

**Invitation for Expression of Interest (EOI)
for Empanelment of OEMs /Their Authorized
Distributors/ Channel Partners Registered in India for
Electronic Ticket Issuing Machines (ETIMs) and
Point of Sale(PoS) Machines**

EOI Ref Number: EOI/NCMC/ETIM/01/2024-2025



प्रगत संगणन विकास केन्द्र

CENTRE FOR DEVELOPMENT OF ADVANCED COMPUTING

Anusandhan Bhawan, C-56/1, Institutional Area, Sector-62 Noida-201309 (U.P.) India

Glossary:

TERMS	DESCRIPTION
AFC	Automatic Fare Collection
Bid	An offer, by an organization, in response to an Expression of Interest to provide the required Services
Bidder	Bidder means any firm/agency/company/contractor/supplier/vendor responding to Invitation for Expression of Interest/ Bids
CAFC	Centralized Automatic fare Collection system
CDAC	Centre for Development of Advanced Computing
Client	Normally PTO
CMMi	Capability Maturity Model Integration
CPPP	Central Public Procurement Portal
EoI	Expression of Interest
ETIMs	Electronic Ticket Issuing Machines
GST	Goods and Services Tax
ISO	International Organization for Standardization
IT	Information Technology
MeitY	Ministry of Electronics and Information Technology, Government of India
MoHUA	Ministry of Housing and Urban Affairs, Government of India
NCMC	National Common Mobility Card
NPCI	National Payments Corporation of India
O&M	Operation and Maintenance
PQ	Pre-Qualification
PTO	Public Transport Operator
SLA	Service-level Agreement

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I. Notice Inviting Tender/EoI(NIT)

The aim of this EoI is to empanel OEMs (or) their authorized Distributors/ Channel Partners of ETIM/Validators/PoS Machines registered in India for deployment of Centralized Automatic Fare Collection Systems developed by CDAC. Nature of Jobs/Services	Empanelment of OEMs and / (or) their authorized Distributors/ Channel Partners of ETIM/Validators/PoS Machines registered in India having interest in supply, installation, commissioning and O&M of ETIM/Validators/PoS Machines for implementation of Centralized Automatic Fare Collection (CAFC) System developed by CDAC.
EoI Processing Fee (Non refundable Fee required at Stage I process at the time of bid submission)	Rs. 5900/- (Rupees Five Thousand Nine Hundred Only). Payment need to be done through online as per the account details given below: Name of the Beneficiary: Centre For Development of Advanced Computing. Account Number: 171901000007860 IFSC Code: IOBA0001719 Bank Name: INDIAN OVERSEAS BANK Branch: SECTOR 58, NOIDA MSEs and Startups providing relevant certificates will be exempted from EOI processing fee.
Publishing Date	3/10/2024
Document download Start Date & Time	03/10/2024 at 4 PM
Date, Time & Venue for Pre-Bid Meeting	15/10/2024 at 11.00 AM in Hybrid Mode (Online + Onsite). 1. All the bidders must send their pre-bid queries in the desired format (Form -A) of this document by 11/10/2024 by 5.00 pm or earlier. 2. Bidders interested in attending Pre-bid in Online Mode should request the same by 11/10/2024 along with the details of bidder's representative. 3. Meeting Link will be shared to interested bidders by 14/10/2024. 4. Address for Onsite Meeting: Centre For Development of Advanced Computing (CDAC), C-56/1, Anusandhan Bhawan, Institutional Area, Sector – 62, Noida – 201309.
Reply to Pre-bid Queries By:	24/10/2024 by Mail/CDAC website
Bid Submission Start Date & Time	28/10/2024 at 10 AM
Document download End Date & Time	4/11/2024 at 6 PM
Bid Submission End Date & Time	5/11/2024 at 5 PM
EoI Processing Fee submission last date	5/11/2024 on or before 3 pm

Bid Opening Date, Time and Venue	6/11/2024 at 3 pm (ONLINE) at CDAC, C-56/1, Anusandhan Bhawan, Institutional Area, Sector – 62, Noida – 201309.
Bid Procedure	Single Cover (Technical Evaluation- Stage-I& Stage-II)
Bid Evaluation Criteria	Refer Instruction to Bidder section
Websites for downloading Tender Document, Corrigendum's, Addendums etc.	www.cdac.in , https://www.eprocure.gov.in/eprocure/app
Bid Validity	120 Days from the date of submission

II. Invitation for Bids

- CDAC Noida invites online EoI proposals from reputed, competent and professional OEMs (or) their authorized Distributors/ Channel Partners registered in India for Android based Electronic Ticket Issuing Machines (ETIMs)/Validators/Point of Sales (PoS) Machine.
- The complete bid document has been published on the websites <http://www.cdac.in> and <https://eprocure.gov.in/eprocure/app> for the purpose of downloading. The downloaded final bid document has to be submitted through online in the Central Public Procurement Portal <https://eprocure.gov.in/eprocure/app> along with requisite documents as provided in the section “Instructions to Bidder” by using Digital Signature Certificate (DSC). **C-DAC will not accept/entertain off-line/hard copy EOI bid submission.**
- CDAC reserves the right to share the information provided in the Bid document during the course of evaluation of bids.
- The bidders are expected to ensure that their bid documents are submitted online through Central Public Procurement Portal <https://eprocure.gov.in/eprocure/app> on or before the due date& time.
- The Bidder, who qualifies for one or more below mentioned categories, can apply for the same in the single form :
 - Open Loop ETIM
 - Closed Loop ETIM
 - PoS Machines
 - All of the above.

Bidder must mention the category applied, while responding this EOI as per Annexure-I. Without Proper information, the form is liable to reject.

- Hardware vendors refers to the ETIM/Validator/PoS manufacturer/vendor. The term manufacturer/vendor is used interchangeably (unless and until the context specifies like in PQs and/or TQs) just to emphasize the fact that CDAC is expecting ETIM vendor to arrange and support the required Hardware and other services like field level support services, manpower etc. to Roll out and Operational services required to execute

operations of CAFC for PTO(s) as per the terms of tender/client work respectively which may vary on case to case basis.

7. The Bids will be opened as per the details provided in EOI documents. The bidders may track the bid opening process through Central Public Procurement Portal <https://eprocure.gov.in/eprocure/app> and there is no need for physical appearance.
8. No contractual obligation whatsoever shall arise from the EOI/Bidding process.
9. The bids will be evaluated through a two stage process. The bidders qualifying in Stage-I will be required to submit 04 Nos. of samples (out of 4Nos. submitted, 02 Nos. will remain with CDAC forever for demo purposes and 02 Nos. will be returned after porting is completed) of the proposed hardware (ETIM/Validator/PoS) and support the porting of CDAC's Software on machine through dedicated manpower and necessary SDK, software libraries, other required software etc. within agreed time frame in Stage-II. The whole process of porting CDAC's software is expected to be completed within three months. Therefore, the bidders who qualifies in the stage-I process are required to submit the hardware within 7 working days to CDAC after issuance of written communication. Also, the respective bidder needs to provide software & technical support till the porting process is successfully completed. If number of vendors are more then CDAC will queue them at its own discretion for porting.
10. The bidder has to provide the required support and software etc. during the porting period failing which their machines, software etc. shall be forfeited and party shall be deemed to have abandoned/relinquished/surrender edits claims/rights/selection.
11. CDAC may request additional documents, test reports etc. for the understanding/technical/business evaluation of the solution and vendor.
12. The successful bidders in Stage-II process will be communicated by C-DAC and accordingly such bidders shall have to sign a contract with CDAC within 30 days from the date of issuance of empanelment Letter by C-DAC.
13. The successful bidder(s) in Stage-II shall have to sign a contract with CDAC within the specified period failing which their machine/software etc. shall be forfeited and party shall be deemed to have abandoned/relinquished/surrender edits claims/rights/selection.
14. Depending on business proposition, CDAC may float limited tenders among empaneled vendor(s) (including the vendor(s) empaneled by CDAC during similar earlier bids for the required category).
15. Bidders after empanelment may do frontend/market CDAC's AFC/CAFC/ PoS solution along with their devices after due permissions from competent authority in CDAC. Bidder(s) must request required permissions and quote(on case to case basis) from CDAC's Authorized signatory. Depending on the scope of work and customization, CDAC may quote it's charges.
16. C-DAC can also support the empaneled vendor(s) i.e. hardware partner(s) by providing its software solution at a mutually agreed royalty rates or quote its price wherever there is an outside business opportunity generated by the vendor. These royalty rates or quoted price

will depend on the efforts and quantum of work as decided by CDAC.

17. Any information provided herein is intended only to help the bidders to prepare a logical bid-proposal.
18. CDAC Noida reserves the complete right to cancel the bid process / reject any or all of the bids /enter into agreement with successful bidder(s) at its sole discretion.

III. Background:

Centre for Development of Advanced Computing (C-DAC) is the premier R&D organization of the Ministry of Electronics and Information Technology (MeitY) for carrying out R&D in IT, Electronics and associated areas.

Transport is an important economy enabler. An efficient Urban transport system not only provides ease of commute to the citizens but also acts as a catalyst to economic activities thus enhancing prosperity and livability. Our cities are growing at a phenomenal pace. To cater to the increasing requirement of travel, there is a need to boost the public transport systems.

Major Challenges in transit system are:

- i. Cash handling.
- ii. Revenue Leakage and cash reconciliation.
- iii. Import of technology and transit systems.
- iv. Multiple systems to be maintained.
- v. Cost of Equipment and dependency on foreign vendor. Because of dependency on foreign vendor, we were losing control on our basic infrastructure.
- vi. Flow of Foreign Currency outside the country.

To address the cash and cash related challenges, transport operators have started implementing Automatic Fare Collection (AFC) Systems. However, these AFC systems are currently imported through foreign vendors and the installation and maintenance costs of these systems are exorbitant causing loss of precious foreign exchange. Apart from this, the systems being proprietary and non-interoperable, the operators are vendor locked for further supplies and maintenance. Thus, raising the need of open loop, indigenous, affordable interoperable AFC system under the 'Make in India' initiative.

In the above context and to accomplish the dream of “One Nation One Card” of Government of India for all types of digital transactions, Ministry of Housing & Urban Affairs (MoHUA) constituted a High-level committee and took the initiative for standardization and indigenization of NCMC Eco-system which consists of Card, Reader/Validator, AFC System and Gate.

As mandated by MoHUA, CDAC has designed the NCMC Ecosystem specifications (Part IV-VII), which were released by MOHUA for Nationwide adoption on 11th May, 2020 to various stake holders including State Transport Authorities.

NCMC Ecosystem brings under its umbrella many stakeholders, most notably:

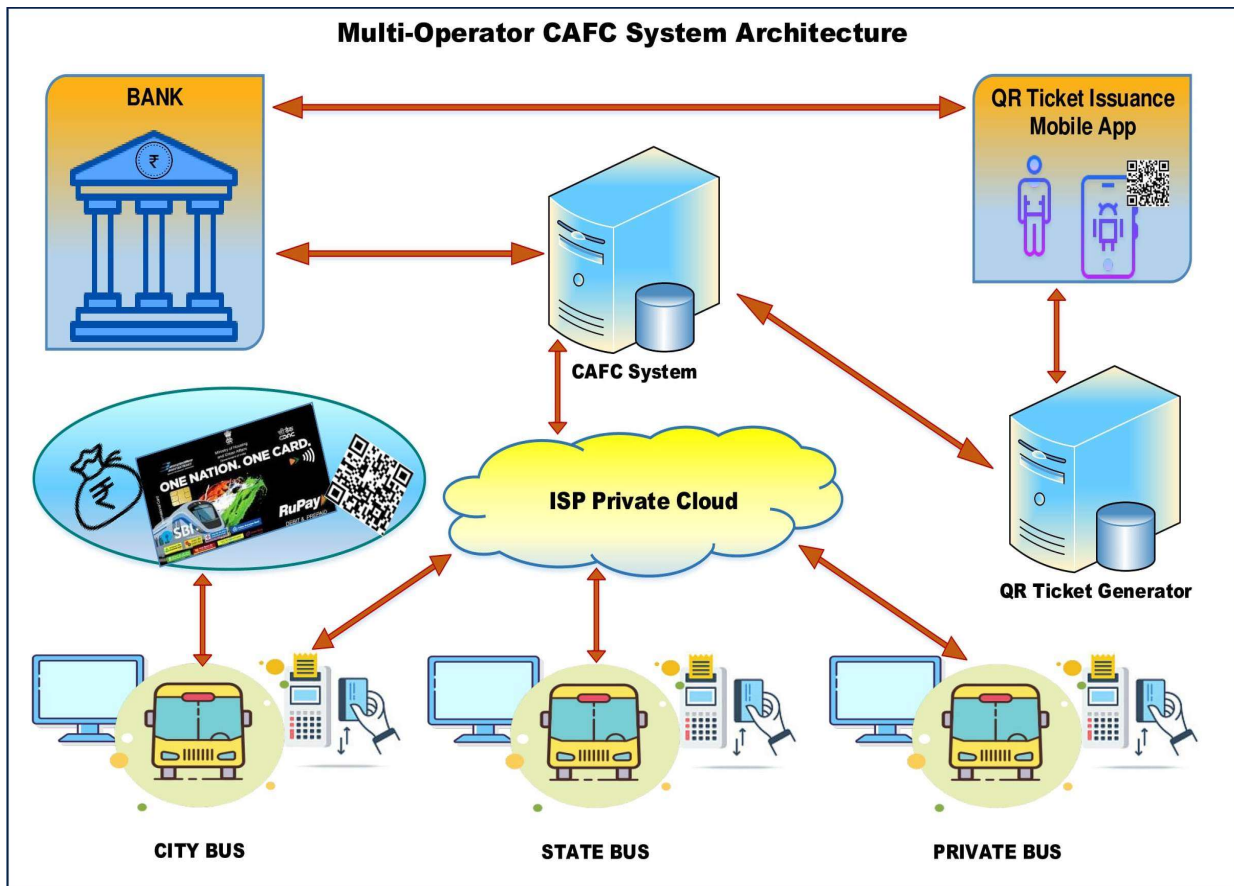
- i. Software System Integrators that implement the NCMC.
- ii. Certified Hardware Vendors that satisfy the open hardware solutions to support NCMC transactions.
- iii. Public / Private sector Banks as acquirers and payment gateway integrators.

In order to prove the efficacy of standards, CDAC has designed and developed its own Modular Centralized Automatic Fare Collection System for Public Transport Operators

(PTOs) hosted on CDAC's Data Centre. This will ensure faster deployment of Reliable, Secure and cost effective uniform CAFC solution for all the PTOs across the nation.

In the meantime, as per the mandate of MoHUA, CDAC has also developed QR specifications specifically for transit which was also released by MoHUA on 19th April, 2021 for Nation wide adoption.

Thus, CDAC has designed and developed its NCMC & QR ticketing CAFC Solution. Ticketing transactions using NCMC Card, Cash & QR were performed successfully in the field testing on Live routes with more than 9 Nationalized banks NCMC cards and reconciliation was done. CAFC is seamlessly linked with Acquirer for the purpose of reconciliation and fund settlement. The top level architecture of CDAC CAFC Solution is shown in following figure.



One of the major objectives of the NCMC Ecosystem exercise is to provide a uniform secure indigenous transit solution for all PTOs (irrespective of the size) so that PTOs can appreciate enhanced technology and operations at reduced cost with enhanced efficiency. In order to proliferate CDAC's CAFC's solution nation wide, Under the directions of Hon'ble Ministries (MoHUA and MeitY), CDAC is in advanced stage of discussions with various PTOs. The Centralized architecture of the CAFC supports from few hundred to thousands of buses in the fleet without any performance degradation, allowing multiple PTOs irrespective of size to join CAFC Solution. CDAC offers complete lifecycle support and solution to Bus Operators from Roll out to Operation and Maintenance with near real time monitoring, customized reports and strategic business analytics. CAFC offers multiple payment modes including traditional cash,

NCMC card (prepaid as well as bank issued debit/credit cards) and emerging technologies like transit specific consumer based QR ticketing solutions. QR ticket can be issued either through mobile and/or Web portal, can be for single or multiple journeys and can be for individual or a group. CDAC is expecting association with several Public Transport Organization(s) in near future; hence, empaneled parties will also have chances to get long terms business benefits.

A. **NCMC Business Potential:** There are around 62 State Transport Undertakings collectively operating 150,000 buses and serving 70 million passengers/day besides the multiple municipal corporations operating their own buses in multiple cities. Government of India (GoI) is committed to it NCMC initiatives through various scheme and Ministries like:

1. **MoHUA:**

- i. May,2022: Recommendation letters for NCMC Specifications.
- ii. April,2021: Recommendation letters for QR Specifications.

2. **MoRTH:** June 2022: PTOs' Modernization with NCMC as the key requirement.

3. **MoHUA: PM e-BuS Sewa scheme (announced on August 2023):** NCMC based Automatic fare Collection is the key requirement. In this initiative around 10,000 New Electric buses will be deployed on PPP model in 169 cities; Infrastructure to be upgraded in 181 cities under Green Urban Mobility Initiatives and Total estimated cost of the scheme to be Rs.57,613 crore.

CDAC has already piloted its modular, Scalable, secure, Vendor & Bank Agnostic Centralized Automatic Fare Collection Solution in B.E.S.T., Mumbai.

B. **Closed Loop ETIMs:**

Also, we understand that many of the PTOs are still working on closed loop technology due to multiple constraints and have requirements of closed Automatic Fare Collection Systems, therefore, CDAC will develop/enhance its AFC Solution as per requirement of these Bus Operators, depending on the business proposition.

This further extends business opportunities for ETIMs vendors in a big way.

C. **PoS Machines:**

There are requirements for PoS Machines in retail as well as transit sector and CDAC may enhance its software solutions for the same.

Hence, the scope of EoI includes both types of ETIMs (open loop & closed loop) and PoS machines/systems.

IV. Scope of Work

To proliferate/enhance AFC/CAFC/PoS Solution, CDAC is looking for OEMs/their

authorized Distributors/ Channel Partners of ETIM/Validators/PoS Machines registered in India for the supply, installation & commissioning and O&M of ETIMs, and/or Validators and/or PoS machines. ETIM/Validator/PoS Vendors registered in India have to comply atleast with the minimal specifications given in this document in Appendix-A for participation in this bid. The deployment under the proposal consists of Rollout (within agreed timelines) and Operation & Maintenance as per mutually agreed terms on case to case basis.

Below is the given tentative scope of work, however, actual scope of the work will depend on the PTO/client requirements. CDAC reserves the Right to make changes in deliverables as per Projects/PTOs requirements, changes in the quantities and/or technical specifications and/or services, and/or may collaborate with more than one vendor for the successful execution of the project.

Tentative Scope of Work:

There are possibilities that the empanelled vendor(s) may have to involve themselves in some additional activities for successful Project execution as per Project/ PTOs/Clients requirements; however, this is not mandatory.

You are requested to give your acceptance in the following table; however detailed scope will be discussed case-to-case basis as per requirements of PTOs/Clients and all other stakeholders involved.

Sr. No.	Activities	Confirmation (Yes / No)	Remarks, If any
Mandatory Requirements			
1	Supply, Install / Deploy of ETIM / PoS / Validator Hardware		
2	Provide all necessary SDK and all firmware / driver		
3	Provide support for porting CDAC L3 and transit app on Hardware to be supplied, as applicable		
4	Supply of Chargers, and Bag/Covers etc.		
5	Supply of consumables		
6	24*7 on-site support / As per PTOs/Clients requirements		
7	Comprehensive on-site Annual Maintenance (AMC) as per SLA on back to back basis for mutually decided Scope of Work		
8	Device testing at factory (FAT)		
9	Handholding and training to conductors/operator staff		
Optional Requirements			
1	Supply of Manpower for Operations		

2	Procurement and deployment of hardware like PCs, Routers, networking etc. to support CAFC deployment		
3	Procurement and Deployment of Add Value Terminal Infrastructures [Dual monitor, thermal printer, Optical scanners to scan QR Code tickets (TOM-Customer Care) cabling, etc. at each depot]		
4	System Integration testing of items supplied, if required		
5	System support services for setting up of IT Infrastructure, hardware, network, software etc. at site		
6	Monitor and maintain computer systems and networks		
7	Troubleshoot system and network problems, diagnosing and solving hardware or software faults		
8	First level Troubleshooting, identify hardware and software issues, assigning problems to respective and resolving any hardware problems		
9	Maintaining SLA, System Availability at client site		
10	Any other requirements, case-on-case basis, for successful project execution		

Please note:

- Optional activities / deliverables are only for future reference(s), if any.
- To Qualify for Empanelment, Mandatory activities are must to be complied along-with other requirements of Eligibility Criteria as per this Document.

V. ELIGIBILITY CRITERIA

Pre-Qualification Criteria-Table-I

Compliance Area	Eligibility Criteria	Supporting Document
Legal	Indian companies must be a registered company under the Companies Act, 1956 or a partnership firm registered under Partnership Act or a Proprietorship firm. The company should have GST registration for legally carrying out its business activities. The company should also have a valid PAN. The bidder should be operational in India for at least last five (two years in case of Startup and MSME) financial years as of 31st March, 2024 as evidenced by the Certificate of Incorporation issued by the Registrar of Companies, India.	The company should submit Self attested copy(ies) of the Certificates of Incorporation and other certificates that are legally required for carrying out its business activities in their country. The certificates should be valid at the time of Empanelment Evaluation document submission and should be certified by an authorized signatory.
Technical	i)For ETIM Machines: The bidder should have supplied at-least 500 ETIM devices in any financial year during last 5 years MSEs and Startups producing relevant certificates must have supplied at least 250 ETIM devices in any financial year during last 5 years. ii)For POS Machines: The bidder should have supplied at-least 5000 PoS devices in any financial year during last 5 years. MSEs and Startups producing relevant certificates must have supplied at least 2500 ETIM devices in any financial year during last 5 years.	Work Order and completion certificate Bidders applying for both must qualify for both(i) & (ii)
	The bidder shall provide the details of the ownership of the company and details of	Relevant document to be provided. (Annexure-II)

Others	owners/directors along with complete addresses of the owners/directors and their other activities. If the company is Parent or subsidiary firm/company of another company, similar details of the other company and owners should also be provided.	
	The bidder company must have an average annual turnover of minimum One (1) Crore during the last three financial years. i.e. 2021-2022,2022-2023, 2023-2024. MSEs and Startups must have an average annual turnover of minimum 50 Lakhs during the last three financial years. i.e. 2021-2022,2022-2023, 2023-2024.	The bidders should enclose the copies of Audited Balance sheet and P/L statement along with ITRs of last 3 Financial Years. Annexure – VIII need to be enclosed.
	The bidder company should have a positive net worth and recorded profit during the last three financial years. i.e 2021-2022,2022-2023, 2023-2024	The bidders should enclose the copies of Audited Balance sheet and P/L statement along with ITRs of last 3 Financial Years. Annexure – VIII need to be enclosed.
	The bidder should not be insolvent, in receivership, or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended, not have been blacklisted, defaulted and must not be the subject of legal proceedings for any of the fore going reasons.	Relevant document to be provided. (Annexure IV-Self Declaration)
	The bidder should not have, and their directors and officers not have, been convicted of any criminal offence related to their professional conduct or the making of false statements or mis representations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified pursuant to debarment proceedings.	Relevant document to be provided. (Annexure IV-Self Declaration)

	The bidder should not have a conflict of interest in the EoI in question as specified in the bidding document.	Relevant document to be provided. (Annexure IV-Self Declaration)
	The bidder should comply with the code of integrity as specified in the bidding document.	Relevant document to be provided. (Annexure IV-Self Declaration and Annexure VII-Code of Integrity)
	Certifications: The bidder should have a valid as a minimum: i)CMMi Level 3 or higher or ii)ISO9001:2015 certificate as on last date of bid submission.	Copy of Valid certificates plus list of certificates in tabular fashion.
	Design the system as per the functional requirements of the project. The life period of the system shall be up-to 6 (Six) years from start of O & M phase and further extendable as per mutual agreement (in terms of selected technology, support for components, security considerations, scalability and future upgrades, as per requirements) CDAC may examine this requirement depending on the client/business requirements and contract. If the vendor is not OEM then he has to submit relevant documents and declarations from OEM to support the above criteria/requirement of support [up-to 6 (Six) years from start of O & M phase and further extendable as per mutual agreement].	Relevant document/Product Roadmap/Plan on Letter Head of OEM to be provided plus Annexure-X.
	The bidder must provide necessary manpower for onsite AMC and other services, if required, including charging, handling and maintaining ETIMs as per required SLA.	Declaration on Letter to be enclosed as per Annexure-XII
	Bidder must be willing to open Service Centre/Office at the customer site/district.	

	Every Vendor/OEM has to submit that the proposed equipment is original and there are no copyright infringement/Legal issues for the proposed product.	
	Public Procurement (Preference to Make in India) Order 2017	Declaration on Letter to be enclosed as per Annexure-XIII
	Restrictions on procurement from a vendor / manufacturer from countries sharing land border with India.	Declaration on Letter to be enclosed as per Annexure-XIV
	The bidder must be registered at GeM Portal.	Declaration on Letter head to be enclosed.

Note: In case, any bidder is not meeting the requirement of eligibility Criteria such bidder will be summarily rejected at this stage itself.

VI. Technical Qualification Criteria and Score:

S.No.	Qualifying Criteria	Scoring Criteria	Max Score	Remarks
1	The IP /Design/Patent should be in the name of the OEM who participate either directly or through their authorized Distributors/ Channel Partners and not of any Subsidiary/Parent company	The bidder / OEM with foreign IP /Design/Patent.	0	Patent/IP certificate from competent authority to prove the claim.
		The bidder / OEM with domestic/India based IP /Design/Patent.	5	
2	Production/Assembly facility in India	The bidder / OEM not having manufacturing/assembly facility in India.	0	Supporting documents like GST, MSME, NSIC certificate, etc.
		The bidder / OEM having manufacturing/assembling	10	

		facility in India.		
3	Experience in ETIM, machines deployment during the last 3 financial years ending 31 st March,2024.	The average of total number of machines sold during the last three financial years i.e. 2021-2022, 2022-2023 & 2023-2024.	10	Corresponding sale invoice and GST remittance challan.
		MSEs and Startups producing relevant certificates will be given exemption to the tune of 50%.		
		QTY 500-1000		
		QTY 1001 - 1500		
		QTY 1501-2000		
		QTY 2001 or more	10	
OR (Please refer Note 4 below this table)				
	Experience in PoS, machines deployment during the last 3 financial years ending 31 st March,2024.	The average of total number of machines sold during the last three financial years i.e. 2021-2022, 2022-2023 & 2023-2024.	10	
		MSEs and Startups producing relevant certificates will be given exemption to the tune of 50%.		
		QTY 5000-10000		
		QTY 10001 - 15000		
		QTY 15001-20000		
		QTY 20001 or more	10	
4	Turn Over Average Annual Turnover of the Vendor for the last 3 Financial years: i)2021-2022 ii)2022-2023 iii)2023-2024 MSEs and Startups producing relevant certificates will be given exemption to the tune of 50%.	Maximum Marks	10	As per Annexure-VIII.
		Less than 3 Cr	2	
		From Rs.3 Cr (including) and up to 5 Cr(excluding)	4	
		From Rs.5 Cr(including) and up to 10 Cr(excluding)	7	
		Rs.10 Cr (including) and above.	10	

5	Experience: The Bidder having experience of implementing and supporting AFC involving design, supply, installation, operation and maintenance of ETIM machines for public transport authority with fleet size of at least 100 buses in the last 5 years. (as on the last date of bid submission)	The bidder should have executed work orders with any Government Transport departments with fleet size of at least 100 buses during the last 5 years.	10	Bidder should submit Annexure- X along with the summary table as per “Guidelines to Capability Statement”.
		Clients: 0	0	
		Clients: 1-2	4	
		Clients: 3 - 4	7	
		Clients: 5 onwards	10	
6	Production Capability: Production capacity and Availability of product against indent.	Maximum Marks	10	Self-undertaking by the bidder(Applicable only if the bidder is OEM) in Company’s Letter Head
		Units/month: less than 1000	0	
		Units/month: 1001 to 2000	3	
		Units/month: 20001 to 40000	6	
		Units/month: 40000+	10	
7	Presentation and demonstrations must be accompanied by capability statement. Please refer to guidelines for presentation and capability statement in Annexure VI: General Application Form (Break up for Presentation and demonstration (if required) will be shared with bidders qualifying eligibility criteria)	Maximum Marks	45	
		Presentation	25	
		Demonstration	20	
Total maximum marks			100	

Note 1: Verification method: Bidder must enclose the required docs for verification as per

the requirement clause. CDAC may request more information like additional documents and/or site visit to verify the claim.

Note 2: The minimum score for getting qualified in the Technical Evaluation process is 60 Marks and those who are not meeting the minimum eligibility score will not be considered for empanelment process.

Note 3: Even after getting minimum 60 marks in the Technical Evaluation process if the bidder fails in the portability process of C-DAC software in their ETIM/PoS machines/proposed Hardware, such bidders will not be considered for empanelment process.

Note 4: Bidder (s) applying for both ETIM and PoS must qualify their respective criteria as mentioned under "Pre-Qualification "; However, the bidder is free to submit necessary documentations against either ETIM/ Validator or PoS, as per their willingness, for getting maximum score under the Technical Evaluation (Only one area (PoS/ETIM) will be evaluated, if applying for both).

Note 5: Bidders have to submit relevant documents:

- i) to establish themselves as OEM

VII. Instructions to Bidder (ITB)

1. Downloading of EoI / Bid / Tender Documents

The downloading of Bid documents shall be commenced from the date of publication of Notice Inviting Tender (NIT) and shall be stopped one day prior to the date of opening of Bid. The complete bid document can be downloaded from (i) The Central Procurement Portal - www.eprocure.gov.in; or (ii) CDAC web-site - www.cdac.in. The prospective bidders can download the bidding document from the websites and pay the EOI fee before the date & time of submission of Bid to CDAC through online.

2. EOI Process Fee:

The EoI fee of Rs 5,900/- (Rs Five Thousand Only/-) including GST has to be paid through NEFT payment to C-DAC as per the bank details given in this EOI document before the last date and time of EOI submission. The bank transfer details need to be enclosed along with the EOI application. The tender fee is non-refundable. MSEs and Startups providing relevant certificates are exempted from payment of EOI processing fee.

3. Pre-bid Meeting/ Clarifications (Refer Form-A - Pre-bid Query Format for submitting queries)

- a. Any prospective bidder may, in writing (As per Form-A), seek clarifications from the procuring entity in respect of the bidding documents.
- b. The preferred mode of delivering written questions to the aforementioned contact

person would be through email. The email should be sent to es-noida@cdac.in. In no event will the CDAC be responsible for ensuring that bidders' inquiries have been received by CDAC.

- c. After distribution of the EoI, the contact person notified by CDAC will begin accepting written questions from the bidders. CDAC will endeavor to provide a full, complete, accurate, and timely response to all questions. However, CDAC makes no representation or warranty as to the completeness or accuracy of any neither response, nor does CDAC undertake to answer all the queries that have been posed by the bidders.

4. Changes in the Bidding Document

- a. At any time, prior to the deadline for presenting bids, the procuring entity may for any reason, whether on its own initiative or as a result of a request for clarification by a bidder modify the bidding documents by issuing an addendum in accordance with the provisions below.
- b. In case, any modification is made to the bidding document or any clarification is issued which materially affects the terms contained in the bidding document, the procuring entity shall publish such modification or clarification in the same manner as the publication of the initial bidding document.
- c. In case a clarification or modification is issued to the bidding document, the procuring entity may, prior to the last date for submission of bids, extend such time limit in order to allow the bidders sufficient time to take into account the clarification or modification, as the case may be, while submitting their bids.
- d. Any bidder, who has submitted his bid in response to the original invitation, shall have the opportunity to modify or re-submit it, as the case may be, within the period of time originally allotted or such extended time as may be allowed for submission of bids, when changes are made to the bidding document by the procuring entity, Provided that the bid last submitted or the bid through online CPPP as modified by the bidder shall be considered for evaluation.

5. Period of Validity of Bids

- a. Bids submitted by the bidders shall remain valid during the period specified in the NIT/ bidding document. A Bid valid for a shorter period shall be rejected by the procuring entity as non-responsive Bid.
- b. Prior to the expiry of the period of validity of Bids, the procuring entity may request the bidders to extend the bid validity period for an additional specified period of time. A bidder may refuse the request and such refusal shall be treated as withdrawal of Bid.
- c. Validity of the collaboration under this EoI is for 3 Years (Agreement to be signed for 3 Years).
- d. In addition to collaborating through this EoI, CDAC would be free to collaborate with other Organizations / Companies.

6. Format and Signing of Bids

Bid shall consist of the following documents: -

S. No.	Document Type	Document Format
Fee Details		
1	EOI processing Fee/ MSE certificate/ Startup certificate	Transfer of Rs.5000/-(Rs Five Thousand only/-)+ GST (as Applicable)through NEFT and the bank transfer details need to be enclosed along with the EOI application. MSEs and Startups submitting relevant certificates are exempted from payment of EOI processing fee.
Pre-Qualification and Technical Evaluation Documents		
1	EOI Covering Letter	As per Annexure-I
2	Tender Form	As per Annexure-II
3	Bidder's Authorization Certificate	As per Annexure-III
4	Self-Declaration	As per Annexure-IV
5	Certificate of Conformity/No-Deviation	As per Annexure-V
6	General Application Form	As per Annexure-VI
7	Code of Integrity	As per Annexure-VII
8	Financial Capability	As per Annexure VIII
9	Relevant Experience	As per Annexure IX
10	Manufacturers Authorization Form	As per Annexure X
11	Checklist	As per Annexure XI
12	Onsite AMC, Service Centre/Office, & Copyright infringement/issues	As per Annexure XII
13	Public Procurement	As per Annexure XIII
14	Land Border Sharing	As per Annexure XIV

15	Technical Specifications of ETIM	As per Appendix A: Para 1
16	Additional ETIM Info	As per Appendix A: Para 2
17	Technical Specifications of Validator	As per Appendix A: Para 3
18	Additional Validator Info	As per Appendix A: Para 4
19	Hardware for TOM	As per Appendix A: Para 5
20	Table for Vendor Info	As per Appendix A: Para 6
21	All the documents mentioned in the "Legal and Others under Pre-qualification Criteria", in support of the eligibility	As per the format mentioned against the respective eligibility criteria clause.

- a. The bidders need to ensure that their bid documents are submitted online through Central Public Procurement Portal <https://eprocure.gov.in/eprocure/app> on or before the due date. Only such bids received through CPPP on or before the scheduled date will be considered.
- b. The bidder should ensure that all the required documents, as mentioned in this bidding document, are submitted along with the Bid and in the prescribed format only. Non-submission of the required documents or submission of the documents in different format/contents may lead to the rejection of the Bid submitted by the bidder.
- c. This expression of interest is Cover-1, that is, technical evaluation. Technical evaluation is a two stage process i.e. Stage- I & Stage-II.
- d. Bidders are advised to study all instructions, forms, terms, requirements and other information in the EoI documents carefully. Submission of the bid shall be deemed to have been done after careful study and examination of the EoI document with full understanding of its implications.
- e. All the communication to CDAC including this EoI and the bid documents shall be signed on each page by the authorized representative of the bidder and authority letter should be attached with the bid.
- f. CDAC reserves the right to collaborate with more than one Hardware vendor at any time for NCMC Proliferation for the same project.

7. Cost & Language of Bidding

- a. The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the procuring entity shall not be responsible or liable for those costs,

regardless of the conduct or outcome of the bidding process.

- b. The Bid, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the procuring entity, shall be written only in English Language.
- c. This EOI does not bind CDAC to award a contract.
- d. All materials submitted by the bidder become the property of CDAC and may be returned at its sole discretion.

8. Alternative/Multiple Bids

Alternative/Multiple Bids for one EOI from one Bidder shall not be considered.

9. Deadline for the submission of Bids

- a. Bidder needs to submit their bids through online portal Central Public Procurement Portal (CPPP) within the stipulated date & time as per the details mentioned in the section -I (Notice inviting Tender) & Section-II (Instruction to the bidders).
- b. Normally, the date of submission and opening of Bids would not be extended. In exceptional circumstances or when the bidding document are required to be substantially modified as a result of discussions in pre-bid meeting/ conference or otherwise and the time with the prospective bidders for preparation of Bids appears insufficient, the date may be extended by the procuring entity. In such case the publicity of extended time and date shall be given in the manner, as was given at the time of issuing the original NIT and shall also be placed on the Central Procurement Portal, if applicable. It would be ensured that after issue of corrigendum, reasonable time is available to the bidders for preparation and submission of their Bids. The procuring entity shall also publish such modifications in the bidding document in the same manner as the publication of initial bidding document. If, in the office of the Bids receiving and opening authority, the last date of submission or opening of Bids is a non-working day, the Bids shall be received or opened on the next working day.

10. Withdrawal, Substitution, and Modification of Bids

- a. A Bidder may withdraw its Bid or re-submit its Bid after it has been submitted before the deadline prescribed for submission of bids.
- b. Bids withdrawn shall not be opened and processed further.

11. Opening of Bids

- a. The Bids shall be opened through online CPP portal and the process may be tracked by the bidders through the same portal and there is no need for any physical presence in C-DAC office.
- b. The committee shall conduct a preliminary scrutiny of the opened Bids to assess the prima- facie responsiveness and ensure that the:
 - i. Bid is accompanied by bidding/ Tender fee

- ii. Bid is valid for the period specified in the bidding document
 - iii. Bid is unconditional
 - iv. Other conditions, as specified in the bidding document are fulfilled.
 - v. Any other information which the committee may consider appropriate.
- c. No Bid shall be rejected at the time of Bid opening except the Bids not accompanied with the Tender fee.

12. Selection Method

Only such bids that are complete in all respects shall be considered for evaluation. The decision of CDAC in this matter will be final.

13. Clarification of Bids

- a. To assisting the examination, evaluation, comparison and qualification of the Bids, the bid evaluation committee may, at its discretion, ask any bidder for a clarification regarding its Bid. The committee's request for clarification and the response of the bidder shall be in writing.
- b. Any clarification submitted by a bidder with regard to its Bid that is not in response to are quest by the committee shall not be considered.
- c. All communications in this regard shall be included in the record of the procurement proceedings.

14. Evaluation of Bids

The bid evaluation committee will evaluate the received bids on the basis of their capability and capacity to support proliferation of CDAC's CAFC with the required hardware and operational support. The bid evaluation committee may request the bidder to submit additional information or documents to help them in the evaluation process. Failure of the bidder to comply with the request within the specified time may result in the rejection of its bid.

Bids shall be evaluated based on the documents submitted in the bid as mentioned in clause "Format and Signing of Bids" under Section 6 above and on the basis of other documents requested from the bidders. The bidders who qualify in Stage-I shall be informed in writing and will be asked to do the POC in the Stage-II process within stipulated date.

15. Exclusion of Bids/Disqualification

- a. A procuring entity shall exclude/ disqualify a bid, if any of the condition given below is satisfied:-
 - i. The information submitted, concerning the qualifications of the bidder, was false or constituted a misrepresentation;
 - ii. The information submitted, concerning the qualifications of the bidder, was

- materially inaccurate or incomplete;
- iii. The bidder is not qualified as per pre-qualification/eligibility criteria mentioned in the bidding document;
- iv. The bid materially departs from the requirements specified in the bidding document or it contains false information;
- v. The bidder, submitting the bid, his agent or anyone acting on his behalf, gave or agreed to give, to any officer or employee of the procuring entity or other governmental authority a gratification in any form, or any other thing of value, so as to unduly influence the procurement process;
- vi. The bidder, in the opinion of the procuring entity, has a conflict of interest materially affecting fair competition.
- b. For the reasons given above, a bid can be excluded/disqualified even at a later stage.

16.Re-invitation of Bids

CDAC may, at its own discretion, decide to re-invite the bids. The eligibility criteria and other conditions may be revised at the re-invitation stage.

17.Information to shortlisted bidder(s)

The intimation to shortlisted bidder(s) will be published through CPP Portal/ through email.

18.Procuring entity's right to accept or reject any or all Bids

The Procuring entity reserves the right to accept or reject any Bid, and to annul (cancel) the bidding process and reject all Bids at anytime, without thereby incurring any liability to the bidders.

19.Cancellation of EOI process

- a. If the procurement process has been cancelled, it shall not prevent the procuring entity from initiating a new procurement process for the same subject matter of procurement, if required.
- b. The procuring entity shall not open any bids or proposals after taking a decision to cancel the EOI process in totality.

20.Code of Integrity for Bidders

Refer Annexure-VII

21.Reservation of Rights

To take care of unexpected circumstances, CDAC Noida shall reserve the rights for the following: -

- i. Extend the closing date for submission of the bid proposals.

- ii. Amend the bidding requirements at any time prior to the closing date, with the amendment being notified to prospective bidders through corrigendum in CPP Portal.
- iii. To accept any bid not necessarily the highest, reject any bid without assigning any reasons and accept bid for all or anyone or more than one for which bid has been invited.
- iv. Terminate or abandon the bidding procedure or the entire project whether before or after the receipt of bid proposals.
- v. Seek the advice of external consultants to assist CDAC Noida in the evaluation or review of proposals.
- vi. Make enquiries of any person, company or organization to ascertain information regarding the bidder and its proposal.
- vii. Reproduce for the purposes of the procedure the whole or any portion of the proposal despite any copyright or other intellectual property right that may subsisting the proposal.

The decision of CDAC in this matter shall be final.

22. Jurisdiction

The jurisdiction for the purpose of settlement of any dispute or difference whatsoever in respect of or relating to or arising out of or in any way touching this contract or the terms and conditions there or the contraction/interpretation shall be that of the appropriate court in Gautam Budha Nagar U.P.

23. Arbitration

If at any time, dispute or difference whatsoever arises between the Parties out of or relating to the construction, meaning, scope, operation or effect of this contract or the validity or breach thereof shall be settled amicably. In case both the parties are unable to resolve the dispute amicably, the same shall be referred to the arbitrator appointed by C-DAC only under Arbitration & Conciliation Act 1996 as amended from time to time and rules made there under and the Award made in pursuance thereof shall be binding on the parties.

The venue and seat for the arbitration shall be Noida/New Delhi, India and language shall be English. The Award given by the Arbitrator shall be final and binding on the Parties.

The rights and obligation of the parties shall remain in full force and effect, pending the result of any arbitration proceedings.

24. Force Majeure

Should any of the force majeure circumstances, namely act of God, natural calamity, fire, Government of India Policy, restrictions, strikes or lock-outs by workmen, war, military operations of any nature and blockades preventing the C-DAC/Successful Bidder from wholly or partially carrying out his contractual obligations, the period stipulated for the performance of the Contract shall be extended for as long as these circumstances prevail.

In the event of these circumstances continuing for more than three months, either party shall have the right to refuse to fulfill its contractual obligations without title to indemnification of any losses it may thereby sustain. The party unable to carry out its contractual obligations shall immediately advise the other party of the commencement and the termination of the circumstances preventing the performance of the contract. A certificate issued by the respective Chamber of Commerce shall be sufficient proof of the existence and duration of such circumstances.

25.No Contractual Obligation

C-DAC is not bound contractually or in any other way to any prospective buyers to this tender. C-DAC is not liable for any costs of compensation in relation to expenditure incurred by the prospective buyer to this tender on whatsoever reasons/grounds whether or not C-DAC terminates, varies, or suspends the tendering process or takes any other action permitted under this tender provision during the course of execution.

26. Confidentiality

This Tender's provisions and existence, as well as any commercial data including price or technical data and any information provided in accordance herewith to the other party shall be considered as confidential. Such information shall not be disclosed to any third party unless required by any applicable law or authorized in writing by the other party.

All such information shall be used by the other party only for the purposes of performance of this Tender.

The restrictions here-in-above shall not apply to any information generally available to the public or received in good faith from a third party without restriction. The parties hereto agree to keep as confidential all documentation furnished or received by either party at any time in connection with this Tender. This provision, as far as practicable, shall apply to all the concerned officials of either party.

Confidentiality will be maintained during existence of this Tender and even on termination/expiry.

27. Indemnification

Bidder (the "Indemnifying Party") undertakes to indemnify CDAC (the "Indemnified Party") from and against all Losses on account of bodily injury, death or damage to tangible personal property arising in favor of any person, corporation or other entity (including the Indemnified Party) attributable to the Indemnifying performance or non-performance under this Agreement.

If the Indemnified Party (CDAC) promptly notifies Indemnifying Party (Bidder) in writing of a third-party claim against Indemnified Party that any component/equipment/service provided by the Indemnifying party infringes a copyright, trade secret or patents incorporated of any third party, Indemnifying Party will defend any such claim at its expense and will pay any costs or damages that may be finally awarded against Indemnified Party.

28.Exit Policy

A bidder must inform CDAC even after empanelment or at any stage, at-least three months before, if it is going in insolvency stage, or due to any other reason it wants to exit or terminate.

In case OEM or Manufacturer is closing the product, then, also bidder/vendor must inform to CDAC in writing and propose an alternative /risk mitigation plan (if any) at the earliest. In this case vendor has to comply with CDAC's exit policy. CDAC can impose penalty and may blacklist the firm/bidder, in case the bidder is not complying with the terms of Exit Policy.

29.Non-Disclosure of Information

The bidder shall not communicate or use in advertising, publicity, sales releases or in any other medium any information/materials like description of the site, dimensions, photographs or any other information concerning the work under this contract which may come to its possession, without the prior written permission of the CDAC.

30.Indemnification Against Infringement of Intellectual IPR Etc.

The successful bidder/contractor shall indemnify, protect and save C-DAC against all claims, losses, costs, damages, expenses, action, suits and other proceeding, resulting from / arising out of:

- a. Infringement of any law pertaining to intellectual property, patent, trademarks, copyrights etc. by the bidder or
- b. Such other statutory infringements in respect of all the equipment supplied by successful bidder, or
- c. Caused due to any act / omission / performance / under or non or part performance/failure of the bidder.

Form-A
PREBID QUERIES FORMAT

NIT No:

Name of the Company/Firm: _____

Name of Person(s) Representing the Company/Firm:

Name of Person	Designation	Email-ID(s)	Tel. Nos. & Fax. Nos.

Company/Firm Contacts:

Contact Person(s)	Address for Correspondence	Email-ID(s)	Tel. Nos. & Fax. Nos.

Query/Clarification Sought:

Sr. No.	EoI Page No.	Section No.	Details Presenting EoI/BID Documents	Query/Suggestion/Clarification

Note: Query must be strictly submitted only in prescribed format ((.XLS/.XLSX/.ODF). Queries not submitted in prescribed format will not be considered/responded at all by the tendering authority.

Annexure-I
EOI COVERING LETTER
(To be given in Company Letter Head)

To
Centre for Development of Advanced Computing
Anusandhan Bhawan, C-56/1
Institutional Area, Sector-62,
Noida-201309 (U.P.)

SUBJECT: ACCEPTANCE OF TERMS & CONDITIONS- Empanelment of OEMs /Their Authorized Distributors/ Channel Partners Registered in India for Electronic Ticket Issuing Machines (ETIMs)/Point of Sale (PoS) Machine-Reg

EOI Reference No.

Dear Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned 'EOI document' from the web site(s) namely: www.cdac.in / www.eprocure.gov.in etc; as per your NIT / advertisement, given in the above-mentioned website(s).
2. I/We hereby, certify that we qualify for the below category(ies) and our bid should be considered accordingly:

S.No	Category	Yes/No	Remarks
.			
1	Open Loop ETIM		
2	Closed Loop ETIM		
3	PoS Machines		
4	All of the above		

Note: Bidder may also mention their consent for getting empanelment for validators. They have to submit details of validators in that case (including makes, model, features, experience details etc.).

1. I / We hereby certify that I / We have read the entire terms and conditions of the EOI documents from Page No. ..to(including all documents like annexure(s), schedules (s), etc.), which form part of the contract/ agreement and I / We shall abide hereby by the terms / conditions/ clauses contained therein.
3. The corrigendum(s) issued from time to time by your department / organization too has also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept the EOI terms & conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.
5. I / We do hereby declare that our firm has not been blacklisted / debarred by any Govt. Department / Public sector undertaking.
6. I / We certify that all information furnished by our firm is true & correct and, in the event, that the information is found to be incorrect / untrue or found violated, then your department/ organization shall without giving any notice or reason thereof or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the earnest money deposit, if any, absolutely.

Yours faithfully,

**Authorized Signatory.
(Signature of the Bidder, with official Seal)
Email Id for correspondence.**

Annexure-II
TENDER FORM

NIT No:

1). Addressed to:

Name of the Tendering Authority	Head, MMG,CDAC-Noida
Address	
Telephone	
Tele-Fax	
Email	

2). Firm Details:

Name of Firm				
Name of Contact Person with Designation				
Registered Office Address				
Address of the Firm				
Manufacturing/Supply Unit Address				
Year of Establishment				
Type of Firm Put tick (✓)mark	Public Limited	Private Limited	Partnership Firm	Proprietary Company
Telephone Number(s)				
Email Address/Website	Email:		Website:	
Fax No.				
Mobile Number	Mobile:			
Certification/Accreditation/Affiliation, if any				
Collaborators in the company and their share	Indian		Foreign	

Role of Foreign Collaborator and their share/control	Finance	Transfer of Technology	Licensing/ Proprietary /Patents	Others
Type/Category of Manufacturing	MSME	Startup	Others	DIPP Certifications(Local 1/ local 2)

3). The requisite tender fee amounting to Rs. /-(Rupees<in words>) has been deposited vide DD No._____Dated_____.

4)We agreed to abide by all terms and conditions mentioned in this form issued by the Competent Authority and also the further conditions of the said notice given in the attached sheets(all the pages of which have been signed by us in token of acceptance of the terms mentioned therein along with stamp of the firm).

Date:

Name & Seal of the Firm:

_____.

Authorized Signatory:_____.

Annexure-III
BIDDER'S AUTHORIZATION CERTIFICATE

To
Centre for Development of Advanced Computing
Anusandhan Bhawan, C-56/1
Institutional Area, Sector-62,
Noida-201309 (U.P.)

SUBJECT: ACCEPTANCE OF TERMS & CONDITIONS- Empanelment of OEMs /Their Authorized Distributors/ Channel Partners Registered in India for Electronic Ticket Issuing Machines (ETIMs)/Point of Sale (PoS) Machine-Reg

EOI Reference No.

Dear Sir,

I/ We (Name/Designation) hereby declare/ certify that (Name/Designation) is hereby authorized to sign relevant documents on behalf of the company/firm in dealing with Tender/**NIT No:**

He/ she is also authorized to attend meetings & submit filled BID DOCUMENT with Pre-Qualification, technical & financial information/ Clarification as may be required by you in the course of processing the Empanelment Evaluation. For the purpose of validation, his /her verified signatures are as under.

Thanking You.

Name of the Company-
Authorized Signatory-
Seal of the Organization-
Date-_____.

Verified Signature:

Place-__.

Annexure-IV
SELF DECLARATION

To
Centre for Development of Advanced Computing
Anusandhan Bhawan, C-56/1
Institutional Area, Sector-62,
Noida-201309 (U.P.)

SUBJECT: ACCEPTANCE OF TERMS & CONDITIONS- Empanelment of OEMs /Their Authorized Distributors/ Channel Partners Registered in India for Electronic Ticket Issuing Machines (ETIMs)/Point of Sale (PoS) Machine-Reg

EOI Reference No.

Dear Sir,

In response to E o I / NIT Ref. No. _____ dated _____, as an Owner/Partner/Director/Auth. Sign. Of _____.

I/We hereby declare that presently our Company/firm, at the time of submission of BID DOCUMENT: -

- a. Possess the necessary professional, technical, financial and managerial resources and competence required by the BIDDOCUMENT issued by the Procuring Entity.
- b. is having unblemished record and is not declared ineligible for corrupt & fraudulent practices either indefinitely or for a particular period of time by any State/Central government/PSU/UT at the time of submission of response to this EoI.
- c. is having unblemished record and is not declared ineligible for corrupt & fraudulent practices either indefinitely or for a particular period of time by governing laws of country in which I operate/registered.
- d. does not have any previous transgressions with any entity in India or any country during the last three years.
- e. does not have any debarment by any other procuring entity.
- f. is not insolvent in receivership, bankrupt or being wound up. Not have its affairs administered by a court or a judicial officer, not have its business activities suspended and is not the subject of legal proceedings for any of the foregoing reasons.
- g. does not have, and our directors, and officers not have been convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of procurement process, or not have been otherwise disqualified pursuant to debarment proceedings.
- h. does not have a conflict of interest as mentioned in the BID DOCUMENT which materially affects the fair competition.

- i. Will comply with the code of integrity as specified in the BIDDOCUMENT.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken as per the provision of the applicable Act and Rules and our Empanel Evaluation process, to the extent accepted, may be cancelled.

Thanking You.

Name of the Company-Authorized Signatory-

Seal of the Organization-

-

Date-_____Place-

-

Annexure-V

CERTIFICATE OF CONFIRMITY/NO-DEVIATION

To
Centre for Development of Advanced Computing
Anusandhan Bhawan, C-56/1
Institutional Area, Sector-62,
Noida-201309 (U.P.)

SUBJECT: ACCEPTANCE OF TERMS & CONDITIONS- Empanelment of OEMs /Their Authorized Distributors/ Channel Partners Registered in India for Electronic Ticket Issuing Machines (ETIMs)/Point of Sale (PoS) Machine-Reg

EOI Reference No.

Dear Sir,

This is to certify that, the details which I/We have mentioned in the filled BID DOCUMENT, and which I/We shall comply if I/We am/are awarded with the work, are in conformity with the minimum specifications of the BID DOCUMENT and that there are no deviations of any kind from the requirement specifications.

Also, I/we have thoroughly read the tender/BID DOCUMENT and by signing the certificate, we hereby submit our token of acceptance to all the tender terms & conditions without any deviations.

Thanking You.

Name of the Company-
Authorized Signatory-
Seal of the Organization-
Date-_____.

Place-__.

Annexure VI
GENERAL APPLICATION FORM

NIT No:

Expression of Interest for (-ETIMs/Validators/PoS machines).

1.Name of Firm/Organization	
2.Act under which the organization is registered, if any	
3.Registration number , if any	
4.Date of commencement of operations	
5.Addresswithemailandphonenumbers	
6.ContactPerson	
7.Company's total annual turnover in INR for the last three years? (in Rs.)	2023-2024 2022-2023 2021-2022

8. Capability Statement

Please provide, as an Annex 1 to this form, a Capability Statement of no more than 10 pages in font size 12, which provides the necessary details as per guidelines given below.

9. CV(s) of Key Personnel

Please provide, as Annex 2 to this form, abridged CV(s) of no more than two pages (for each individual) in key personnel (maximum 5) who would be expected to provide the services listed in Contract Notice.

10. Conflict of Interest

You must disclose in your response, details of any known circumstances that will or might give rise to a conflict of interest. Where a potential conflict is identified, you should state how you intend to avoid such conflict.

Guidelines for Preparing Presentation

Below are the guidelines for preparing presentation:

- a. Give a brief description of core area of operation of your organization and how they relate to e-ticketing and/or ETIM/Validator/PoS manufacturing capability and capacity.
- b. Understanding and Proposed Approach to this kind of business.
- c. Illustrate your skill and experience of doing business in this kind of business Model.
- d. Experience in the country and region on similar business.

- e. Past experience of working with State/Central Governments in India.
- f. A summary of major project and assignments similar to this project as per format given below:

Name of Project	Year (From-To)	Country, State	Value (in Rs.)	Client	Lead Firm/ Partner	Short Description

- g. An overview of the human resources of the Organization. Key resource personnel involved in ETIM/e-ticketing/AFC business.
- h. Past experience in e-ticketing/ETIMs project during the last 3 years detailing financial and technical aspects including ETIMs supplied (if any).
- i. Product Offered and brief of technical Specifications and capabilities.
- j. USP(Unique Selling Proposition) of the product.
- k. Testing and Quality checks performed at various stages by vendors.
- l. Customer Support Organization, and flow of customer support request, tools used, mechanism to support SLAs and Testimonials from customers.
- m. **Quality Assurance Certification** (if any) like-**ISO-9001-2008, CMMI** etc.

Guidelines for Preparing Capability Statement

Bidder will need to address the following areas in their Capability Statement. The Capability Statement should be of no more than 10 A4 pages in font size 12. Please note that we will also take into account the financial standing of applicants during the Expression of interest assessing process.

- a. Give a brief description of core area of operation of your Organization (**Half Page**) as they relate to e-ticketing and/or-ETIM/Validator/PoS manufacturing capability and capacity.
- b. Understanding and Proposed Approach to this kind of business (**One Page**).
- c. Illustrate your skill and experience of doing business in this kind of business Model (**Two Pages**).
- d. Experience in the country and region on similar business (**One Page**).
- e. Past experience of working with State/Central Governments in India (**Half Page**).
- f. A summary of major project and assignments similar to this project (**Maximum 4 Pages**) as per format given below:

Name of Project	Year (From-To)	Country, State	Value (in Rs.)	Client	Lead Firm/Partner	Short Description

- g.** An overview of the human resources of the Organization (**One Page**).
- h.** Past experience in e-ticketing/ETIMs project during the last 3 years detailing financial and technical aspects including ETIMs supplied (if any)(**One Page**).
- i.** **Quality Assurance Certification** (if any) like-**ISO-9001-2015, CMMI** etc.

ANNEXUREVII

CODE OF INTEGRITY FOR BIDDER(S)

Section1: Preamble

- a. No person participating in the bidding process shall act in contravention of the code of integrity prescribed by the Government.
- b. The code of integrity includes provisions for:-
 - i. Prohibiting
 - a. any offer, solicitation or acceptance of any bribe, reward or gift or any material benefit, either directly or indirectly, in exchange for an unfair advantage in the bidding process or to otherwise influence the bidding process;
 - b. any omission, including a misrepresentation that misleads or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation;
 - c. any collusion, bid rigging or anti-competitive behavior to impair the transparency, fairness and progress of the bidding process;
 - d. improper use of information shared between CDAC and the Bidders with an intent to gain unfair advantage in the bidding process for personal gain;
 - e. any financial or business transactions between the Bidder and any officer or employee of the CDAC;
 - f. **any coercion** including impairing or harming or threatening to do the same, directly or indirectly, to any party or to its property to influence the bidding process;
 - g. any obstruction of any investigation or audit of a bidding process;
 - ii. Direct or indirect canvassing on the part of the Bidder or his representative would be a disqualification.
 - iii. Disclosure of conflict of interest;
 - iv. Disclosure by the Bidder of any previous transgressions with any entity in India or any other country during the last three years or of any debarment by any other procuring entity.
- c. Without prejudice to the provisions below, in case of any breach of the code of integrity by a Bidder, CDAC may take appropriate measures including:-
 - i. Exclusion of the Bidder from the bidding process;

- ii. Debarment of the Bidder from participation in future contracts of CDAC for a period not exceeding three years.

Section2: Commitments of the Bidder(s)

The Bidder commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution-

- The Bidder(s) will not, directly or through any other persons or firm, offer promise or give to any of the government employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage or during the execution of the contract.
- The Bidder(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- The Bidder(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by CDAC Noida as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- The Bidder(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any.
- Similarly, the Bidder(s) of Indian Nationality shall furnish then ameand address of the foreign head, if any. Further, all the payments made to the Indian agent/representative have to be in Indian Rupees only.
- The Bidder(s) will, when executing the agreement, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

The Bidder(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section3: Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put his reliability or credibility in question, CDAC is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or take action as per the decision taken by the competent authority.

Section4: Compensation for Damages

1. If the CDAC has disqualified the Bidder(s) from the tender process prior to the award according toSection3, CDAC is entitled to demand and recover the damages equivalent to Earnest Money Deposit/Bid Security, if any.
2. If the CDAC has terminated the contract according to Section 3, or if CDAC is entitled to terminate the contract according to Section 3, CDAC shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to Security Deposit / Performance Bank Guarantee.

Section5: Previous Transgression

1. The Bidder declares that no previous transgressions occurred in the last three years with any other company in any country conforming to the anti-corruption approach or with any other public sector enterprise in India that could justify his exclusion from the tender process.
2. If the bidder makes incorrect statement on this subject, he can be disqualified from the tender process or action can be taken as per the decision taken by the competent authority.

Section6: Equal treatment of all Bidders/Contractors/Subcontractors

1. CDAC will enter into agreements with identical conditions as this one with all bidders, contractors and subcontractors.
2. CDAC will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section7: Criminal charges against violation Bidder(s)/Contractor(s)/Subcontractor(s)

If CDAC obtains knowledge of conduct of a Bidder which constitutes corruption, or if CDAC has substantive suspicion in this regard, CDAC will initiate action as per the agreement.

Section8: Other provisions

- This agreement is subject to Indian Law, Place of performance and jurisdiction is the Registered Office of the CDAC, Noida.
- Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- Should one or several provisions of this agreement turnout to be invalid, there **main derof** this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

Annexure VIII
Financial Capability

<<To be completed by the Bidder>>

<<On the letter head of the Chartered Accountant>>

<<To be submitted along with Audited Financial Statements>>

Date:

To

Centre for Development of Advanced Computing

Anusandhan Bhawan, C-56/1

Institutional Area, Sector-62,

Noida-201309 (U.P.)

SUBJECT: ACCEPTANCE OF TERMS & CONDITIONS- Empanelment of OEMs /Their Authorized Distributors/ Channel Partners Registered in India for Electronic Ticket Issuing Machines (ETIMs)/Point of Sale (PoS) Machine-Reg

EOI Reference No.

Dear Sir,

We have examined the books of accounts and other relevant records of <<Bidder along-with registered address>>.On the basis of such examination and according to the information and explanation given to us, and to the best of our knowledge & belief, we hereby certify that the annual turnover for the last three financial years is as per details given below are correct:

Information from Balance Sheets (in Indian Rupees)			
	2021-2022	2022-2023	2023-2024
Annual Turnover			
Net-worth			

(Signature of the Chartered Accountant):

Name :

Designation :

Membership Number:

UDID Number :

Date :

Company Seal:

Business Address :

Annexure IX
Relevant Experience

<<On Bidder's Letterhead>>

Sr. No.	Credential for<Criteria No.>	
	Name of the Organization-<<Name of the Bidder that have executed/executing the project>>	
	Parameter	Details
General Information		
1.	Customer Name	
2.	Name of the contact person, address and contact details of the customer	
3.	Whether customer visit can be organized	(YES/NO)
Project Details		
4.	Project Title	
5.	Location	
6.	Start Date and End Date	
7.	Duration of assignment in months	
8.	Government/Private/PSU/Others please specify	
9.	Geographical Coverage (No. of locations the project covers)	
10.	No. of ETIMs deployed	
12.	No. of Buses covered	
14.	Total Cost of the project (in INR)	
15.	Total Value of services delivered by your firm (in INR)	
16.	Current Status (Live/completed/on-going/terminated/suspended)	
17.	Number of years of successful operation	
18.	No of staff provided by your company	
19.	Please indicate the current or the latest AMC period with the client <i>(From Month–Year to Month-Year)</i>	
20.	Please indicate whether the client is currently using the implemented solution If no, please state the reason	
Size of the project		
21.	Order Value of the project (in lakhs)	
22.	Capital Expenditure involved (in lakhs)	

Sr. No.	Credential for<Criteria No.>		
	Name of the Organization-<<Name of the Bidder/Consortium Member that have executed/executing the project>>		
	Parameter		Details
23.	Cost of services provided by the bidder (in Lakhs)		
24.	Copy of Go-Live/completion certificate issued by the client attached		Yes/No
25.	Does the work order/Purchase order/Copy of completion certificate clearly specify following? 1. Name of your organization 2. Detailed Scope of work covering details of solution provided 3. Duration start and end date 4. Names of the associated firms 5. Value of overall contract and value of your scope of work. <i>Note-If no, kindly attach a self-declaration duly attested by statutory authority stating the above listed details for each project. In such cases, absence of this self-certification may result into project not being considered during technical evaluation.</i>		Yes/ No
26.	Cost of services provided by the partners if involved (in Lakhs)		
27.	Number of total users and concurrent users of the solution at the client location(s):	Total users	
		Concurrent users	
28.	Training responsibilities of Bidder		
29.	Any other information to be shared with CDAC		
Narrative Description of the Project:			
Detailed Description of actual services provided by Bidder:			
Documentary Proof:			
Highlights of the Key Result Areas expected and achieved			
List of modules and sub-modules implemented			

***For each of the project listed above the bidder needs to provide documentary evidence in the same format separately for different projects: Work Order, Completion letter**

Annexure X

Manufacturers Authorization Form

<<To be submitted on the Company Letter head of the OEM>>

Date:

Centre for Development of Advanced Computing

Anusandhan Bhawan, C-56/1
Institutional Area, Sector-62,
Noida-201309 (U.P.)

SUBJECT: ACCEPTANCE OF TERMS & CONDITIONS- Empanelment of OEMs /Their Authorized Distributors/ Channel Partners Registered in India for Electronic Ticket Issuing Machines (ETIMs)/Validators / Point of Sale (PoS) Machine-Reg

EOI Reference No.

Dear Sir,

1. This is to certify that I/We am/are the Original Equipment Manufacturer in respect of the products listed below. I/We confirm that <name of Bidder> have due authorization from us to provide services, to CDAC, that are based on our product(s) listed below as per EoI document titled "Empanelment of OEMs /Their Authorized Distributors/ Channel Partners Registered in India for Electronic Ticket Issuing Machines (ETIMs)". We further endorse the warranty and contracting terms provided by bidder to CDAC.
2. I/We are the Original Equipment Manufacturer in respect of the products listed. I/We do hereby undertake that our products are being installed by <Bidder Name >, pursuant to the document "Empanelment of OEMs /Their Authorized Distributors/ Channel Partners Registered in India for Electronic Ticket Issuing Machines (ETIMs)" relating to providing of the supply, commissioning, support and maintenance of the said Equipment and services to CDAC, will be inspected to ensure they are installed, commissioned and supported.
3. I/We also undertake that we will provide support to CDAC in quality of deliverables and in ensuring that the solution is implemented to the CDAC or CDAC's Client by exploiting all the capabilities offered by the solution, to meet the requirements of CDAC or CDAC's client.
4. The design life period of the system shall meet the criteria/requirement (mentioned in EoI Pre-Qualification criteria(i)) of support upto 6 (Six) years from start of O & M phase, in terms of selected technology, support for components, future upgrades, security considerations, scalability and future upgrades in-case required.
5. I/
We also undertake that we will support all the customizations made on our product by the CDAC/ SI to meet the requirements of CDAC/CDAC's client. Data sheets are attached for the below mentioned products.

S. No.	Product Name	Remarks

Yours faithfully,

Authorised Signatory Designation

OEM's company name

CC: Bidder's corporate name

Annexure XI

Checklist

<<On Bidder's Letterhead>>

The Bidder is required to fill relevant information in the format given below. The pre-qualification bid must contain documentary evidences and supporting information to enable purchaser to evaluate the eligibility of the Bidder without ambiguity.

Information of the Bidder

S.No.	Criteria	Pre-Qualification Criteria Description	Supporting Document	Response (Yes/No)	Reference in response to Re-Qualification (Section # and Page #)

Annexure XII
Undertaking Letter
On Bidder's Letter Head

Date:

Centre for Development of Advanced Computing
Anusandhan Bhawan, C-56/1
Institutional Area, Sector-62,
Noida-201309 (U.P.)

SUBJECT: ACCEPTANCE OF TERMS & CONDITIONS- Empanelment of OEMs /Their Authorized Distributors/ Channel Partners Registered in India for Electronic Ticket Issuing Machines (ETIMs)/Validators / Point of Sale (PoS) Machine-Reg

EOI Reference No.

Dear Sir,

In connection with subject EOI participation, We (Bidders Firm Name) hereby undertake the following as a part of EOI compliance:

1. We will provide necessary manpower for onsite AMC and other services like charging, handling and maintaining ETIMs as per required SLA on PAN India Basis based on project location.
2. We will open Service Centre/Office at the customer site/district based on the project location on PAN India basis.
3. We as an OEM/Authorized channel partner/ Distributor confirm that the proposed equipment is original and there are no copyright infringement/Legal issues for the proposed product.

Thanking You.

Name of the Company-
Authorized Signatory-
Seal of the Organization-
Date-_____.

Place-__.

Annexure XIII
LOCAL CONTENT DECLARATION
On Bidder's Letter Head

Date:

To
Centre for Development of Advanced Computing
Anusandhan Bhawan, C-56/1
Institutional Area, Sector-62,
Noida-201309 (U.P.)

SUBJECT: LOCAL CONTENT DECLARATION-SUBJECT: ACCEPTANCE OF TERMS & CONDITIONS- Empanelment of OEMs /Their Authorized Distributors/ Channel Partners Registered in India for Electronic Ticket Issuing Machines (ETIMs)/Validators / Point of Sale (PoS) Machine-Reg

EOI Reference No.

Dear Sir,

I _____ S/o, D/o, W/o _____, Resident of _____ do hereby solemnly affirm and declare as under that:

1. I will agree to abide by the terms and conditions of subject tender terms & conditions issued by C-DAC.
2. The information furnished hereinafter is correct to best of my knowledge and belief and I undertake to produce relevant records on demand by C-DAC for the purpose of verifying the Local Content (LC).
3. The LC for all inputs which constitute the said Goods /Services/Works has been verified by me and I am responsible for the correctness of the claims made herewith against the subject tender participation.
4. In the event of the LC of the Goods/Services/Works mentioned herein is found to be incorrect and not meeting the prescribed LC norms, based on the verification by C-DAC (or) appropriate authority, I/my firm will be liable as under clause 9(f) of Public Procurement (Preference to Make in India) Order 2017.
5. I agree to maintain all information regarding my claim for LC in the Company's record for a period of 2 years and shall make this available for verification to any statutory authorities.
6. The details of LC claim:
 - a. Goods /Services/Works for which the certificate is produced:
 - b. Percentage of LC claimed:%
 - c. Type of Supplier (Class-I/Class-II):.....
 - d. Name and contact details of the unit of the manufacturer/Service Station:

For and on behalf of _____ (Name of firm/entity)

Authorized signatory (To be duly authorized by the Board of Directors)

Annexure XIV
DECLARATION-LAND BORDER SHARING

Date:

To
Centre for Development of Advanced Computing
Anusandhan Bhawan, C-56/1
Institutional Area, Sector-62,
Noida-201309 (U.P.)

**SUBJECT: DECLARATION-OM.NO.6/18/2019-PPD DATED 23.07.2020 OF PUBLIC
PROCUREMENTDIVISION, DEPARTMENT OF EXPENDITURE, MINISTRY OF FINANCE FOR
RESTRICTIONON PROCUREMENT FROM A BIDDER OF COUNTRIES WHICH SHARES A LAND
BORDER WITH INDIA-REG**

EOI Reference No.

Dear Sir,

I have read the subject clause regarding restrictions on procurement from a bidder / OEM / Vendor of a country which shares a land border with India; I certify that our firm is not from such a country or, / if from such a county, that has been registered with the Competent Authority (copy of the Registration Certificate enclosed).

Yours faithfully,

Authorized Signatory.
(Signature of the Bidder, with official Seal)
Email Id for correspondence.

Appendix A

1. Technical Specifications of OPEN LOOP ETIMs: (To be Filled by Vendor and OEM both on their Letter Heads)

S. No.	Parameter	Specification	Compliance(Yes/No)	Remarks
1	Application Processor ^[Note 1, 2, 3]	- 32/64bit processor - Multicore - Must be capable of delivering at least up to 2500DMIPs with a base CPU utilization of less than 25%		Core: Core count: Base CPU utilization:
2	Operating System ^[Note 4, 5]	Android 7.0 or better and kernel version 4.0 or better		OS type & version:
3	Memory ^[Note 6, 7]	For Android OS: At least 1024MB + Base memory utilization; total memory to be a multiple of 512MB		Base memory utilization:
4	Storage ^[Note 8]	User/application storage requirements range from 4GB to 8GB; Upgrades must be available to satisfy the maximum requirements		Base storage: Stock free space: Upgrade options:
5	Secure Memory ^[Note 9]	Optional; if present, must be at least 1024B (preferred 2048B)		
6	SAM Slots	2 slots; ISO 7816 compliant		
7	Contactless Interface	HF (13.56MHz) interface with multiprotocol support - Mandatory ISO/IEC 14443-3 & 4 support - Mandatory EMV L1 support		Optional support:

		- Optional support for proprietary protocols for example Mifare etc.		
8	2D/QR Code Scanner ^[Note 10]	Scanner or Camera (at least 5MP) with auto focus - Mandatory support for scanning QR codes - Optional support for other 2D codes such as Aztec, Data Matrix etc - View finder or target indication feature - Scan time must not exceed 100ms		Scanner type: Scan time:
9	Audio	- Speakers with good audibility in noisy environments - Optional (preferred) volume control		Volume control: Audio formats supported:
10	RTC	RTC with separate power domain - Minimum accuracy = $\pm 2s$ / day; - Desired accuracy = $\pm 0.5s$ / day		Time difference one week after synchronization:
11	Communication – WAN	- Must support – 4G, 3G & 2G (Indian telecom bands) - Dual SIM support		
12	Communication – LAN	Must support WiFi – 2.4/5 GHz, 802.11 b/g/n		
13	Bluetooth	Optional (preferred); v4.0 and above		
14	GPS	Optional (preferred)		Navigation System -
15	Display	- Display size must be at least 5 inches - Display resolution		

		must be at least WVGA (480x768) - Display must have sunlight readability and brightness control		
16	User Inputs ^[Note 11]	- Mandatory capacitive touch interface with sufficient resolution to support complex UIs on unstable environments; - Optionally (preferred), 1-2 multi-function hardware buttons		
17	Indicators	Power/Charging Status indicator; Optionally (preferred), 1 or more user controlled LED indicators;		Indicator details -
18	Printer	- Thermal printer speed must not be below 50mm/s (preferred print speed is 70mm/s) - Paper roll cage: 58mm width & 35mm and above roll diameter; - Must support multiple languages(English, Hindi and other Indian languages) /fonts for (English, Hindi and other Indian languages) and font sizes in a single print - Optional (preferred) paper presence sensor - Paper loading process must be fast		Printer speed: Paper presence sensor:

		and simple - Tear bar Support Required		
19	Power Input	Wall adapter rated for Indian electrical sockets		
20	Battery ^[Note 12]	- Li-Ion/Li-Polymer or equivalent; - Battery capacity not less than 3400 mAh subject to an operational period of not less than 8 hours, under standard conditions; - Optionally, batteries may be swapped for extending lifetime;		Battery swapping possible?
21	Environment	- Operating temperature (not charging): 0 to 50 degree C; - Operating temperature (charging): 0 to 40 degree C; - Storage temperature: -10 to 50 degree C		
22	Physical Characteristics	- Must be rugged and resistant to shocks and rough handling; - Must be easy to grip and slip resistant; - A certain level of ingress protection is desired		Ingress protection rating
23	Accessories	Preferred list: - Gang chargers and/or docks; - On bus chargers (8-32VDC) - Extra battery packs; - Protective carry cases; - Degraded mode data retrieval system		

24	Optional features	Support reading / writing on Mifare Cards (Classic, Plus, Desfire) - ISO/IEC 14443 Type-A 13.56 MHz contactless smart cards.		Closed loop cards
25	Mandatory Certifications: EMV L1	Please mention version & validity		Submit copy of Certificate
26	Mandatory Certifications: Rupay-qSPARC L2 Kernel	Please mention version & validity The following transaction types must be supported - Service update - Service Create - Money Add - Balance Update - Balance Inquiry - Online & Offline Purchase The following terminal types must be supported - Transit, Attended Offline with Online capability (92) and optionally Transit, Attended Offline (94)		Submit copy of Certificate

Note 1: Cumulative processor DMIPs is calculated as $\text{Core}_{\text{PIT}} \times \text{Core}_{\text{MCR}} \times \text{CoreCount}$, where

- Core_{PIT} – Core’s peak integer throughput expressed as DMIPs/Mhz
- Core_{MCR} – Core’s maximum clock rate as defined by SoC/processor datasheet in MHz
- CoreCount – Number of cores in the SoC/processor

Note 2: Base CPU utilization is defined as CPU utilization (on average) as measured on a stock machine running no extra applications

Note 3: The following rules-of-thumb may be applied

- Single Core, ARM Cortex A9 or better, Clock speed up to 1GHz or better
- Quad Core, ARM Cortex A7 or better, Clock speed up to 1GHz or better

Note 4: A better version must be interpreted to mean ‘maintenance offered by developers till a later date’.

Note 5: OS must be hardened to reduce attack surfaces and patched against known exploits / vulnerabilities; this is especially true for older OS versions

Note 6: Base memory utilization is defined as the memory used (on average) as measured on a stock machine running no extra applications. A sample calculation is shown here. An Android device with the base memory utilization of 600MB will need an additional 1024MB of

application memory giving a total of 1624MB; such a device should have at least 2048MB of memory (2048 being the nearest multiple of 512 greater than 1624).

Note 7: The following rules-of-thumb may be applied

- Terminals offering Android OS and 2GB RAM can be considered as compliant

Note 8: A terminal with a storage element of 4GB and a stock space utilization of 1.5GB, has 2.5GB free space satisfying the minimum storage requirement. Such as terminal must offer a upgraded 8GB storage option in order to satisfy the maximum storage requirement.

Note 9: Secure memory refers to memory accessible only by privileged applications with automatic erasure on security breach

Note 10: Scan time is defined as the time to scan a Version 10 QR code; time is measured from time of proper placement (the QR code can be positioned prior to initiating scan) to scan output.

Note 11: Unstable environments – A vehicle moving over an uneven surface is an illustrative example of an unstable environment vis-a-vis touch interface

Note 12: Standard Conditions – The standard test conditions may be characterized as follows

- WAN modem on for at least 50% of the time
- At least 800 paper tickets (10 lines each) issued
- Screen on for at least 50% of the time in high brightness, off for the rest;
- At least 400 Version 10 QR codes scanned
- At least 400 NCMC transaction done

Note 13: Detailed Specs and Brochures of the proposed ETIMs are to be submitted.

2. Closed Loop ETIM Specifications:

Processor	Application CPU: Quad Core Cortex-A53 1.3G Security CPU : Cortex M3
Memory	1 GB RAM + 16 GB ROM
OS	Android 11/ Linux /Others(please specify)
Display	5-inch, 1280*720 pixels resolution
Battery	7.4 V / 3000 mAH – 22Wh
Physical	L*W*H (mm) : 201.83 * 79.24 * 68.37 Weight (g): 408 (including Battery)
Physical Key	1 * ON/OFF; 15 * Alphanumeric ; 2 * Volume
Camera	5M rear camera with flash 0.3M Front Camera
Printer	2 inch Thermal Printer; Paper Roll: 58.40 mm
Card Reader	Magnetic Card Reader, Smart Card Reader; Contactless Card Reader
Card Slots	1 * SIM + 2 * SAM Card Slots 2 * SIM + 1 * SAM Card Slots 1 Nano SIM + 1 Mini SAM
Communications	4G/3G/2G, Bluetooth Version 4.2, WiFi
Audio	1 Speaker; 1 Microphone ; 1 Headphone Jack Connector 3 mm

GPS	Build In
Adapter	5V / 2A Dual Filter
Peripheral Ports	1 Type C; 1 Micro SD slot up-to 32 G; 1 Magnetic Attract Head

3. Technical specification of Point of Sale (PoS)

Operating System	Android
Processor	Application CPU: ARM Cortex A7, 1.3GHz Security CPU: 32/64-bit RISC Core (ARMv7-M), 1.25DMIPS/MHz
Memory	1GB DDR + 8GB eMMC 1 x Micro SD Card Slot, Supports Up To 128GB
Display	5.0 Inch 720 x 1280 Pixel Capacitive Touch Screen
Physical Keys	1 x ON/OFF Key 2 x Volume +/- Button
Satellite Positioning	GPS GLONASS BEIDOU
Printer	2-inch Thermal Printer Print Speed: 80mm/s Paper Width: 58mm Diameter: 40mm
Communications	WiFi 2.4/5 G, Supports Hotspot 4G (TD-LTE / FDD-LTE) + 3G I (WCDMA / TD-SCDMA) + 2G (GSM / GPRS) Bluetooth 4.0
Cameras	5 Megapixels Auto Focus Rear Camera with LED Flashlight (optional) Reads 1D & 2D Codes
Card Readers	Magnetic Card Reader Smart Card Reader Contactless Card Reader
Battery	7.2V / 2600mAh Rechargeable Li-ion Battery
Audio	1 x Speaker Volume up to 85dB 1 x Microphone
Physical	L x W x H (mm) : 175 x 82 x 62 Weight (g) : 410 (Including Battery

4.

5. Additional Info (To be furnished for each proposed Hardware by Vendor and OEM on their Letter Heads)

S.No	Item	Description	Info to be Filled by Vendor	Remarks
1	Production capacity and product availability	Lead time of the product after order		
		Warranty/Guarantee Period of product		
		Lifecycle of the product		
		MTBF (Mean time between failures)		
		MTTR (Mean time to repair/replace failures)		
		Onsite Replacement/Repair time for Damaged/Malfunctional Products		
		Others		
2	Physical Properties	Dimensions		
		Weight		
3	Accessories()			

6. Table for Vendor Info(To be Filled by Vendor and OEM on their Letter Head and signed by authorized person)

If the Vendor is Authorized Supplier registered in India

S.No	Item	Description	To be filled by Vendor	Remarks
1	Vendor Details	Name of the Vendor		
		If the vendor is authorized supplier		If the vendor is authorized supplier then he has to provide all the mandatory certificates like support and lifecycle for the offered product as per EoI terms in Pre-Qualification criteria

				from OEM also.
		Registered Office Address		
		Head Office Address		
		OEM and Manufacturing country		
		OEM complete details		
		Supply Unit Address		
2	Company Stakeholders with complete details	MD or Equivalent		
		Other Senior Management		
		Contact person Details(Name/mail-d/contact no.)		
3	Legal entity of Vendor	Pvt. Limited		
		Joint Venture		
		LLP		
		Single Ownership		
4	Collaborators in the company and their share	Indian(%)		
		Foreign Collaborators(%)		
5	Role of Foreign Collaborator and their share/control	Finance		
		Transfer of Technology		
		Licensing/Proprietary/Patents		
		Others		
6	Product origin country along with complete details of OEM and experience			In addition to vendor OEM has to submit the certificates required by CDAC or Govt. Agency: Like Authorized vendor, Support of the product, no copyrights infringements issues etc.

Appendix B

NCMC Specifications Released by MoHUA on 11th May, 2020

F. No. K-14011/5/2019-MRTS-III
Government of India
Ministry of Housing and Urban Affairs
Urban Transport Division

Nirman Bhawan, New Delhi,
Dated: May 11, 2020

To

1. Chief Secretaries of all States/ UTs
2. Managing Directors of Metro Rail Corporations

Subject: Interface Specification of National Common Mobility Card (NCMC) Ecosystem (Part IV-VII) – reg.

Sir/Madam,

This is regarding implementation of National Common Mobility Card (NCMC) ecosystem across India. National Common Mobility Card (NCMC) ecosystem was launched in March 2019 by Hon'ble Prime Minister under the 'Make in India' initiative, which fulfils the vision of "One Nation One Card". National Common Mobility Card (NCMC) ecosystem consists of indigenously developed RuPay Card, Automatic Fare Collection (AFC) System & Software, Validation Terminal, Metro Gate and Interfacing Software with Banking system. This envisages seamless travel across different modes of transport (e.g. Metros, Rail, Bus, Taxi, Auto, Parking etc) besides retail shopping.

2. NCMC card is based on qSPARC (quick Specification for Payment Application of Rupay Chip) developed by National Payments Corporation of India (NPCI). Automatic Fare Collection (AFC) system has been designed & developed indigenously by C-DAC in collaboration with Bharat Electronics Ltd (BEL) & NPCI and accredited for international standards by an EMVCo accreditation agency FIME in France.

3. In this connection, Interface Specification for NCMC ecosystem was developed by Centre for Development of Advanced Computing (CDAC) and Draft was circulated for comments to all the State Governments and UT administrations and Metro Corporations, apart from BRTS operators and Bus Operators, vide this Ministry's letter of even number dated 20th November 2019. Based on the comments and consultations with stake holders, the specifications have been finalised by CDAC, as "Interface Specification of National Common Mobility Card (NCMC) Ecosystem, Version 1.2, (Part IV to VII)". The specification comprises the following parts, viz.

Part-IV: Transit Service,

Part-V : Terminal to AFC Backend Communication Interface,

Part-VI: AFC Ecosystem to Acquirer Interface and

Part-VII: Gate to Terminal Interface.

3. The specification is hereby released by this Ministry for adoption across the country, with the approval of Hon'ble MoS (HUA) (I/C). It is requested to adopt the "Interface Specification of National Common Mobility Card (NCMC) Ecosystem, Version 1.2, (Part IV to VII)" by all concerned, such as Road Transport Corporations, Urban Transport Operators, Metro Rail Corporations, BRTS operators etc. for all existing and future operations.

Yours faithfully,

Encl: As above.



(Priya Mahadevan)

Under Secretary to the Govt. of India
Tel: 011-23061358

Copy to:

1. Secretary (MoRTH), Secretary (DFS).
2. Chief Executive Officer, NITI Aayog
3. Director General, STQC, Meity, Electronics Niketan, 6CGO complex, New Delhi.
4. Chief General Manager, SBI, State Bank Bhawan, Madam Cama Road, New Delhi.
5. Managing Director, BEL, Chander Lok, Janpath Rd, New Delhi.
6. Executive Director, CDAC, New Delhi.
7. MD & CEO, NPCI, 10th Floor, The Capital, Mumbai.
8. Director General, BIS, 9 Bahadur Shah Zia Marg, New Delhi.
9. All BRTS, Road Transport Corporations, City Bus Operators
10. PSO to Secretary (HUA), PPS to JS (AMRUT), PPS to OSD (UT), MoHUA, Nirman Bhawan.

Appendix C

QR Ticketing Specifications Released by MoHUA on 19th April, 2021

Government of India
Ministry of Housing and Urban Affairs
Urban Transport Division

Nirman Bhawan, New Delhi
Dated: April 19, 2021

To

1. Chief Secretaries of all States/ UTs
2. Managing Directors of Metro Rail Corporations

Subject: Specifications for QR Ticketing System for Transit Applications Version 1.1 - reg.

Sir/Madam,

1. This is regarding implementation of National Common Mobility Card (NCMC) ecosystem across India. National Common Mobility Card (NCMC) ecosystem was launched in March 2019 by Hon'ble Prime Minister under the 'Make in India' initiative, which fulfils the vision of "One Nation One Card". National Common Mobility Card (NCMC) ecosystem consists of indigenously developed RuPay Card, Automatic Fare Collection (AFC) System & Software, Validation Terminal, Metro Gate and Interfacing Software with Banking system. This envisages seamless travel across different modes of transport (e.g. Metros. Rail. Bus. Taxi. Auto. Parking etc) besides retail shopping.

2. Final Interface Specification of NCMC ecosystem Version 1.2 (Part IV-VII) was circulated to all State Governments, UT Administration and Metro Companies and also to BRTS Operators and Bus Operators, vide this Ministry's letter of even No. K-14011/5/2019-MRTS-III dated 11.05.2020 for adoption across the country.

3. In addition to the above, Specification for QR Ticketing for Transit Applications Version 1.0 was developed by Centre for Development of Advanced Computing (CDAC) and these draft specifications were circulated for comments to all the State Governments, UT administrations and Public Transport Operators vide this Ministry's letter of even number dated 23rd September, 2020.

4. The QR Code Ticketing aims to address the vast base of customers looking for tickets for a single journey/ group journeys by any mode of public transport such as metro, buses and eventually para transit, and for related services such as parking. QR Tickets address three very pertinent requirements for transit operators in our country, viz.

- i. Reducing peak-hour rush
- ii. enabling cashless initiatives and
- iii. Serving as an effective cost-cutting measure by doing away with tokens and reducing paper tickets.

5. Based on the comments and consultations with stakeholders (at workshop held on 22nd and 23rd Dec, 2020), the specifications have been finalized by C-DAC, as "Specifications for QR Ticketing System for Transit Applications Version 1.1" comprising the following parts, viz.

(i) **Part-I : QR Code Data Set** - describes the data structure and elements of the QR payload containing user journey details that is encoded on to the QR image.

(ii) **Part-II : QR Security Scheme** - describes the security features implemented for authentication, data integrity, non-repudiation and confidentiality.

(iii) **Part-III : QR Interface Specification** - describes the various interfaces with various entities that exist in the QR Ticketing System viz. Web, Mobile applications, Ticket Office Machine (TOM), Customer Care, Automatic Fare Collection (AFC), Aggregator (Banking), Validating terminals etc.

6. The "Specifications for QR Ticketing System for Transit Applications Version 1.1" are hereby released by this Ministry for adoption across the country. It is requested to ensure adoption of these specifications by all stakeholders such as Road Transport Corporations, Urban Transport Operators, Metro Rail Corporations, BRTS operators etc., for all existing and future operations. The QR Ticketing System Implementation Guidelines & FAQ V(1.0) issued by C-DAC are also enclosed for reference.

7. It is issued with the approval of Competent Authority.

Encl: As above.

Yours faithfully

(Lalit Kumar)

Under Secretary to the Govt. of India

ललित कुमार/LALIT KUMAR
अवर सचिव/Under Secretary
आवास एवं शहरी परिवहन विभाग
Ministry of Housing and Urban Affairs
आवास विभाग/Dept. of India
निर्मल भवन, नई दिल्ली-110011
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