

## Part-1: Technical Bid

### A. Eligibility Criteria for Participating in the Tender

Sr. No	Description	Document Required	Doc. Supplied (Y/N)	Provide the page no in the bid
1	Please provide the name, address, and other details of the OEM/Bidder.	Valid certificates		
2	Please provide full details of factory/manufacturing units for each item for which the bid is invited.	OEM Certificates		
3	OEM/Bidder must be an ISO 9000/9001/9002 certified company consistently	Valid certificates		
5	OEM/Bidder must have 5+ years of experience supplying and servicing products in libraries	Valid certificates		
6	OEM/Bidder must have an average turnover of at least Rs. 2 crore in business in India/Globally for the past 3 financial years	Annual reports		
7	Bidder must provide evidence that at least 2 libraries have used its hybrid system on at least 100,000 books. Third-party certificates will not be acceptable.	Satisfaction certificates (along with contact details) from two libraries where installation has been completed more than 2 years back are required.		
8	Bidder must show evidence that OEM's systems are working on industry-standard platforms and not any OEM-specific hardware/software.	Certificates		
9	The bidder must be an Original Equipment Manufacturer (OEM) of RFID hardware components or an Authorized Distributor of OEM of RFID hardware components or a System Integrator having experience in RFID Solutions. Company registration details in terms of PAN Card and OEM certificate to be provided with the BID.	PAN Card Company, Incorporation Certificate, Company GST Certificate, OEM Certificate		
10	The complete solution proposed by the bidder must include the supply and installation of RFID components, development and operation of software components and RFID Consumables in an integrated manner. Integration should be possible directly through SIP2 without any middleware components.	OEM Certificate Bidder Declaration		
11	The bidder must have a prior experience of working with a Government Institution / Institute / Department.	Provide a list of customers with contact details		
12	Bidder should provide a list of a minimum of 5 libraries within India that have been using the RFID + EM Hybrid System from the same OEM.			
13	All products must comply with internationally recognized standards for RFID-based Library self-service systems. Certificate from OEM Should be provided to that effect.	OEM Certificates		
14	The bid may be rejected at any stage of the evaluation if it is found that the company: <ul style="list-style-type: none"> <li>a. Has provided misleading information</li> <li>b. Has been banned/blacklisted by a central or state government</li> <li>c. Has indulged in any malpractice/ unethical practice</li> <li>d. Has not honoured contractual obligation elsewhere</li> </ul>	Self Declaration Certificate by the bidder		

## B. General Requirements

Sr. No	Description	Document Required	Doc. Supplied (Y/N)	Provide page no in bid
1	All system components must be UL, CE, and FCC Part 15-Certified; SIP2, RS-232, TCP/IP Ethernet 10/100, 802.11b (wireless) compliant	OEM Certification		
2	The proposed system must provide application-specific software to incorporate all RFID Library-related hardware (detection systems, staff station readers, cataloging stations, patron self-check stations, inventory, book issue and book return system), the circulation RFID tags and any other RFID-related hardware into the system. The Software system has to support all general features of the Library system for RFID automation even though they might not be part of the system right now. Such functionalities are required in the system so as to keep future upgrades possible	OEM Certification		
3	The proposed system must not interfere with other equipment that may be nearby. The proposed system must be able to connect through the Library's Ethernet network via an RJ-45 connector and/or secured wireless network. 1. The RFID system must be ISO 15693 18000-3 Mode 1 Compliant and must use Reader Talks First (RTF) Architecture.	OEM Certification		
4	All the RFID & EM components proposed in the system should be manufactured by a single OEM, to ensure seamless compatibility and single source for supply and support. Part bid/assembly of RFID & EM components from different OEMs by the Bidder is not acceptable	Certification		
5	It is important that the bidders point out clearly in its bid any deviation in the software and hardware specification (if any). If any deviation is found later on and is not specified in the bid, it will result in complete rejection of the bids.	Bidder Certification		
6	Bidder has to provide an affidavit stating that products or major sub-components being proposed by the bidder are not manufactured or supplied by Chinese companies.	Bidder Certification		
7	The bidder has to provide and be responsible for the complete solution and partial bids or conditional bids shall not be acceptable	Bidder Certification		

**C. Technical Specification for RFID System**

**C (i). Book Label RFID Tag**

No	Item	Description	Compliance (Y/N)
1	Dimensions	RFID Tag size 50 x 50 mm or 50 x 80 or comparable	
2	Thickness	350um Max	
3	Memory	Not less than 2048 bits	
4	Data Processing Rate	26Kbps Minimum	
5	Frequency	13.56 MHz	
6	Standard	ISO 15693 and 18000-3; ICODE SLIX2	
7	Type	Read/Write Lockable with unlimited Number of read/write cycles and must be re-writable	
8	Distance for Tag detection	36" Minimum	
9	Operation Mode	Passive	
10	Functionality	Both Security & Inventory Control	
11	Adhesive	The proposed system tags are adhesive-backed and one piece (tag and label integrated into one piece) to adhere to file materials without the addition of an adhesive cover label. The proposed system tag uses a low acid, or neutral pH, adhesive.	
12	Operating Temperature Range	-40°C to +85°C approximately	
13	Other Features	<ul style="list-style-type: none"> <li>a. A single tag for Identification, automation and Anti-theft must be read even if not visible and must be read inside the book; temper proof and has a guarantee for the life of the item on which it is affixed initially.</li> <li>b. The proposed system tags enable the AFI security status to be stored directly on the tag and trigger an immediate alarm if an item not charged is read by the detection system.</li> <li>c. The proposed system tag is guaranteed for the life of the item on which it is affixed initially. A lifetime guarantee assures the quality of the product offered and future replacement of the RFID tags which are found un-operational, without any extra cost.</li> <li>d. The tag supplied should have a branding of the OEM on the chip side</li> <li>e. The RFID tag and Book Label (EM Tag) should be from the same OEM</li> </ul>	
14	Antenna Type	Aluminum	
15	Samples	Tag samples to be provided with the technical bid	

**C (ii). EM strip Tattle Tapes**

No	Description	Compliance (Y/N)
1	The Size of the Security Strip should be a minimum 160 mm X 3 mm for hardbound books, softbound books and periodicals;	
2	Strips must be guaranteed to perform for a lifetime of the object in which they are placed.	
3	Strips, once applied to material, should be hidden in nature.	
4	The security strips shall be one-piece, flexible, thin, non-rusting metallic alloy coated with an adhesive film. The film shall not discolour or lose its adhesive or cohesive strength with age. The strips shall require no moisture, heat or additional glue, or adhesive for affixing to library materials.	
5	The strips shall be virtually unaffected by any shielding devices such as gum, cigarette wrappers, aluminum foils, human body, or by items held back-to-back or cover-to-cover, or concealed in briefcases or backpacks.	
6	Manufacturer shall warrant that the strips will be free of defects in materials & manufacture for the lifetime of the strip	
7	The RFID tag and Book Label (EM Tag) should be from the same OEM	
7	Vendor shall supply samples with the technical bid	

**C (ii). Multi-layered optically Watermarked Sticking Labels with the Institute Logo**

No	Description	Compliance (Y/N)
1	Dimensions: Minimum half an inch larger than the RFID tag	
2	Thickness: 350um Max	
3	Paper: UDV Paper	
4	Printing: Color Printed 4 + 0	
5	Finishing: Die Cutting in roll form only and not in sheets	
6	Logo: Color Printed Logo	
7	Adhesive: Strong, Non Removing Adhesive	
7	Other feature: Optical Watermark with Library Branding, Samples Label samples to be provided with the technical bid	
8	Dimensions: Minimum half inch larger than RFID tag	
9	Thickness: 350um Max	

**C (iii). Staff Station for Personalization & Circulation of books and cards**

No	Description	Compliance (Y/N)
1	For circulation and conversion operations at the staff desk. It physically should consist of a combined hybrid station (EM & RFID) unit from the manufacturing level. There should be no separate Reader & Antenna. Only data and power cables should be connected to the unit. It should be able to process both EM and RFID tags.	
2	The RFID antenna shall be fully shielded, i.e. not read items placed under the table and on the side of the antenna pad	
3	The staff station shall be able to program and verify multiple RFID tags placed on the antenna	
4	The staff station will enable the security status of the tag to be changed without interaction with the LMS	
5	The staff station connects to the PC via USB only	
6	Suitable software for integrating the RFID functions into the circulation workflow and for tagging library items will be provided with the equipment	
7	Design: Easy to use, space-saving, ergonomic design and interface and should Include feedback indicators	
8	Software for Circulation of the items using SIP2 only without any middleware	
9	Software for Circulation should not be through keyboard input or screen mapping into the LMS software. It should be an independent software that can be used for Circulation using a Card Reader & biometric for patron Identification and an RFID reader for Book Identification	
10	The software system provided should be able to provide the detailed MIS for the tagging. It should be able to generate the lists for the tagging of the items with the time stamp, Accession No & Tag Id	
11	For circulation processes, the software should be able to provide an MIS for all the checked-out and checked-in items with patron details.	
12	Energy Profile: 200-240 VAC, 2.0/1.0 A, Single phase	
13	Staff stations should also support patron card readers for ISO 14443A cards with applications for card programming and reprogramming. Standards & Protocols: ISO 14443 A/B with up to 848 kbps transmission rate (depending on the card), ISO 15693 with up to 26 kbps transmission rate (depending on the card), T=CL	
14	Staff station should have an STQC certified Biometric Scanner integrated with the application software.	
15	It should be possible to use the circulation software after doing the biometric based authentication as well. Biometric device to be supplied for the authentication along with the computer application and PC.	

**C (iv). Hybrid Electromagnetic & RFID Detection Gate System dual**

No	Description	Compliance (Y/N)
1	Detect genuine Tattle-Tape™ & RFID Tags in any orientation	
2	External devices, such as CCTV and/or barriers can be connected	
3	The system incorporates visual and audible alarms	
4	The alarm system has flexible light in different colours	
5	The visual alarm can be configured to flash corridor specific or give a full system alert	
6	The audible alert has a variable alarm pattern and adjustable volume	
7	The system should incorporate an energy-saving function that can remain in a low energy state until the people counter detects movement	
8	The gates shall provide full detection from 0 to 100cm between the panels	
9	It shall obtain optimal detection performance at a pedestal distance of 100cm	
10	The system should be provided with 'False positive filtering', reducing false alarms caused by foreign objects	
11	The system shall be built on a master-slave principle with up to 6 pedestals (5 gates) in one single system for future upgrades.	
12	The system shall provide multiple gate installation up to 5 gates	
13	The weight per gate should not be more than 30 KG	
14	The system should be able to detect both types of tags (RFID & EM) on the items	
15	The antenna's mounting points must be easy to install	
16	The system shall provide a Baseplate for easy installation available for single or dual-gate installations	
17	The antennas shall have side panels designed for applying customizable vinyl graphics for promotion activities. The institute will provide the content which is to be printed on these panels. Printing & application in the vendor's scope.	

**C (v). Hybrid Self-Check-In /Check-Out System**

No	Description	Compliance (Y/N)
1	The kiosk shall be free-standing	
2	The housing shall be made of metal only.	
3	The housing covers computer hardware, wiring and power supply and can be locked. No wires or peripherals should be accessible from outside	
4	The system shall have minimum 2 external USB connectors for service & maintenance	
5	The system shall have a 19/22" touchscreen	
6	The system shall have LED Light-based indicators to guide the patron through the process	
7	The system shall have an easily accessible integrated printer	
8	The system shall have a thermal printer that can print paper rolls with a maximum width of 80mm	
9	The system shall be able to check in and out library items based on RFID & EM	
10	The system shall support check-in and check-out using the combination of RFID or barcode and EM strips	
11	The system shall have a perfect shape to support a maximum item size	
12	The system shall be able to detect multiple items and secure single-item processing	
13	All user elements should be placed within the DDA/ ADA range (for wheelchair drivers)	
14	The system shall Identify users with Barcode, RFID, Mifare	
15	The system shall be audio-enabled to have the possibility for extended communication with the patron	
16	The kiosk shall have a graphic wrap. Content for the graphic wrap will be provided by the library. However, its printing and application will be in the vendor's scope.	

17	The software shall enable checking library items in and out based on a SIP2 connection to the library management system	
18	The software shall enable patrons to check their account (items borrowed and expiration per item, fees and fines) and to prolong (if the library choose to allow for it)	
19	When processing library items (checking in-or out) the status of each item shall be displayed ((incl. the setting of the security bit and type of item (i.e. books, CD, DVD's, Blu-ray and games)	
20	The software shall allow to integrate payment functionality at a later stage (cash (coins & notes) and chip & pin cards, without software charges.	
21	The software shall allow the library to choose between several standard themes designs, also children's themes.	
22	The software enables a patron to complete all functions (check-in, check-out, check account, payments) under one login, making the transaction process easy and smooth.	
23	The software shall have the possibility to display/promote Library activities	
24	The software can be configured to continue working in offline mode, when the connection to the LMS has failed. The software shall continue to let patrons borrow and return items to provide a continuous service; then, once the connection to the LMS has been restored, all offline transactions shall be automatically uploaded to the LMS, ensuring that all transaction history has been updated. If transactions fail to upload correctly, then the staff will be alerted automatically	
25	The software contains a communication link to an intranet-based monitoring system and will cope with the requirements defined for that system.	
26	The software contains a tool to customize and run detailed reports from one location	

### C (vi). FlapBarrier

No	Description	Compliance (Y/N)
1	The system should open the flap barrier only after recognizing the ID cards of registered users.	
2	The system shall be in a metallic enclosure of suitable thickness form, which should be able to capture all the inward and outward traffic in the library.	
3	Patron identification should be possible using Mifare cards.	
4	The system should be able to hold a minimum user data of 20,000 patrons	
5	The system should be able to hold a minimum transaction data of 10 million records	
6	Smart Card Interface should have Standards & Protocols: ISO14443A/B with up to 848 kbps transmission rate (depending on the card), ISO15693 with up to 26 kbps transmission rate (depending on the card), T=CL	
7	The system shall have minimum 2 connectors for service & maintenance	
8	The system shall have an easily accessible metal housing that can be locked	
9	The system software shall enable patrons to check in and check out of the library using Mifare cards	
10	The system software should have an easy-to-use user interface	
11	The MIS software should be able to display the Library Usage statistics for usage by different Users, Branches & Departments	
12	The system should create alerts through email/sms in case a particular patron is inside the library above a certain threshold time.	
13	The system should create alerts through email/sms in case the number of patrons inside the library increases beyond a certain threshold.	
14	The system should provide details of all the patrons who are inside the library currently.	
15	The system should be in a single kiosk and peripherals should all be inside the kiosk. Only LAN cable and power cables should be output from the system	
16	It should be possible to manually check out patrons in case of any exceptions	
17	The installation should include the partition created using toughened glasses at the library entrances so that no one is able to pass through other sides.	

**C (vii). Mobile Inventory Reader**

No	Description	Compliance (Y/N)
1	The portable handheld reader and the required accessories must be a cordless, one-piece design to be held in one hand with facility of conducting full range search, inventory and shelf order functionality.	
2	The portable handheld reader must feature sound battery backup	
3	The total weight of the portable handheld reader must be less than 1 Kg, including battery, RFID reader, antenna and computing unit, and any other components that must be carried by the user	
4	The portable handheld reader must incorporate an ergonomic design to aid user in reading shelves at all levels easy to use and be relatively non-stressful to wrist, arm shoulder and elbow.	
5	The portable handheld reader battery life must allow the user to work for at least 16 hours before recharging.	
6	The portable handheld reader must use an anti-collision algorithm that does not limit the number of tags, which can be simultaneously identified and read.	
7	The portable handheld reader must have the capacity to download at least 1 million items from library's automation system onto the portable handheld reader memory medium.	
8	The proposed portable handheld reader must accommodate data collection simultaneously with other functions.	
9	The proposed system must accommodate Sorting, Shelving, Searching, finding of library documents and pulling the defined data to help the user.	
10	The proposed portable handheld reader must have an audible tone and visible indicators to verify items has been identified.	
11	The proposed system must accommodate secure status checking to allow a user to identify individual items which have not been properly checked out and have caused an alarm of the detection system.	
12	Reader should have facility to transfer data using USB and Wi-Fi (Wi-Fi Security Protocol WEP/WPA/WPA2).	
13	Real time communication capability with ILS/LMS software.	
14	Reader should have the capability to work off-line mode.	
15	Read range: Minimum 15 cm and above	
16	Scan Rate of up to 20 items per second	
17	IP 30 or above	
18	Should have a boost mode for increasing detection power	
19	Should have all these compliances EN 300 330, FCC 47 CFR Part 15, RSS-210, Issue 8, EMC EN 301 489, EN 60950-1, EN 50364, EN 300328	
20	Interfaces: WLAN / Wi-Fi (Wi-Fi Security Protocols WEP / WPA / WPA2)	
21	RF Transmitting power: Standard Mode 1.5 W / Boost Mode 4.0 W	

**C (viii). Smart Card printing system**

No	Description	Compliance (Y/N)
1	Resin thermal transfer printer with minimum 300 dpi	
2	Accepts a minimum 100 ISO sized cards	
3	Printer with dual side colour printing technique and system control display	



4	Connection of the printer should be possible through USB, LAN and wifi	
5	The printer should have the inbuilt capability to print and program the cards in a single process. Printer encoding should support Mifare chips. No external device is to be connected.	
6	Software to print the cards on both sides should also be provided.	
7	Printing software should support direct connection with LMS for direct printing without any middleware.	
8	It should be possible to import data using Excel files into printing software.	
9	The library should be able to create multiple designs/templates for the printing process, and it should be possible to select a particular type of design at the time of printing. There should be no limitation and dependence on the layouts & types of cards to be printed.	
10	The software should support the printing and programming of the cards.	
11	The software should provide all MIS of the cards printed & programmed and all the data imported into the system.	

**C (ix). Smart Cards and printer consumables, including ribbons & cleaning cards**

No	Description	Compliance (Y/N)
1	Preprinted Smart Cards with Original NXP Mifare 4K Chips to be supplied	
2	Pre-printed with the Institute Approved Design (Static text)	
3	Programmed with institute-provided details (software application to be supplied)	
4	Memory of Cards: Minimum 4K	
5	Size of Cards: ISO ID Card Standard	
6	Identity ISO Standard: ISO 14443A/B	
7	Only original NXP Mifare 4K Chips are to be provided. The genuineness of the NXP cards will be validated using the Tag Info app provided by NXP, downloaded from the NXP website. Samples are to be provided with the technical bid.	
8	Only the first sector is to be used for the library setup. The remaining space will be used by the institution for future multiple applications. Vendor has to supply the software application for the printing and programming of the cards	
9	The vendor should supply consumables for the printing of these cards, including but not limited to the ribbons and cleaning cards	
10	Vendor needs to mention in the technical bid about how many cards a particular ribbon can print and how many ribbons are being supplied.	

**C (x). Job Work – Tagging of RFID, EM and Labels and programming of Tags**

No	Description	Compliance (Y/N)
1	All books need to be tagged	
2	Affix EM Tag	
3	Affix RFID Tag	
4	Affix Sticking Label	
5	Programming of the Tags	
6	Installation of the entire system	
7	Training of the staff	

## Part-II: FinancialBids

### BOQ of the Requirement

S.No	Item	Qty	Unit Price	Amount
1	RFID Tag	12,000		
2	EM Tattle Tapes	12,000		
3	Sticking Labels	12,000		
4	Hybrid Gate	1		
5	Staff station hybrid	1		
6	Library FLAP Barrier	1		
7	Hybrid Self Check	1		
8	Hand Held Reader	1		
9	Smart cards – Mifare	1000		
10	Smart Card Printer System	1		
11	Koha LMS	1		
12	Job Works (Tagging + Installation + Training)	1		
13	CAMC after expiry of warranty	1		
			<b>Grand Total</b>	

**Note:** The quantity mentioned above may vary for certain items at the time of implementation as per the requirement of the department. The decision of the competent authority in this behalf will be final. For any increase or decrease in the purchase of items, the unit rate shall determine the actual payable amount. The quantity mentioned above for the respective phases or in totality may vary as per the requirement, and payment will be made as per actual.