

AMENDMENTS TO THE TENDER NO. SM-III(IT)/AFCS (01)/2023-IT, dt: 11-01-2024 FOR IMPLEMENTATION OF AUTOMATIC FARE COLLECTION SYSTEM IN TSRTC

Amendment No. 1

3.4.9. Technical Qualification Criteria

RFP Document Reference	Content as per RFP	Amended as
TQ.1 Relevant Experience	The Bidder should have minimum one year experience in implementation and go live of at least One AFCS (Automatic Fare Collection System) project in last Five (5) years consisting of a Backend Central Software Application for Fare Collection integrated with NCMC /Credit /Debit card-based ticketing or with RFID based Close-loop Smart card-based ticketing with use of android based ticketing devices with BOOT / BOT / DBOT / BOO / BO / Turnkey basis in Government bus transport services managed by Municipalities or State Transport undertaking (STU)s in India	The Bidder should have minimum one year experience in implementation and go live of at least One AFCS (Automatic Fare Collection System) project in last Five (5) years consisting of a Backend Central Software Application for Fare Collection integrated with UPI /NCMC /Credit /Debit card-based ticketing or with RFID based Close-loop Smart card-based ticketing with use of android based ticketing devices with BOOT / BOT / DBOT / BOO / BO / Turnkey basis in Government bus transport services managed by Municipalities or State Transport undertaking (STU)s in India
TQ.3	Projects with minimum 1 year of Go-Live in reading and writing to NCMC based Open Loop or Closed Loop Smartcard or implementing UPI, CREDIT, DEBIT cards for E-Ticketing / Online Reservation System (ORS) for State Transport undertakings in India.	Projects with minimum 1 year of Go-Live in reading and writing to NCMC based Open Loop or Closed Loop Smartcard or implementing UPI, CREDIT, DEBIT cards for E-Ticketing / Online Reservation System (ORS) for Government bus transport services managed by Municipalities or State Transport undertakings in India.
TQ.4	The Bidder should have experience in projects for development of a Mobile App for E-ticketing / Mobile QR based ticketing / Mobile Bus Pass including mobile validation using ETIM for Transit Ticket Booking including payment gateway integration and customer complaints on both iOS and android platform for State Transport undertakings in India.	The Bidder should have experience in projects for development of a Mobile App for E-ticketing / Mobile QR based ticketing / Mobile Bus Pass including mobile validation using ETIM for Transit Ticket Booking including payment gateway integration and customer complaints on both iOS and android platform for Government bus transport services managed by Municipalities or State Transport undertakings in India.

RFP Document Reference		Content as per RFP	Amended as
TQ.5	The Bidder should have the following Valid Certificate as on the date of bid Submission. a) CMMi Level 3 or higher b) ISO 27001: 2016 - Information Security c) ISO 9001: 2008 - QMS Copy of relevant certificates	Copy of relevant certificates Bidder shall keep the certificate valid for the entire contract period.	Copy of a Valid Certificate which is self-attested by the authorized signatory.

Amendment No. 2

Included in PQ

PQ	Basic Requirement	Pre-Qualification Requirement	Documents to be submitted
9	ETIM certification	The ETIM proposed shall have L3 certification from atleast one financial institution and capable of accepting Credit/Debit cards/UPI for ticketing. MDR Charges should be less than the max amount defined in financial bid.	<ul style="list-style-type: none"> L3 Certificate issued by competent authority. Agreement/letter of consent from the bank on MDR charges

Amendment No. 3

Annexure 17: Financial Capability Format

Content as per RFP

Annual Turnover			
Financial Year	Amount In Figures	Amount In Words	
	₹	Rupees	only
	₹	Rupees	only
	₹	Rupees	only

Amended as.

Annual Turnover			
Financial Year	Amount In Figures	Amount In Words	
2020-21	₹	Rupees	only
2021-22	₹	Rupees	only
2022-23	₹	Rupees	only
Networth	Amount In Figures	Amount In Words	
As on 31.03.2023	₹	Rupees	only

Amendment No. 4**Content as per RFP****Annexure 7: Financial Bid Format**

Note: To be furnished by the bidder on their letterhead and signed by an authorized signatory.

Date:

To,
The Chief Engineer (IT),
Telangana State Road Transport Corporation (TSRTC),
Bus Bhavan, RTC X Road,
Musheerabad, Hyderabad,
Telangana -500020.

Subject: Submission of Financial Bid for ‘Selection of Service Provider for Automatic Fare Collection System for TSRTC’

Dear Sir,

1. I, the undersigned, on behalf of, herewith submit my financial bid as under.
2. I have read the Tender documents in detail, and based on my full study of the above-mentioned document and the conditions, I undertake to complete the Scope of Work in accordance with the terms and conditions of the Tender.

Indicative Project Cost with component wise breakup

Item Description	Amount In Figures (In Rs.)	GST Amount In Figures (In Rs.)	Gross Amount in Figures (In Rs.)

(CAPEX and OPEX Model)

CAPEX(I)				
No. of ETIMS	Cost of each ETIM (in Rs.)	GST (in Rs.)	Total Cost (in Rs.)	CAPEX (in Cr.)
A	B	C	D=B+C	E=AxD
13200				
OPEX(II)				
Avg. No. of Transactions per day	Transaction cost (in Rs.)	GST (in Rs.)	Total Cost (in Rs.)	OPEX cost for 5 years (in Cr.)
A	B	C	D=B+C	E=AxDx365x5
30,00,000				

Total project cost = (I) + (II) = _____

The deciding parameter is Total project cost.

Quote for other items

Item	Cost of each Device (A)	GST(B)	Total Cost(C=A+B)	CAPEX (in Cr.) (D=AxC)
Card reader/writer				
Card printer				

MDR Charges

Item	Net Charges(A)	GST(B)	Total (C= A+B)
UPI			
Credit card			
Debit card			
Net banking			
Rupay debit card			
NCMC card			
Any other transaction			

Note:

Financial bid shall be submitted along with BOQ. Also, bidder should quote their rates in Rupees. For Capex and Opex.

For.....,

(Signature of the authorized signatory along with company seal)

Name:

Designation:

Date:

Place:

Business address:

Amended as.

Annexure 7: Financial Bid Format

Note: To be furnished by the bidder on their letterhead and signed by an authorized signatory.

Date:

To,
The Chief Engineer (IT),
Telangana State Road Transport Corporation (TSRTC),
Bus Bhavan, RTC X Road,
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1. I, the undersigned, on behalf of, herewith submit my financial bid as under.
2. I have read the Tender documents in detail, and based on my full study of the above-mentioned document and the conditions, I undertake to complete the Scope of Work in accordance with the terms and conditions of the Tender.

Indicative Project Cost with component wise breakup

(CAPEX and OPEX Model)

CAPEX(I)				
No.of ETIMS	Cost of each ETIM (in Rs.)	GST (in Rs.)	Total Cost (in Rs.)	Total ETIMs cost (in Cr.)
A	B	C	D=B+C	E=AxD
13200				

Note: Cost of CAPEX shall not be more than 40% of estimated total project cost. The ETIM shall have L3 certification with atleast one financial institution and capable of accepting Credit/Debit cards/UPI for ticketing.

OPEX(II)				
Avg. No.of Transactions per day	Transaction cost (in Rs.)	GST (in Rs.)	Total Cost (in Rs.)	OPEX cost for 5 years (in Cr.)
A	B	C	D=B+C	E=AxDx365x5
30,00,000				

Total project cost = (I) + (II) = _____

The deciding parameter is Total project cost.

Quote for other items

Item	Cost of each Device (A)	GST(B)	Total Cost(C=A+B)
Card reader/writer (this maybe the same as ETIM since ETIM will have card read an write capability. Ticketing features may need to be turned off)			
Gang Chargers for charging 100 ETIMs			

Item	Net Cost (A)	GST(B)	Total Cost(C=A+B)
Per card price (mifare SE 1k card with 1 MHz AES/TEA encrypted)			
Per card price (mifare desfire SE 4k card with 13.56MHz AES/TEA encrypted)			
Any other card recommended by bidder			
Card surface Printing charges per card (Print request will be sent from Bus Pass system)			

Note: Printing solution offered shall be compatible with industrial standards. Card Surface printing will include photo, name, gender, college or institution if applicable, pass type, validity date, valid route, tsrtc logo, state logo. TSRTC may change the list of fields in future

Name of the Financial Institution which has given L3 certification for the device:

MDR Charges:

Item	Net Charges (Excl. GST)	Quote should be less than or equal to
UPI		0
Credit card		0.7%
Debit card <2000		0.3%
Debit card >2000		0.7%
Net banking		Rs 3.00
Rupay debit card		0
NCCM card		0.7%

Note:

Financial bid shall be submitted along with BOQ. Also, bidder should quote their rates in Rupees. For CAPEX and OPEX.

For.....,

(Signature of the authorized signatory along with company seal)

Name:

Designation:

Date:

Place:

Business Address:

Amendment No. 5

Content as per RFP

3.5 Tender Model

The Bidders have to submit quotes for implementation of the Project under the following model mentioned hereunder:

CAPEX and OPEX Model:

1. The project involves both capital expenditures viz. CAPEX and operational expenditure viz. OPEX
2. Capex constitute Cost of all the ETIM devices, Card reader/writers, card printers along with five-year warranty including repairs and replacement for wear and tear. The said Hardware (ETIM Device, Card readers/writers) should be procured in the name of TSRTC.
3. Opex constitute Cost of software, maintenance charges for all the hardware, software & peripheral equipment supplied and installed under the project for contract period of five years, annual licenses, data center hosting charges, Internet connectivity charges, SMS

Charges, man power charges, power charges, communication charges and all other related charges for running the project for five years period

Amended as

3.5 Tender Model

The Bidders have to submit quotes for implementation of the Project under the following model mentioned hereunder:

CAPEX and OPEX Model:

1. The project involves both capital expenditures viz. CAPEX and operational expenditure viz. OPEX
2. Capex constitute Cost of all the ETIM devices, **Gang Chargers** along with five-year warranty including repairs and replacement for wear and tear. The said Hardware (ETIM Device, Gang Chargers) should be procured in the name of TSRTC.
3. Opex constitute Cost of software, maintenance charges for all the hardware, software & peripheral equipment supplied and installed under the project for contract period of five years, annual licenses, data center hosting charges, Internet connectivity charges, man power charges, communication charges and all other related charges for running the project for five years period

Amendment No. 6

4.2 Overview of Scope of Work

RFP Document Reference	Content as per RFP	Amended as
Other Services		
9	Manpower Support The Selected Bidder shall provide all necessary manpower for technical support for all hardware and software deployed. Further the selected bidder should set-up 2 service centers for hardware at each region (11) regions in Telangana state) with his own manpower. office space will be provided by TSRTC and Bidders have to plan their own manpower to meet the SLA	1. The Selected Bidder shall provide all necessary manpower for technical support for all hardware and software deployed. Further the selected bidder should set-up 1 service center for hardware at each region (11) regions in Telangana state) with his own manpower. office space will be provided by TSRTC. 2. The Selected bidder shall set up a 24X7 help desk at HO and provide at least 10 persons to monitor the same with one Supervisors. The required hardware, furniture, software and connectivity also shall be provided by the SI. The space and power will be provided by

			<p>TSRTC. 3. The Selected bidder shall provide one DBA, one Network Administrator, one App Developer and one project manager (all with minimum three years relevant experience) at TSRTC Bus Bhavan during the entire contract period.</p>
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Amendment No. 7

5. Change Request Process

5.1. Change Request Process Overview

1. Change Requests shall emanate from each Parties' designated personnel ('Project Manager') who shall be responsible for obtaining approval for the change, and act as its representative throughout the Change Request Process.
2. The Project Manager from the initiating Party shall complete 'Part A: Initiation' of the Change Request Note ('CRN') attached in Annexure 5, and present it to the other Party's Project Manager, who will acknowledge receipt by signature of the CRN.
3. The Selected Bidder will assess the CRN and complete 'Part B: Evaluation' of the CRN, and provide as a minimum:
 - a) A description of the change;
 - b) A list of deliverables required for implementing the change;
 - c) A time frame for implementation of the change;
 - d) An estimate of any proposed charges for implementation of the change; and
 - e) Material evidence to prove that the proposed change is not already covered within the Agreement and the Scope of Work.
4. If satisfied and after securing all necessary internal approvals, the Project Manager for the Purchaser shall complete 'Part C: Authority to Proceed' of the CRN and submit the completed CRN to the Selected Bidder's Project Manager, subsequent to which the Selected Bidder shall be obliged to implement the proposed change within the agreed timeframe.

5.2. Other Terms and Conditions for Change Requests

1. Any Change Request with respect to the Scope Of Work that includes additional requirements that can be fulfilled by the Selected Bidder shall **not** require the Purchaser to solicit fresh bids via a new tender process, unless such individual Change Request increases the Project implementation cost by more than 25% (twenty five percent) of the Total Project Value, in which case it shall be considered beyond the scope of the Change Request Process and will require the Purchaser to solicit fresh bids via a new tender process.
2. No additional charges will be paid to selected bidder, If the implementation cost of

Change Request falls below 25% of Total Project Value.

3. The Selected Bidder shall not be obligated to initiate work on a change until the Parties agree in writing upon its scope, price and / or schedule impact.

Amended as

5.1. Change Request Process Overview

1. Change Requests shall emanate from each Parties' designated personnel ('Project Manager') who shall be responsible for obtaining approval for the change, and act as its representative throughout the Change Request Process.
2. The Project Manager from the initiating Party shall complete 'Part A: Initiation' of the Change Request Note ('CRN') attached in Annexure 5, and present it to the other Party's Project Manager, who will acknowledge receipt by signature of the CRN.
3. The Selected Bidder will assess the CRN and complete 'Part B: Evaluation' of the CRN, and provide as a minimum:
 - a) A description of the change;
 - b) A list of deliverables required for implementing the change;
 - c) A time frame for implementation of the change;
4. If satisfied and after securing all necessary internal approvals, the Project Manager for the Purchaser shall complete 'Part C: Authority to Proceed' of the CRN and submit the completed CRN to the Selected Bidder's Project Manager, subsequent to which the Selected Bidder shall be obliged to implement the proposed change within the agreed timeframe.

5.2. Other Terms and Conditions for Change Requests

All feature enhancements, additional modules, reports; additional functionalities shall be taken up without any additional charges to TSRTC.

Amendment No. 8

As per RFP

Annexure 5: Change Request Note Format

Change Request Notice Number:	Date of Initiation:
Part A: Initiation	
Title:	
Originator:	Sponsor:
Details of Proposed Change:	
(Include reason for change and appropriate details / specifications. Identify attachments as A1, A2, A3, etc.)	

Authorized By the Purchaser		Received By the Selected Bidder	
Signature		Signature	
Name Title:		Name Title:	
Date:		Date:	
Part B: Evaluation			
Brief Description of Solution:			
(Identify any attachments as B1, B2, and B3 etc.)			
Changes to Services, charging structure, payment profile, documentation, training, service levels and component working arrangements and any other contractual issue.			
Impact:			
Deliverables:			
Timelines:		Charges for Implementation:	
		Include payment schedule	
Authorized By the Purchaser		Received By the Selected Bidder	
Signature		Signature	
Name Title:		Name Title:	
Date:		Date:	
Part C: Authority to Proceed			
Implementation of this CRN as submitted in Part A, in accordance with Part B is: (tick as appropriate)			
<input type="checkbox"/> Approved <input type="checkbox"/> Rejected <input type="checkbox"/> Requires Further Information (as follows, or as Attachment 1, etc.)			
Authorized By the Purchaser		Received By the Selected Bidder	
Signature		Signature	
Name: Title:		Name: Title:	
Date:		Date:	

Amended as

Annexure 5: Change Request Note Format

Change Request Notice Number:		Date of Initiation:	
Part A: Initiation			
Title:			
Originator:		Sponsor:	
Details of Proposed Change:			
(Include reason for change and appropriate details / specifications. Identify attachments as A1, A2, A3, etc.)			

<p>Authorized By the Purchaser</p> <p>Signature Name Title: Date:</p>	<p>Received By the Selected Bidder</p> <p>Signature Name Title: Date:</p>
<p>Part B: Evaluation</p>	
<p>Brief Description of Solution:</p> <p>(Identify any attachments as B1, B2, and B3 etc.)</p> <p>Changes to Services, documentation, training, service levels and component working arrangements and any other contractual issue.</p>	
<p>Impact:</p>	
<p>Deliverables:</p>	
<p>Timelines:</p>	<p>Charges for Implementation:</p> <p>Include payment schedule</p>
<p>Authorized By the Purchaser</p> <p>Signature Name Title: Date:</p>	<p>Received By the Selected Bidder</p> <p>Signature Name Title: Date:</p>
<p>Part C: Authority to Proceed</p>	
<p>Implementation of this CRN as submitted in Part A, in accordance with Part B is: (tick as appropriate)</p> <p><input type="checkbox"/>Approved <input type="checkbox"/>Rejected <input type="checkbox"/>Requires Further Information</p>	
<p>Authorized By the Purchaser</p> <p>Signature Name: Title: Date:</p>	<p>Received By the Selected Bidder</p> <p>Signature Name: Title: Date:</p>

Amendment No. 9**Addition to clause 11.2 SLAs****11.2.8 SLA for Application Response Time of ticketing solution in ETIM**

Definition	‘Application Response Time’ refers to the time taken to generate ticket from the time of conductor hitting the From/to button to print the basic ticket, measured in seconds.
SLA	The Average Application Response Time should not exceed 3 (three) seconds.
SLA Measurement	Average Application Response Time = The average time taken across transactions in a day, in seconds, to generate ticket from the time of conductor hitting the From/to button to print the basic ticket. As measured manually by a reputed analytics solution or via automated reports, in the month.
SLA Penalty Amount	3 seconds or lesser: ₹0 (Rupees Zero) 3.1 to 5 seconds: ₹ 50,000 (Rupees one lakh Only) per day 5.1 to 10 seconds: ₹ 2,00,000 (Rupees two lakhs Only) per day More than 10 seconds: ₹3,00,000 (Rupees Three lakhs Only) per day
Critical SLA	15 seconds

Amendment No. 10

As per RFP

7. Project Timelines

Milestone	Days
Implementation Phase	
1. Date of execution of Agreement	T
2. Submission of System Requirements Specifications (‘SRS’) document	T + 25 days
3. Approval of SRS by the Purchaser	T + 30 days
4. Pilot implementation of ticketing solution in two depots	T + 90 days
Phase-I	

<ul style="list-style-type: none"> • Supply of ETIMs including maintenance for Greater Hyderabad Zone • Development of ETIM software to download data for master data system • Development of ETIM software for Cash collection, paper ticket issue, related TTI functionality • Payment gateway integration software to accept UPI, Credit/Debit card. (Payment gateway partner will be provided by TSRTC. However, SI can suggest PG partner) • Reservation functionality including Mobile and web for reservations • Ticket sales by drivers/conductors through ETIMs on reservation buses. • B2C and RTC/Agent counters booking. • Deployment of Software in ~2000 ETIM devices, which are in use in reservation buses • Dashboard & Reports • Training - Functional training to crew and depot staff • Go Live 	T + 120 days
Phase-2	
<ul style="list-style-type: none"> • Supply of ETIM hardware including maintenance for remaining services. • Ground booking paper (QR) ticket validation • Mobile (QR) ticket validation • Bus Pass validation, zero ticket recording (assuming no paper ticket) and related TTI functionality • Supply and installation of Card reader/writer • Card reader/writer software with API to write cards 	T+150
Phase-3	
<ul style="list-style-type: none"> • Mobile ticket or pass validation through TSRTC app for all tickets Open loop prepaid NCMC card validation, Ticket issue, related TTI functionality, Payment gateway integration card writer software Integration with Open Loop Card Issuing systems to write value or rules to the card • Integration of the POS and backend Ticketing/Reservation system with the Central Command/Customer Data Manager. Any communication between the POS or backend Ticketing/Reservation and either of the systems with any other TSRTC system is through the Central Command/Customer Data Manager 	T+180 days
<p>Performance Tuning This will be an ongoing activity. However, we expect that resources and attention would be required in the first 3 months after Go-Live</p>	T+210 days

Operations And Maintenance Phase	
8. Operations and maintenance phase	Live + Term as per clause 2.1(2)
9. Extension to operations and maintenance phase	As per clause 2.1(2)

Amended as

Milestone	Days
Implementation Phase	
1. Date of execution of Agreement	T
2. Submission of System Requirements Specifications ('SRS') document	T + 25 days
3. Approval of SRS by the Purchaser	T + 30 days(T1)
4.Pilot implementation of ticketing solution in two depots	T1+60 days (T2)
Phase-I	
<ul style="list-style-type: none"> Supply of ETIMs including maintenance for Greater Hyderabad Zone Development of ETIM software to download data for master data system Development of ETIM software for Cash collection, paper ticket issue, related TTI functionality Payment gateway integration software to accept UPI, Credit/Debit card. (Payment gateway partner will be provided by TSRTC. However, SI can suggest PG partner) Reservation functionality including Mobile and web for reservations Ticket sales by drivers/conductors through ETIMs on reservation buses. B2C and RTC/Agent counters booking. Deployment of Software in ~2000 ETIM devices, which are in use in reservation buses Dashboard & Reports Training - Functional training to crew and depot staff Go Live 	T2 + 30 days(T3)
Phase-2	
<ul style="list-style-type: none"> Supply of ETIM hardware including maintenance for remaining services. Ground booking paper (QR) ticket validation Mobile (QR) ticket validation Bus Pass validation, zero ticket recording (assuming no paper ticket) and related TTI functionality Supply and installation of Card reader/writer Card reader/writer software with API to write cards 	T3+30 days(T4)

Phase-3	
<ul style="list-style-type: none"> Mobile ticket or pass validation through TSRTC app for all tickets Open loop prepaid NCMC card validation, Ticket issue, related TTI functionality, Payment gateway integration card writer software Integration with Open Loop Card Issuing systems to write value or rules to the card Integration of the POS and backend Ticketing/Reservation system with the Central Command/Customer Data Manager. Any communication between the POS or backend Ticketing/Reservation and either of the systems with any other TSRTC system is through the Central Command/Customer Data Manager 	T4+30 days (T5)
Performance Tuning This will be an ongoing activity. However, we expect that resources and attention would be required in the first 3 months after Go-Live	T5+30 days
Operations And Maintenance Phase	
8. Operations and maintenance phase	Live + Term as per clause 2.1(2)
9. Extension to operations and maintenance phase	As per clause 2.1(2)

Other Amendments

Amendment no 11

RFP Document Reference(s) Section and Page Number(s)	Content of RFP requiring Clarification(s)	Amended as
Annexure 2: Technical Specifications of ETIM Page 66	Cameras Rear: 5 megapixels autofocus camera Front: 0.3 megapixels	Cameras Rear: 5 megapixels autofocus camera Front: 0.3 megapixels (optional)

Amendment no 12

RFP Document Reference(s) Section and Page Number(s)	Content of RFP requiring Clarification(s)	Amended as
Annexure 2: Technical Specifications of ETIM, Page No 65	Audio-Microphone	Audio-Microphone (Optional)

Amendment no 13**3.4.7. Pre-Qualification Criteria**

RFP Document Reference(s) Section and Page Number(s)	Content of RFP requiring Clarification(s)	Amended as
3.4.7. Pre-Qualification Criteria,6 OEM Authorization.	Manufacturers Authorization letter in favor of bidder from the manufacturers of the items. (OEM and bidder will submit a registered agreement between them to TSRTC stating both are committed to provide support and services for the contractual period) (OEM and bidder will submit a registered agreement between them to TSRTC stating both are committed to provide support and services for the contractual period)	Agreement not required. MAF from only one manufacturer is to be submitted

Information**Annexure - 1****Actual number of transactions for past 1 year**



















Statement of month wise no. of Ticket Transactions from 01-01-2023 to 15-01-2024		
Month	Total No. of tickets (inc OPRS)	AVG no of Ticket transactions/Day
Jan-23	58697846	1893479
Feb-23	56947095	2033825
Mar-23	60523914	1952384
Apr-23	55488615	1849621
May-23	61071924	1970062
Jun-23	58738020	1957934
Jul-23	54800135	1767746
Aug-23	58955694	1901797
Sep-23	55495544	1849851
Oct-23	55874987	1802419
Nov-23	54274623	1809154
Dec-23	76197384	2457980
15.01.2024	44490013	2966001

Note: The Mahalakshmi scheme (free travel to all women& transgenders of any age group) is implemented wef 15.12.2023. The no. of tickets has been increased in the month of December

and January due to the new scheme and expected to be continued further. There will be reduction of bus passes from 9 lakhs to 5 lakhs due to introduction of Maha Lakshmi scheme

Annexure - 2

Specification of old 2000 ETIMs

SPECIFICATIONS FOR I-TIMS		
	Payswiff	Pay Tm
Make	Nexgo	Ingenico
 Operating System	Android 9.0	Android 10.0
 Processor	Quad-core 1.4 Ghz processor Security chip	ARM Cortex Quad Core
 Memory	1 GB RAM+8GB FLASH, 2GB RAM+16GB FLASH(OPTIONAL), (micro SD card supported upto 128GB	1GB RAM + 8GB Flash
 Card Readers	Magstripe: ISO 1/2/3 BI-Directional ISO7811 Smartcard: EMV, PBOC approved Level 1 Contactless cards: 13.56 MHz ISO 14443 Type A&B, QPBOC approved	Magstripe: ISO 1/2/3 Smartcard: EMV Level 1 Contactless: EMV Level 1 and 2 compliant NFC: ISO/ICE 14443 Type A&B, Mifare cards
 Cameras	Rear: 2 megapixels Front: 5 megapixels	Rear: 5 megapixels autofocus camera Front: 0.3 megapixels
 Displays	5" HD (1280 x 720) color screen capacitive touch screen multi -touch	5.5 inches IPS colour 1280x720 pixels Touchscreen Capacitive
 Comms Configurations	4G / 3G/2G, wifi 802.11b/g/n, 2.4 GHz BT4.2	Mobile Data: 4G or LTE WiFi: WiFi b / g / n Bluetooth: 4.x
 Battery	7.4V/2600mah Equals to 3.7V 5200 mah battery Rechargeable Li-ion battery	Li-ion equivalent to 7.4 Volts, 3000 mah, 22WH or more
 Printer	high speed thermal printer, Paper roll diameter:58mm, diameter-40mm	Speed in lines / sec: Up to 18 lines / second Paper roll cage: 58 mm width x 40 mm diameter
 SIM / SAM	2 x SAM slots compliant to ISO 7816	2 x SAM slots
 Positioning	Enabled including A-GPS	GPS built-in
 Keys / Buttons	Virtual keypad with touch screen	Onscreen virtual keyboard
 Audio	built in speaker	1 speaker, 1 microphone
 Ports	micro USB OTG, Micro USB cable, WIFI and bluetooth	USB: Micro-USB OTG or USB-C
 Adapter	AC Charger working from 100 to 240V, 50 Hz	AC Charger working from 100 to 240V, 50 Hz
 Physical	194 mm (L) X 80mm (w) X 68.8mm(H) and weight 420gms (battery included)	500 grams or lesser
 Environmental	Operating temperature DC unplugged: 0°C to +50°C Operating temperature DC plugged: 0°C to +50°C Storage temperature: 0°C to +50°C	Operating temperature DC unplugged: 0°C to +50°C Operating temperature DC plugged: 0°C to +50°C Storage temperature: 0°C to +50°C
 Certifications	CCC, CE, ATEX IP54: EMV3.0, L1& L2, PBOC/QPBOC, PAYPASS, PAYWAVE, JCB,AMEX,DISCOVER,TQM, PC16.X UPTS3.0	Certified PCI PTS 5.x, EMV L1 & L2, certified RuPay SPARC, certified for NCMC, EMV Contactless L1, Master Card Pau pass, Visa PayWave, Discover D-PAS, AMEX Express Pay, Master Card TQM

