Government of India
BHABHA ATOMIC RESEARCH CENTRE
Engineering Services Group
Security Technical Support Section
Mumbai-400085

A. S. Salunke
Head, STSS
BARC, Trombay
Mumbai-400085

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Tender No.: BARC/ESG/STSS/IDGS/17/29 **Date: 07.11.2017**

Due Date: 21.11.2017 at 14:30 Hrs

Sub: Invitation to submit your quotation

On behalf of President of India, Head, Security Technical Support Section, Engineering Services Group, Bhabha Atomic Research Center invites lowest quotation in sealed envelope for the work given below as per the scope of work & technical specifications enclosed herewith.

S. No.	Description of Job	Completion Period
1.	**Fabrication, Supply, Installation & Commissioning of modular Integrated Electronic Key Cabinets at BARC, Trombay** as per annexure-A attached.	Four Months

Quotations are invited for the above system as per annexure-A on or before November 21, 2017 up to 14.30 hrs in a sealed envelope through registered post/speed post of Indian Postal Services only.

The terms and conditions are given below:

1. Qualifying criteria for bidders:

1.1 Firms willing to bid for above mentioned job shall have been vetted by Security Section of BARC.

1.2 All the supervisors and workers should have valid Police Verification Certificate (PVC) (for minimum 03 persons) and not expiring during the tender period (i.e., from the date of issue of this enquiry till completion of job after getting work order). The list of manpower available with firm shall also be submitted along with their details of PVC.

1.3 Workers/labourers given by the vendor should be well experienced in Fabrication, installation and commissioning of similar type jobs**.**

1.4 All workers/labourers of the Vendor/Contractor employed for execution of job in this tender should have proper Personal Protective Equipment (PPE), the arrangement of which shall be made by Vendor/Contractor

1.5 The past experience of the firm in similar nature in BARC/DAE shall be made available with Work Order copy and satisfactory completion certificate from the user. Also the list on of going jobs inside BARC premises with expected completion period shall be provided.

2. The quotation envelope shall be superscripted with **Description of the job and the Tender Ref. No.** as mentioned above.

3. Authorization & service support up to five years Certificate from the OEM of the equipment shall be submitted along with the quotations.

4. The complete quotation shall reach the following address on or before 21.11.2017 14:30 Hrs. by **Registered Post/ Speed post.** The quotations will be opened on the 21.11.2017 in Accounts Division, BARC between 1500 to 1600 Hrs.

To,

Head, STSS, ESG,

Attention: **Shri. Ranjit Sen**

SO/D

Room No. 313,

E&SC building

BARC, Trombay,

Mumbai- 400 085

5. **Printed Letter Head**: Quotation should be printed on the letter head; computer generated quotation is not valid.

6. **Validity of the Offer**: Validity of the offer shall be for 90 days from the date of opening of quotation.

7. Guarantee: Vendor shall have to give guarantee of the quality and workmanship of work done for the period of min. 12 months from the date of completion of the work.

8. **Offer of Firm:** Offer of those firms, who do not submit their quotation as per the details given in the technical specification and incomplete quotations in any respect shall not be considered.

9. The department reserves right to extend the date of opening the quotations.

10. **Payment Terms:** Accounts Division BARC Mumbai-400085 shall make full and final payment only after submission of the satisfactory work completion certificate issued from the undersigned, bill, guarantee certificate, delivery Challan and advanced stamped receipt. No advance payment is admissible.

11. **Income Tax Recovery Clause:** Income tax @ 2% will be deducted from the bill.

12. If any of the employee, consultant, or partner of the company is an Ex- BARC employee, the same must be stated in the quotation clearly.

13. **Penalty:** Any delay which is attributable to the contractor is liable for penalty @ 0.5 % per week (max 5 %).

14. **GST Number:** Quotation shall consists of GST Registration Number registered with local authority & PAN number of the firm, etc.

15. **Safety & Security Rule:** The vendor shall follow all the safety procedures as per the normal industrial practice during the execution of the job at site. Any mishap occurring during the work due to unsafe workmanship shall be the vendor's liability. Security and transportation rules at BARC, Trombay premises shall be strictly followed.

16. **Confidential Clauses:**

I. **Confidentiality** : No party shall disclose any information to any third party concerning matters under this contract generally, In particular, any information identified as "Proprietary" in nature by the disclosing party shall be kept strictly confidential by the receiving party shall not be disclosed to any third party without the prior written consent of the original disclosing party This clause shall apply to the sub- contractors, consultants, advisors, or the employees engaged by a party with equal force.

II. "Restricted information" categories under section 18 of the Atomic Energy Act, 1962 and "Official secrets" under section 5 of the of the Official Secret Act, 1923: Any contravention of the above mentioned provisions by any contractor, sub-contractor, consultant, advisor or the employee of a contractor will invite Penal consequences under the aforesaid legislation.

III. Prohibition against use of BARC's name without permission for any publicity Purpose. The contractor or Sub contractor, consultant, advisor or the employees engaged by the contractor shall not be use any public purposes through any media like press, TV, or internet, without the prior written approval of BARC.

Salunke 07-12-2017

(A. S. Salunke)
Head, STSS
BARC
(For and on behalf of President of India)

ए. एस. सालुंके / A. S. SALUNKE
अध्यक्ष, सुरक्षा तकनीकी आलंब अनुभाग, भापअ केंद्र
Head, Security Technical Support Section, BARC

Annexure - A

Scope of Work for Fabrication, Supply, Installation & Commissioning of modular Integrated Electronic Key Cabinets at BARC, Trombay.

Scope of Work

1. Vender will supply, install and customize the electronic key cabinets at locations indicated below.
2. All related Key Fobs will be printed/embossed with door/vehicle numbers as per the list of individual facility doors/ vehicles provided at the time of installation.
3. Vender will provide the time schedule for early implementation of the work preferably within 6 months from the date of placement of the firm work order.
4. All the items covered under this work order will be subject to 12 months warranty period.
5. Vender will also quote separately for non-comprehensive AMC charges for the period of three years to carry out the scheduled preventive maintenance at each site at least once in a month and will attend to any fault reported to them within the shortest response time after warranty period.
6. Vender will train BARC security & technical personnel on operation & services of the electronic key cabinet systems.

Deliverables: Electronic key cabinets with related accessories as per the requirements indicated below:

S. No.	Cabinet Type/Capacity	Qty.
1.	128 key-fob holding capacity slave cabinet with battery backed –up power supply & related accessories	4 sets
2.	48 key-fob holding capacity cabinet with battery backed –up power supply & related accessories	4 sets
3.	IP camera with snapshot storage facility	4Nos.

Technical Specifications of modular Integrated Electronic Key Cabinet

Objective: -

The main purpose of the electronic key cabinet system is to replace manual operation of daily issue and deposit of door lock & vehicle keys only to authorized person/s based on RFID card, with an easy to use, relatively secure device that automatically records these transactions.

A modular key cabinet shall hold all the keys. The cabinet shall identify authorized user by their RFID Card, and will be allowed to withdraw/deposit assigned keys only.

The system should record all transactions of withdrawal and deposit of key / key bunches with respective of employee number, Date & time stamp and also real time image of the user. This information should be built into an easily accessed, centralized network system based server database, which gives immediate visibility of which personnel was responsible for each asset at any given time.

System Overview: -

The system may consist of RF tag embedded PVC key fobs, which are encoded with individual serial numbers (using NXP IC H32 or compatible RF tags operating at 125 KHz.). Each fob can have a single door key or set of keys (max. 4 Nos.) attached, secured with a permanent metal wire seal / 'U' clip. The cabinet and software should monitor the authorized removal and return of the fobs. Users with their ID card (Mifare 13.56 MHz. 14443A compatible RF smart card) should be able to access the cabinet and keys.

The construction of the cabinet should be modular in nature, consisting of a single Master Controller with User's RFID card reader, display & keypad, and multiple key-fob holding slave modules. Each key-fob holding slave module shall be suitable for 16 key-fobs. The master controller shall be able to control about 32 or more such slave modules. The master controller shall also be able to communicate with host computer (server) using RS485 / Ethernet LAN link with existing.

System components: -

1. Key Fobs and wire seals
2. Master Control Module
3. Slave controller Module for Key fobs
4. Enclosure with Battery backup power supply
5. IP camera with snapshot storage facility

1. Key Fobs: -

Molded Plastic, lockable key fobs, encoded with individual serial number using 125KHz. RF key tag. Each fob should have provision to attach single key or set of keys (4 nos. Max.), secured with a permanent metal ('U' shaped) wire seal. The key fob shall have provision to engrave/print key details (like room number or vehicle number etc.). The key fob shall have facility to add a tamper proof link to detect if the same has been tampered with.

2. Master Controller Module: -

The master controller module should be a microcontroller based unit consisting of RFID card reader, standard serial communication link (RS 232C or RS 485 or TCP/IP) between slave controller modules & Host computer or Internet enabled server. A highly durable, backlit Keypad should be used for entering PIN or selection of the key fob listed (about 7 numbers of key fobs) displayed on the color LCD of suitable size. The unit should HOLD min. 2000 keys entry and 1000 user entries. It should facilitate to group keys & hold such 400 groups. An authorized key return shall also be detected & acknowledged within 2 seconds max. The unit shall hold min. 10000 transactions in its non-volatile memory. It should provide audio feedback for card events, key events and keypad events. It will also provide following functions by a system administrator: -

- Check keys not returned to system
- Generate alarm event for cabinet/key tampering
- Check keys present in the system.
- Check & acknowledge alarm events

3. Slave Controller Module for Key fobs: -

The slave control unit module shall control about 16 key fobs. It shall have ergonomically design key Fob receiving & locking socket. The key fob can be released under control of master unit and an audio visual (LED) indication to indicate that the key fob being released.

4. Key Cabinet Enclosure: -

A suitable size wall mountable enclosure probably of 18 SWG M.S. and Stainless Steel 'front blank plates', should preferably be able accommodate a battery back-up DC power supply, the master, slave modules. The key cabinet box design should facilitate capacity expansion by simply adding Key Fob controller slave module as described above.

Physical Cabinet Size: -

The integrated Key cabinet should be compact; the overall dimensions for a 48 key-fob holding capacity, 112 cabinet key-fob holding capacity as applicable.

Mounting: -

Accessories for mounting the key cabinet on Wall should be provided.

Environmental: -

Operating temperature: - 10 to 60 degree C.

Humidity: - 0 – 95% non-condensing.

EMI / RFI Immunity: **-** Should be specified by the supplier.

5. External Power Supply: -

An Electronic Key cabinet should be 230 VAC +/- 20%, 50 Hz, powered with built-in 10Hrs minimum of battery back-up regulated DC power supply (with each enclosure).

6. IP camera with snapshot storage facility

a) 1-megapixel CMOS Sensor
b) Removable IR-cut Filter for Day & Night Function
c) Built-in IR Illuminators, effective up to 10 Meters
d) Real-time H.264, MPEG-4 and MJPEG Compression (Triple Codec)
e) Vandal-proof IK10-rated and Weather-proof IP66-rated Housing
f) Built-in 802.3af Compliant PoE
g) Built-in MicroSD/SDHC Card Slot for On-board Storage
h) 3-axis Mechanical Design for Ceiling/Wall Mount Installation
i) Easy and Flexible Installation
j) Compact, Elegant Design

7. Spares: -

Additional specific spares parts, if any should be recommended and prices should be quoted for spares required for maintaining the unit for five years.

8. New Hardware & Software features desired:

- Embedding the Snap shot Camera (Miniaturized Mobile Camera) its power supply & KMS supply in the Original Cabinet itself (to reduce the external power point & LAN port to single only)
- Snap Shot IR Camera range max upto 3 feet, wide angle with motion sensing feature activated & audio alarm I/P & O/P activated
- Email Module upto three nos. for each user
- Biometric Module for three level authorization
- Key FOB's not configured for particular cabinet; should not accept it rather eject it
- Emailing if "KEY NOT TAKEN" for more than 4 weeks of period for detecting/ tracking parallel access/ possession of duplicate keys, which is unlawful act
- Information on who accessed & system denied, the dispensing of requested key to check/track willful illegal attempts.
- In Event of Network failure; offline recording of event locally in cabinet memory and dumping the transactions to the server as & when network resumes.

9. Installation & Commissioning:

Installation of the key cabinet and IP camera including related wiring (AC mains & Cat-6) in casing capping should carried out up to the power point & network switch (up 10 meters) at each location.

Vender should support for commissioning activity till the all authorized users data is loaded in the system.

S. No.	Cabinet Type/Capacity	Location	Qty.
1.	128 key-fob holding capacity slave cabinet	Mod. Lab A,B,C,D blocks	4 Nos.
2.	48 key-fob holding capacity cabinet with IP camera with snapshot storage facility	a) Cargo Scanner facility, b) Hall 6 c) FIPLY f) HIRR**UP**	4 Sets

10. Documentation: -

Two copies of detailed instruction, operation and maintenance manuals and inspection reports shall be supplied with each instrument.

11. User training: -

The supplier shall arrange training for maintenance of the equipment at OEM premises for two representatives of the purchaser.

12. Warranty: -

The equipment shall be warranted for trouble from operation for a minimum period of 12 months from the date of receipt of equipment by the purchaser.

13. Packing & shipping instructions: -

- The Cabinet, card reader unit and control unit shall be packed as follows:
- All sub-assemblies shall be wrapped in Polythene sheets and all the equipment shall be packed in a plywood / cardboard box lined with waterproof paper with provision for absorption of moisture.
- Shipping marks shall be done as per the instruction given by the purchaser.
- Other details like Fragile, This side up, gross weight, volume, size etc. shall be written on the outer side of the box.

- Thermacol padding shall be provided between the parts. The box shall be designed for safe handling and provision shall be made for putting slings. Various parts shall be securely packed by giving additional support wherever necessary.