate, in accordance with internationally accepted export practices and in such a manner so as to protect it from damage and deterioration in transit by road, rail, air or sea. The Contractor shall be held responsible for all damages due to improper packing.
- b) The Contractor shall ensure that each box / unit of shipment is legible and properly marked for correct identification. The failure to comply with this requirement shall make the Contractor liable for additional expenses involved.
- c) The Contractor shall notify the purchaser of the date of shipment from the port of embarkation as well as the expected date of arrival of such shipment at the designated port of arrival.
- d) The Contractor shall give complete shipment information concerning the weight, size, content of each packages, etc.
- e) Trans-shipment of equipment shall not be permitted except with the written permission of the purchaser.
- f) Apart from the despatch documents negotiated through Bank, the following documents shall also be airmailed to the purchaser within 3 days from the date of shipment:
 - i) Air Way Bill (Two non-negotiable copies)
 - ii) Invoice (3 copies)
 - iii) Packing List (3 copies)
 - iv) Test Certificate (3 copies)
 - v) Certificate of Origin, wherever applicable.

The Contractor shall also ensure that one copy of the packing list is enclosed in each case.34. SECURITY INTEREST:

On each item to be delivered under this Contract, including an item of work in progress in respect of which payments have been made in accordance with the terms of the Contract, purchaser shall have a security interest in such items which shall be deemed to be released only at the time when the applicable deliverable item is finally accepted and delivered to the purchaser in accordance with the

terms of the Contract. Such security interest of the purchaser shall constitute a prior charge as against any other charge or interest created in respect of such items by any entity.

35. INDEMNITY:

The Contractor shall warrant and be deemed to have warranted that all Stores supplied against this Contract are free and clean of infringement of any patent, copyright or trade mark and shall at all times indemnify the purchaser against all claims which may be made in respect of stores for infringement of any right protected by Patent, Registration of design or Trade Mark and shall take all risk of accident or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for the sufficiency of all the means used by him for the fulfilment of the Contract.

36. COUNTER TERMS AND CONDITIONS OF SUPPLIERS:

Where counter terms and conditions/printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the purchaser unless specific written acceptance thereof is obtained.

37. CONTRACTORS DEFAULT LIABILITY:

The purchaser may upon written notice of default to the Contractor terminate the Contract in whole or in part in circumstances detailed hereunder:

- a) If in the judgement of the Purchaser the Contractor fails to make delivery of Stores within the time specified in the Contract/agreement or within the period for which extension has been granted by the Purchaser to the Contractor.
- b) If in the judgment of the Purchaser the Contractor fails to comply with any of the other provisions of this Contract.

Bid Templates

General Specification

Item Specifications

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
1	<p>1.SCOPE:</p> <p>Supply, installation, acceptance and training of customizable Yield Management software for SCL's VLSI fabrication facility, It shall be a software system that is to help in achieving and maintaining high yields by allowing engineers to collect, correlate, analyze and share critical data including defect, bin sort, parametric, inline, review, bit map and WIP tracking and Final test.</p> <p>It shall have the capability to overlay various design</p>			

	<p>layouts over defects for correlation analysis of defects with physical layout Capability to overlay or create inspection recipe care area on the design layout and filter defects for design based classifications.</p> <p>It shall have Open Database supporting Structures Query Language (SQL) or shall be having GUI interface to enable users fetch the data in user required format from one or more tables from database. It shall be compatible with various Standard Manufacturing Execution Systems (MES).</p> <p>Customization of software is to be done by Vendor to automatically fetch and relate data from MES database (SQL SERVER) in SCL</p>			
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	<p>SCL will provide sample data like Inline Defect Data (KLARF files and images), Inline metrology measurement data (CSV files), In Line Electrical test Data (CSV files), Final SORT data (CSV Files) .Vendor to demonstrate the software with SCL provided sample data of 2 to three lots.</p> <p>Vendor has to demonstrate loading of data to software. Vendor also has to demonstrate all the features mentioned in specifications at the time of training.</p>			
2	<p>ELIGIBILITY</p> <p>Vendor shall have a minimum of 10 years of experience in providing such software to internationally reputed running production fabs.</p>			

3	<p>2.HARDWARE REQUIREMENTS:</p> <p>Vendor has to specify Server, Client and Network Configuration (Hardware, Operating System, Database, Any additional licensed software/Applications Required, Networking Protocol).</p>			
4	<p>3.FEATURES:</p> <ul style="list-style-type: none"> •It shall have Open architecture to provides a tool, process and size-independent backbone of the fab •Shall link to Defect Inspection Systems (like KLA 2139, KLA 23XX, AMAT Uvision, AMAT ComPASS/Pro, AMAT ComPlus series)), Defect Review Systems (like Zeiss AxioSpect 200, SEMVision CX), In Line Testers (like HP UX 4072) and standard 			

	<p>Industrial Electrical testers.</p> <ul style="list-style-type: none"> • Shall be able to parse and support various image types such as Single Tiff, Double Tiff, and JPG etc. • It shall link to indigenous Manufacturing Execution System (SQL SERVER Database – Schema will be shared with Vendor) along with standard Manufacturing Execution System like SiView, Workstream, PROMIS, Aspect Etc • Shall have High capacity (Minimum of 10 TB) data collection and storage capacity • Shall Report yield loss over various process steps. 			
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Technical Specification-1

Item Specifications -I

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
1	4.Detailed Specifications Software shall support the following A.DATA TYPES 1Defect Types : Particle defects, Front Scan, Back Scan, Bare, Bevel Edge Inspection Defects.			
2	2Sort: Shall support multiple sorts and retest.			
3	3Metrology Data: It shall support link and correlate various metrology parameters viz. Critical dimensions, Various layer thicknesses, Etch Rates etc measured			

	inline.			
4	<p>4Electrical / parametric test:</p> <p>Shall be able to link and correlate electrical parametric test data collected in line from HP 4072 UX tester.</p>			
5	<p>5WIP:</p> <p>Shall be able to link with Manufacturing Execution System used at site and correlate the data like Lot history data, wafer level tracking data, equipment data, wafer chamber Level data with yield.</p>			
6	<p>6Defect review and classification :</p> <p>Shall support manual defect classification, ADC (Automatic Defect Classification), Spatial Signature Analysis (SSA) and various class types.</p>			

7	<p>7Defect images</p> <p>Shall support storage of Manual or ADC, Spatial Pattern Recognition, RTC images associated to multiple classifications.</p>			
8	<p>9.Defect Images from Review on Inspection Tool</p> <p>KLA 2139 specific:</p> <p>The image files (tif/jpeg/jpg) generated on defect inspection tool while reviewing does not have any embedded information on defect size, defect area, location etc. Instead a TIF and corresponding TRF file is generated for every defect. TRF file carries the information about defect and TIF carries corresponding image. Facility shall be there to upload these two files for every defect and interlink the image to defect ID in</p>			

	<p>klarf file.</p> <p>Other Inspection tools: shall be able to save defect inspection files and images from other inspection tools e.g. KLA, Applied Material etc.</p>			
9	<p>10.Defect Images from Review Stations like (like Zeiss AxioSpect 200, SEMVision CX)</p> <p>System shall be able to upload JPG/TIF format images from review stations and link the images to corresponding defects in related Klarf File.</p>			
10	<p>11Memory bitmap</p> <p>Shall be able to Collect and store bitmap data measured at different parameters from different testers. It shall have feature to classify failure patterns.</p>			

11	<p>B.CLIENT DATA TYPE NAVIGATION & SELECTION</p> <p>1.General Navigation/Selection</p> <ul style="list-style-type: none"> •By process / technology. •By device / product. •By Sub-product . •By lot. •By wafer / slot / Split Lot. •By date / time range, Work Day , Work Week , Month (Based on defect inspection, sort, parametric, or process time). •Time period prior to now, From –Until date. •By Wafer zone, Die Zone, Bare Wafer Zones (Default zone pattern such as radial or user-definable). •By group (Split lot).•By last number of lots. 			
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12	<p>2.Defect Navigation</p> <ul style="list-style-type: none"> •By Sub die. •By Die (Shall allow to include specific bin code data , parametric sites from the Die Level). •By Reticle. •By single / multiple inspection layers. •By single / multiple equipment. •By defect types (Manual, ADC, or Spar- Infinite Class Types). •By defect data (Adder, Common , Removal Raw, cluster, or repeater, Bitmap Hits , Original Cluster , Dynamic adders , Common , Clusters , Defect with Images , Defect Region , Distribution by Test , Review , Sampling). •By defect attribute 			
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	<p>(Defect size, X size, Y size, Defect size, intensity, area, volume, and grade).</p> <ul style="list-style-type: none"> •By slot. 			
13	<p>3.Bin Sort Navigation</p> <ul style="list-style-type: none"> •By hardware bin. •By software bin. •By sort 1 / sort 2 / sort 3 / sort 4/ Multiple. 			
14	<p>4.Bitmap Navigation</p> <ul style="list-style-type: none"> •By memory bit fail mode. •By tester / test program. 			
15	<p>5.Parametric / Electrical / Inline Variable Navigation</p> <ul style="list-style-type: none"> •By parameter (Binning or non-binning parameters). •By inline variable (Various Inline Meteorology Parameters). •By tester. 			

	<ul style="list-style-type: none"> •By test site. •By test site pattern (Product vs. engineering sites). •Process. •By process step. •By stage. •By equipment. •By chamber. •By recipe ID. •By Operation Id. •By WIP Process Time. •By Operator ID. 			
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Technical Specification-2

Item Specifications -II

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
1	<p>C.DATA PROCESSING and MAP ANALYSIS</p> <p>1.Data Loading</p> <p>System shall have loaders/automatic scripts to automatically load the Klarf and image files from shared folders on various review and inspections systems. These loaders or scripts shall continuously monitor the shared folders and upload the data as soon as it is stored in shared folders.</p>			
2	<p>2.Defect Data Processing and Sampling:</p> <p>Shall be able to process data and generate Adder, Common , Removal Raw, cluster, or repeater, Bitmap Hits , Original</p>			

	<p>Cluster , Dynamic adders, Clusters , Defect with Images , Defect Region , Distribution by Test , Review , Sampling</p> <p>Shall have capability to generate sample file in klarf format compatible with review tools as per</p> <ul style="list-style-type: none"> •Default sampling set by Inspection tool. •Sampling based upon specific portions selected by user on wafer map generated as per default KLARF file. •Sampling based upon size, location, area of defects, defect ID selected by user. 			
3	<p>3.Defect Classification:</p> <p>Software shall have a standard library of classification of various defects. This library shall be editable. User shall be</p>			

	<p>able to select a specific layer in a wafer of a lot. User shall have option to classify the defects from a list of classifications shown from defect database. User shall also have option to define a new class of defect. This new class defined here shall be added to defect classification library and available in list while classification is being done next time.</p> <p>User shall be able to select single/multiple areas on wafer map.</p> <p>All the defects in the selected areas that have image stored against them shall be available for classification.</p> <p>Option shall also be there to provide single or multiple set of coordinates (X-start, Y-start, X-end and Y-end) or specific area</p>			
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	<p>selection. All the defects in the areas as per provided coordinates or selection that have image stored against them shall be available for classification. This option shall be GUI based and interactive with user.</p>			
4	<p>4.Defect wafer map</p> <p>Shall be able to generate Bare as well as pattern wafers, stack or single map, single or multiple steps, single or multiple products/sub products.</p>			
5	<p>5.Defect wafer map array</p> <p>Shall provide a gallery of stack or single maps with options of lot vs step, lot vs wafer, or wafer vs steps, wafer vs defect type.</p> <p>Option shall be there to click on any map in the gallery for expanded view</p>			

	<p>of that map, defect /image correlation.</p> <p>Reclassification of defects for ADC /RTC class/manual class types</p> <p>Overlay wafer zones/die zones on wafer map.</p>			
6	<p>6.Defect stack die map</p> <p>A single, Reticle, Horizontal, Vertical die stack map: all dies on all wafers or all dies on single wafer.</p>			
7	<p>7.Bin map :</p> <p>Stack or single map.</p>			
8	<p>8.Bin map array :</p> <p>Gallery of stack or single maps with options of lot vs bin, wafer vs bin. or wafer vs lot—wafer vs sort, wafer vs retest.</p> <p>Options shall be there to click on any map in the gallery for expanded view</p>			

	of that map.			
9	9.Parametric map: Stack or single map of test sites showing values, sigma distributions.			
10	10.Wafer Zone definition: Default zone such as radial, quadrant, or 9 segments available; also user-definable zones.			
11	11.Die Zone definition : Creation of die zones, user-definable.			
12	12.Bare Inspection Zones: Creation of Zones for bare inspection to exclude edge defects as well as user definable areas.			
13	13.Reticle definition: User-definable Reticle setup—analysis on die position in a Reticle field.			

14	<p>14. Various type of overlays:</p> <ul style="list-style-type: none"> • Overlay defects on bin map; display clean good die, defective good die, clean bad die, and defective bad die. • Overlay Defects on ET Maps. • Overlay Sort data on ET Maps. • Inline defects overlay with bit fails. • Inline defects overlay with logic fail signals. 			
15	<p>15. Repartition</p> <p>Option shall be there to Dynamic repartition to remove steps, and recalculate the origin of each defect. The value of the tolerance for the repartition shall be modifiable. The changes done shall be applied only</p>			

	to the session and shall be available for further analysis in other client modules however it shall not saved in the database.			
16	<p>16.System shall have the capability for</p> <ul style="list-style-type: none"> •Coordinate system Management:Automatically take care of different coordinate system, notch orientation, and (0,0) origin die location generated by different systems. •Pre-processing: Run Customizable pre-processing scripts to pre-process in-coming data files based on user definable rules, for example, product or layer specific coordinate offset, normalization of lot / wafer names. or merging. 			

	<ul style="list-style-type: none"> •Ad-hoc defect partitioningPerform Interactive repartitioning of defect overlay from client; different tolerance can be applied with options to write back the results to the database. •Sub Product and Product-group handling Product groups having identical die grids, size definitions (takes care of die size and die pitch info with respect to wafer rotations) to be grouped as one. •Manage Multiple scans per wafer and step (time based) with updated wafer/lot calculations, statistics accordingly. •Enhance Overlay of Bit fails with Inspection defects to calculate Bit Hits defects to find total number of sub dies 			
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	<p>electric failures matched to inspection defects.</p> <ul style="list-style-type: none">•Enhanced Cluster algorithm to calculate Horizontal / vertical cluster groups at die level, Wafer Level to find bit fails , Defects within a specific range of each other within single die / wafer maps.•Repeater calculation based on wafer overlay (for wafer-size reticles).			
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Technical Specification-3

Item Specifications -III

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
1	<p>D.DEFECT IMAGE VIEWING</p> <p>1Image Viewer</p> <p>Browser to view images stored on server by technology, product, sub Product ,lot, wafer, layer, type, tools, test or size.</p>			
2	<p>2View image from defect wafer map:</p> <p>Option shall be there to reproduce a wafer map with only those defects that have images against the defects.</p> <p>Option shall be there to reproduce a wafer map on basis of defects selected as per criteria of size, type of defect etc.</p> <p>Option to Click on defects with defect images to</p>			

	bring up image display window showing defect images; in the case of multiple images for a defect, displays thumbnail gallery, Image gallery with reference to wafer-map position. Images viewing with size-, contrast- and brightness-control reclassification (fine bin, rough bin etc.)			
3	<p>E.CHARTING CAPABILITY</p> <p>1Software shall have capability to generate various charts but not limited to viz.</p> <ul style="list-style-type: none"> •Defect / defect density step contribution: <p>Automatic defect overlay between layers to identify adder defects with user-definable tolerance— analysis can be based on adders or raw defects, common defects missing defects can be identified</p>			

	<p>and exported, user can define specific layers to be overlaid instead of all layers (default)</p> <ul style="list-style-type: none"> •Box plot: Box plot data can be wafer, lot, or site based—options to display minimum, maximum, average, standard deviation, range, upper, and lower quartile and to display outlier or all data points. Box Plots shown with Confidence Intervals •Cumulative probability plot •Pareto •Histogram •X Y scatter plot: Straight line or user-definable degree polynomial curve fitting •Line Graph: 			
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	<p>Trend by day, date, month. or workweek; user-definable workweek</p> <ul style="list-style-type: none"> •Bar graph •2D, 3D bar graph •Y2 chart •Pie chart •Zonal analysis •Average, total, median, quartile •User definable chart attributes (fonts, color, style etc) and option to save these as templates •Chart Data/Statistical Summary: <p>Show data point values, data set content, means, median, minimum, maximum, standard deviation of current chart</p>			
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4	<p>F.DATA CORRELATION ANALYSIS and Normalization</p> <p>1.Software shall have capability</p> <ul style="list-style-type: none"> •To correlate oDefect vs equipment oDefect vs bin sort oDefect vs memory bit fail oDefect vs Parametric oDefect vs Inline oBin sort vs. parameter oBin sort vs equipment oBin sort vs inline variable oBinsort vs Memory bit fail oParameter vs equipment oParameter vs parameter oInline variable vs inline variable oParameter vs inline 			
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	<p>variable</p> <ul style="list-style-type: none"> •To determine Killer ratio <p>oBy defect size, defect type, or layer for bin sort or bit fail correlation</p> <ul style="list-style-type: none"> •To perform High / low yield analysis •To Normalize Defect Density for inline excursion monitoring 			
5	<p>G.EXTERNAL INTERFACE</p> <p>1.Software shall have exporting capability to export summary reports from charts , wafer maps & arrays in user defined templates in MS Office</p>			
6	<p>H.YIELD PREDICTION</p> <p>1.Shall be able to predict Systematic (Ys) , and random yield (Yr)</p>			

7	<p>I.DRILL DOWN / SUBSELECTION ANALYSIS</p> <p>1.Capability of On chart sub selection of data points for drill down analysis:</p> <p>Drill down analysis from data points on charts; sub selection inclusive or exclusive</p>			
8	<p>J.MACRO / BATCH CAPABILITY</p> <p>1.Shall have capability for</p> <ul style="list-style-type: none"> •Automatic macro/script creation based upon manual analysis being done, so that macro/script can be saved and executed for automated analysis of same kind next time •Routine batch job scheduling with facility for job to be executed daily, weekly, or specific days at specific time. 			

	<ul style="list-style-type: none"> •Automatic creation of analysis in Word or HTML files with compatibility to MS Office. 			
9	<p>K.SPC Capability</p> <p>1. •Capability to store spec limit history in database and define spec limit at product/step level.</p> <ul style="list-style-type: none"> •Capability to store spec limit history and display spec limits on charts 			
10	<p>L.INTERFACE TO DEFECT REVIEW STATIONS</p> <p>1. Software System shall have following features</p> <ul style="list-style-type: none"> •Automatic data loading: •Automatic file transfer and loading to update classification code and defect images •Automatic defect sampling file to review stations: 			

	<ul style="list-style-type: none"> •Defect files can be automatically sampled based on, killer defect, defect size, die location, cluster and / or random and transferred to review stations •Interactive sampling of defects to review stations: •On client, user can interactively sample defects based on defect size, die location, cluster and / or random, common or adder, killer defects and transferred to review stations •Defect Re- classification: •Only privileged users shall be able to reclassify defects 			
11	M.DATA MANAGEMENT: PURGING, BACKUP & DATA SECURITY AND ACCESS			

	<ul style="list-style-type: none"> •Capability of Data purging oBy bin oBy parametric oBy WIP oBy bit oBy metrology oBy defect oBy lot/wafer oBy time oBy product oBy defect image •Scripts/GUI to be provided to automatically purge the data as per parameters set in the script. Script shall be modifiable •Database management utility 			
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	<ul style="list-style-type: none"> •Database files, index management; email warning message when file system or database data capacity close to capacity •On-line Data and Retrieving Data from Backup: Minimum of 12 months of data to be available online. Scripts/GUI to be provided by vendor to automatically retrieve data from Purged files as per parameters set in script. Script shall be modifiable •Backup: Vendor to provide Script/GUI utility for performing back up •User set up & security features: All the features in the 			
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	software shall have different level of data access privilege, so that customized and limited access can be given to different users.			
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Additional Requirements

Item Specifications -IV

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
1	<p>5.Additional Requirements:</p> <p>Licensing:</p> <p>a.The software along with all modules requiring separate licenses must have perpetual, floating licenses.</p> <p>License should be for minimum of 5 concurrent client users.</p>			

2	<p>A. License Re-hosting:</p> <p>a. In the event the host-ID / server hosting the licenses becomes unusable due to failure or obsolescence or in case of up gradation of hardware infrastructure, re-hosting of licenses of all products on a new host-ID shall be provided free of cost during the period covered by the maintenance contract.</p> <p>b. Vendor to mention post-maintenance contract rehosting policy.</p>			
3	<p>B. Evaluation procedure:</p> <p>a. At SCL's option, the evaluation of the software will be carried out at SCL, for which the vendor must provide the software in the quoted configuration. The evaluation will be done using test cases provided by the vendor,</p>			

	<p>selected in consultation with SCL.</p> <p>Vendor to demonstrate all the features in the quoted configuration</p> <p>b.The vendor must provide evaluation license(s) as needed for a month or more for use at SCL by SCL engineers during technical evaluation of the software.</p>			
4	<p>C.Training:</p> <p>a. On-site training on operation and maintenance for SCL engineers free of cost. The duration of the training shall be specified by the vendor.</p>			
5	<p>D.Annual Maintenance:</p> <p>a.The vendor must provide free software updates and maintenance releases for one year from the date of</p>			

	<p>acceptance at SCL.</p> <p>b.As an option, the vendor must also quote for software updates and maintenance releases for three years and five years.</p>			
6	<p>E.Acceptance Procedure:</p> <p>Acceptance of the procured software will be done at SCL based on criteria jointly decided by SCL and the vendor and subject to successful demonstration of all features as per quoted configuration</p>			
7	<p>F.All the software modules must be from the same OEM.</p>			
8	<p>G.Documentation:</p> <p>Complete set of manuals corresponding to all quoted modules shall be provided. The manuals shall be in portable document format (pdf).</p>			

	One set of hard copy of the user manuals may be provided.			
9	<p>H.Two-Part Bidding:</p> <p>Vendor shall submit only non-priced commercial offer with Part-1 (Technical) of the bid. Priced offer shall be in Part-2 (Commercial) only. Vendor to note that inclusion of priced offer in Part-1 (technical) shall lead to rejection of the bid.</p>			
10	<p>I.Configuration:</p> <p>Vendor to attach complete configuration of the software including number of licenses for each module along with technical offer.</p>			

Vendor Specified Terms

Description	Vendor Terms
<p>1.Delivery Term:.</p> <p>For imported stores, prices shall be quoted on FOB/FCA nearest International/Gateway airport basis.</p> <p>For indigenous stores, prices shall be quoted on F.O.R destination basis i.e. SCL, S.A.S. Nagar, Mohali, Punjab, exclusive of GST and taxes as may be applicable.</p>	
<p>2.GST:</p> <p>Purchaser is entitled to concessional CGST of 2.5 % and IGST of 5 % as per Ministry of Finance, Department of Revenue, Notification Nos. 45/2017 Central Tax (Rate) and 47/2017 Integrated Tax (Rate) both dated 14th November, 2017 respectively and would accordingly issue Exemption Certificate in favour of the contractor quoting in Indian Rupees. The bidder should take note of the same while quoting the prices in Indian Rupees.</p>	
<p>3.For imported materials, Purchaser is entitled to issue Customs duty exemption certificate (CDEC) to the contractor under customs notification no.51/96 dated 23.07.1996 and subsequent amendments to enable the contractor to avail off the benefit of concessional rate of customs duty under this notification. CVD under this notification is nil. In addition to the above CDEC, any documentary support requested by the contractor from the purchaser for customs clearance of goods against the above CDEC shall be provided by the purchaser.</p>	

<p>(Purchaser will provide Customs Duty Exemption Certificate in case of Import Orders/ imported supplies/ High Sea Sales).</p>	
<p>4. IMPORTANT:</p> <p>This being two part Tender-Technical and Commercial parts separate, the bidder should not attach any document(s) containing pricing information alongwith Technical Part. The Contractor will provide Un-Priced Commercial offer in envelope 1 (Technical Part) as an attachment.</p> <p>The tenders containing price information in Technical Part will be treated as unsolicited offers and rejected. Contractor to confirm that Price bid is not attached in Envelope 1 i.e. Technical Part</p> <p>Priced Commercial offer, if any, should be attached in Envelope-2 (Price Bid) under Supporting Documents from Vendor (Commercial), as an attachment</p>	
<p>5.Delivery Period:</p> <p>The contractor should specify their best delivery period inclusive of all Govt. formalities of the exporting country.</p>	
<p>6.TERMS OF PAYMENT IN CASE OF OVERSEAS SUPPLIER[S]:</p> <p>Being a Department of the Government of India, the normal terms of payment are by Sight Draft. The payment shall be remitted as under:</p> <p>90% of the value of the materials supplied shall be paid within 30 days of the receipt of the materials at purchaser site and the balance 10% amount shall be payable on successful installation and acceptance at</p>	

<p>Purchasers site against a Performance Bank guarantee .</p> <p>All bank charges outside India related to the payment shall be borne by the Contractor and all bank charges in India shall be borne by the purchaser.</p> <p>In the event of the Contractor not being able to provide the Performance Bank Guarantee the payment of balance 10% amount shall be made after the expiry of the warranty period.</p> <p>Indian agent remuneration/service charge shall be payable by the Purchaser directly to the Indian agent in Indian Rupees based on T.T buying rate of exchange prevailing on the date of placement of purchase order within 30 days of acceptance of equipment at purchaser site.</p> <p>The Sight Draft will be operative on presentation of the under mentioned documents :</p> <ul style="list-style-type: none">a) Original Airway Billb) Commercially certified invoices describing the stores delivered, quantity, unit rate and their total value, in triplicate. The invoice should indicate the discounts, if any, and Agency Commission separately.c) Packing List showing individual dimensions and weight of packages.d) Country of Origin Certificate in duplicate, wherever applicable.e) Declaration by the Seller that the contents in each case are not less than those entered in the invoices and the quality of the Stores are	
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<p>guaranteed as per the specifications asked for by the Purchaser.</p> <p>f) Warrantee and guarantee Certificate/s as applicable.</p> <p>While the purchasers bank charges shall be borne by the purchaser, the contractor shall bear the bank charges payable to his banker including the charges towards advising/amendments/commissions etc.</p>	
<p>7.TERMS OF PAYMENT IN CASE OF INDIGENOUS SUPPLIER[S]:</p> <p>The payment shall be remitted as under:</p> <p>90% of the value of the materials supplied shall be paid within 30 days of the receipt of the materials at purchaser site and the balance 10% amount shall be payable on successful installation and acceptance at Purchasers site against a Performance Bank guarantee .</p> <p>In the event of the Contractor not being able to provide the Performance Bank Guarantee the payment of balance 10% amount shall be made after the expiry of the warranty period.</p> <p>While the purchaser bank charges shall be borne by the purchaser, the contractor shall bear the bank charges payable to his banker including the charges towards advising/amendments/ commissions etc.</p>	
<p>8.Performance Bank Guarantee (PBG):</p> <p>The Contractor shall furnish a Bank Guarantee (as per format given by purchaser) from any nationalized/scheduled bank for an amount equivalent to 10% of the value of the Contract and shall be valid for a period of 60 days beyond the expiry date of warranty period. On the performance and completion of the Contract in all respects, the Bank</p>	

<p>Guarantee will be returned to the Contractor without any interest.</p>	
<p>9.Security Deposit (SD):</p> <p>On acceptance of the tender, the Contractor shall submit security deposit for ten percent (10 percent) value of the Purchase Order (PO) within 15 days from the date of PO towards successful execution of the PO. Security Deposit shall be submitted through Demand Draft / Bankers Cheque/ fixed deposit receipt or Bank Guarantee from any of the Scheduled Banks executed on non-judicial stamp paper of appropriate value, and shall be valid for a period of sixty (60) days beyond the date for completion of the Purchase Order.</p> <p>(This will be returned by SCL immediately on execution of the PO satisfactorily as per order terms. If not, the amount will be forfeited).</p>	
<p>10.Warranty :</p> <p>The Contractor shall provide the warranty & customer support for a period of 12 months from the date of acceptance of the software at purchasers site at no extra cost.</p>	
<p>11.Validity of Offer:</p> <p>The tender must be valid for a minimum period of 120 days from the date of opening of Technical bid and 90 days after opening of Price bid.</p>	
<p>12.Liquidated Damages (LD):</p> <p>If the Contractor fails to deliver the stores within the time specified in the contract or any extension thereof, the purchaser shall recover from the Contractor as liquidated damages a sum of one-half of one percent (0.5 percent) of the Contract price of the undelivered stores for each</p>	

<p>calendar week of delay. The total liquidated damages shall not exceed ten percent (10 percent) of the Contract price.</p>	
<p>13.EXTENSION OF TIME :</p> <p>If the completion of supply of stores is delayed due to reason of force majeure such as acts of god, acts of public enemy, acts of Government, fires, floods, epidemics, quarantine restriction, strikes, freight embargoes, etc., the Contractor shall give notice within 15 days to the purchaser in writing of his claim for an extension of time. The purchaser on receipt of such notice after verification, if necessary, may agree to extend the Contract delivery date as may be reasonable but without prejudice to other terms and conditions of the Contract.</p>	
<p>14.Mode of Despatch:</p> <p>In case of foreign orders, stores should be despatched to IGI Airport, New Delhi through freight forwarder nominated by the purchaser whose details shall be indicated in the purchase order.</p>	
<p>15.Insurance of Stores:</p> <p>Insurance wherever necessary, will be arranged by the Purchaser. The necessity or otherwise of insurance will be as indicated in the Purchase Order/Contract.</p>	
<p>16.Packing & Forwarding:</p> <p>The Contractor shall pack and crate all stores for air/sea/road shipment as applicable in a manner suitable for export to a tropical humid climate, in accordance with internationally accepted export practices and in such a manner so as to protect it from damage and</p>	

<p>deterioration in transit by road, rail, air or sea. The Contractors shall be responsible for all damages due to improper packing.</p>	
<p>17.Arbitration:</p> <p>If at any time any question, dispute or difference whatsoever shall arise between the purchaser and the Contractor upon or in connection with this Contract, either party may forthwith give to the other notice in writing of the existence of such question, dispute or difference and the same shall be referred to the adjudication of two arbitrators, one to be nominated by purchaser, other by a Contractor and in the event of any difference of opinion, the arbitrators will refer the matter to the umpire. The arbitration shall be conducted in accordance with the rules and procedure for arbitration of the International Chamber of Commerce at Paris. The expenses of the arbitrators and umpire shall be paid as may be determined by them. However, the venue of such arbitration should be in India. In case of dispute arises with domestic/Indian suppliers, the applicable Arbitration procedure shall be as per Indian Arbitration & Conciliation Act, 1996.</p>	
<p>18.Applicable Law:</p> <p>The Contract shall be interpreted, construed and governed by the laws of India.</p>	
<p>19.Any Other Term:</p>	

Supporting Documents from Vendor

Attachment - I:

Attachment - II:

Price Bid Form

Item Description	Slab Range	Qty	UOM	Currency	Unit Price	Total Price
Yield Management Software SCL Material Code 210513072	-	1	No.	-	-	-

Break-up of other taxes and other costs should be specified in respective narration columns.

Sum of these Break-up values should be specified in respective value columns.

Supporting Documents from Vendor (Commercial)

Document attachment with price bid

Attachment - I:

Attachment - II: