

Rate Contract
Government of India
Directorate General of Supplies & Disposals
Jeevan Tara Building, 5 Sansad Marg
New Delhi-110001 Tel Number 23360610/23360537

Rate Contract no. EPABX/IT-4/RC-Q3000000/0309/84/03055/1012
Date 04-APR-08

To,
MATRIX TELECOM PRIVATE LIMITED
394, GIDC Makarpura, Vodadra- 390010

Sub: Rate Contract for supply of EPABX System
valid from 04-APR-08 To 31-MAR-09 .

Ref:(1) This Office Tender Enquiry no EPABX/IT-4/RC-Q3000000/0309/84
opened on 08-JAN-08.
(2) Your Quotation No MTPL/MAT/2008/02/05 And Dated
05-FEB-08.

Dear sir,

You are hereby informed that your above referred tender read with subsequent letters mentioned above for the Stores specified in the Schedules annexed has been accepted. This rate contract will be governed by the terms and conditions brought in the Form no. DGS&D 1001 available from dgs&d sales counter on payment of Rs. 50/- . The Rate Contract and the schedules annexed here to shall be the sole repository of this Rate Contract/ Transaction.

SCHEDULES ANNEXED

- 1.Schedule "A" Description of stores,prices,duties/taxes.
- 2.Schedule "B" special conditions of contract / Other information.
- 3.Schedule "C" Information to DDOs about parallel rate contracts.
- 4.Annexure - Technical Specification

Yours Faithfully,

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Assistant Director(S)/Section Officer/Dy.Director
For and on behalf of the purchaser named in the Form DGS&D 1001.

COPY TO

- 1.The Chief Controller of Accounts,Department of commerce,New Delhi/
COA Mumbai/COA Kolkata,COA Chennai.
(Through authentication cell) This issues with the approval of competent authority.
- 2.Deputy Director General of Supplies & Disposals,Chennai -10 copies each
- 3.Deputy Director General of Supplies & Disposals,Kolkata -10 copies each
- 4.Deputy Director General of Supplies & Disposals,Mumbai -10 copies each
- 5.Deputy Director General (QA),Kolkata -10 copies each
- 6.Deputy Director General (QA),Chennai -10 copies each
- 7.Deputy Director General (QA),Mumbai -10 copies each
- 8.Deputy Director General (QA),DGS&D -10 copies each
- 9.Inspection Authority ADG(QA) DGS&D New Delhi - 110001.
- 10.Quality assurance Officer Director (QA) Delhi Directorate/ Mumbai,
Chennai/Kolkata.
- 11.Concurrent Audit
- 12.MIS Cell
- 13.Ledger clerk
- 14.O.L.Section
- 15.All Direct Demanding Officers as per mailing list maintained by DGS&D.

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Assistant Director (S) / Section Officer / Deputy Director
FOR DIRECTOR GENERAL OF SUPPLIES & DISPOSALS

SCHEDULE - A

1. RATE CONTRACT No.:-EPABX/IT-4/RC-Q3000000/0309/84/03055/1012
Dated 04-APR-08 FOR THE SUPPLY OF EPABX System

2. ADVANCE RATE CONTRACT NO.-Nil

Dated

3.(a) NAME AND FULL ADDRESS OF THE FIRM -

MATRIX TELECOM PRIVATE LIMITED
394, GIDC Makarpura, Vodadra- 390010

GUJARAT - 390010
Tel. No. - 02652630555
Fax - 02652636598
Email - akshay.sheth@matrixtelesol.com

(b) NAME AND FULL ADDRESS OF MANUFACTURER -

MATRIX TELECOM PRIVATE LIMITED
394-GIDC, Makarpura
VADODARA- 390010

(c) BRAND: MATRIX

4. VALIDITY OF RATE CONTRACT :: 04-APR-08 To 31-MAR-09

5. DESCRIPTION OF ITEM, SPECIFICATION,UNIT, RATE

Item No.	Model No.	Store Description	Unit	Rate
				(in Rs.)
2		Small EPABX Systems Configuaration n	No. of Extensions: 16, No. of Junctions: 8, No. of expandable ports: 64, Operator's Console: 01, Compatible: ISDN	NOS. 65189 Rs. SIXTY-FIVE THOUSAND ONE HUNDRED EIGHTY-NINE ONLY
3		Small EPABX Systems Configuaration n	No. of Extensions: 24, No. of Junctions: 8, No. of expandable ports: 96, Operator's Console: 01, Compatible: ISDN	NOS. 70799 Rs. SEVENTY THOUSAND SEVEN HUNDRED NINETY-NINE ONLY
4		Small EPABX Systems Configuaration n	No. of Extensions: 48, No. of Junctions: 8, No. of expandable ports: 128, Operator's Console: 01, Compatible: ISDN	NOS. 106778 Rs. ONE LAKHS SIX THOUSAND

				SEVEN HUNDRED SEVENTY- EIGHT ONLY
5	Small EPABX Systems Configuration	No. of Extensions: 64, No. of Junctions: 16, No. of expandable ports: 256, Operator's Console: 01, Compatible: ISDN and Networking	NOS.	150786 Rs. ONE LAKHS FIFTY THOUSAND SEVEN HUNDRED EIGHTY-SIX ONLY
6	Small EPABX Systems Configuration	No. of Extensions: 128, No. of Junctions: 24, No. of expandable ports: 512, Operator's Console: 01, Compatible: ISDN and Networking	NOS.	221972 Rs. TWO LAKHS TWENTY-ONE THOUSAND NINE HUNDRED SEVENTY-TWO ONLY
10	ADD-ON Items of EPABX System	Items: ISDN Interface Card (PRI)	NOS.	32104 Rs. THIRTY- TWO THOUSAND ONE HUNDRED FOUR ONLY
11	ADD-ON Items of EPABX System	Items: 4-Port embedded voice mail card for 4 hour recording	NOS.	29016 Rs. TWENTY- NINE THOUSAND SIXTEEN ONLY
12	ADD-ON Items of EPABX System	Items: 2 Port Voice DISA card	NOS.	1960 Rs. ONE THOUSAND NINE HUNDRED SIXTY ONLY
13	ADD-ON Items of EPABX System	Items: E 1 Card.	NOS.	30466 Rs. THIRTY THOUSAND FOUR HUNDRED SIXTY-SIX ONLY
14	ADD-ON Items of EPABX System	Items: R2 MFC Card	NOS.	4836 Rs. FOUR THOUSAND EIGHT HUNDRED THIRTY-SIX ONLY
15	ADD-ON Items	Items: TWT Card	NOS.	14869

of EPABX
System

Rs. FOURTEEN
THOUSAND
EIGHT
HUNDRED
SIXTY-NINE
ONLY

16	ADD-ON Items of EPABX System	Items: Magneto trunk card	NOS.	14991 Rs. FOURTEEN THOUSAND NINE HUNDRED NINETY-ONE ONLY
17	ADD-ON Items of EPABX System	Items: Hot standby card for CPU	NOS.	21278 Rs. TWENTY- ONE THOUSAND TWO HUNDRED SEVENTY- EIGHT ONLY
18	ADD-ON Items of EPABX System	Items: Hot standby card for PSU	NOS.	5803 Rs. FIVE THOUSAND EIGHT HUNDRED THREE ONLY
19	ADD-ON Items of EPABX System	Items: Call Line identification facility for Digital Phones on extensions	NOS.	0 Rs. ZERO ONLY
20	ADD-ON Items of EPABX System	Items: Extra Operator Console	NOS.	6609 Rs. SIX THOUSAND SIX HUNDRED NINE ONLY
22	ADD-ON Items of EPABX System	Items: Digital Phone with display	NOS.	4352 Rs. FOUR THOUSAND THREE HUNDRED FIFTY-TWO ONLY
30	ADD-ON Items of EPABX System	Items: Line card to extend the number of lines by 8	NOS.	9352 Rs. NINE THOUSAND THREE HUNDRED FIFTY-TWO ONLY
31	ADD-ON Items of EPABX System	Items: Line card to extend the number of lines by 16	NOS.	19344 Rs. NINETEEN THOUSAND

				THREE HUNDRED FORTY-FOUR ONLY
33	ADD-ON Items of EPABX System	Items: Line card to extend the number of lines by 32	NOS.	28737 Rs. TWENTY- EIGHT THOUSAND SEVEN HUNDRED THIRTY-SEVEN ONLY
35	ADD-ON Items of EPABX System	Items: Junction card to extend the number of junctions by 8.	NOS.	12018 Rs. TWELVE THOUSAND EIGHTEEN ONLY
36	ADD-ON Items of EPABX System	Items: Digital line card 8 lines	NOS.	10661 Rs. TEN THOUSAND SIX HUNDRED SIXTY-ONE ONLY
37	ADD-ON Items of EPABX System	Items: Digital line card 16 lines	NOS.	18923 Rs. EIGHTEEN THOUSAND NINE HUNDRED TWENTY-THREE ONLY
40	ADD-ON Items of EPABX System	Items: ISDN Interface Card (BRI) 4	NOS.	11760 Rs. ELEVEN THOUSAND SEVEN HUNDRED SIXTY ONLY
41	ADD-ON Items of EPABX System	Items: ISDN Interface Card (BRI) 8	NOS.	22971 Rs. TWENTY- TWO THOUSAND NINE HUNDRED SEVENTY-ONE ONLY
42	ADD-ON Items of EPABX System	Items: E&M Card 4 port	NOS.	11193 Rs. ELEVEN THOUSAND ONE HUNDRED NINETY-THREE ONLY
43	ADD-ON Items of EPABX	Items: E&M Card 8 ports	NOS.	17603 Rs.

System

				SEVENTEEN THOUSAND SIX HUNDRED THREE ONLY
80	Small EPABX System with In built 4 Port voice mail.	No. of Extensions: 16, No. of Junctions: 8, No. of Expandable Ports: 64, Operator's Console: 01, Compatible: ISDN	NOS.	118965 Rs. ONE LAKHS EIGHTEEN THOUSAND NINE HUNDRED SIXTY-FIVE ONLY
81	Small EPABX System with In built 4 Port voice mail.	No. of Extensions: 24, No. of Junctions: 8, No. of Expandable Ports: 96, Operator's Console: 01, Compatible: ISDN	NOS.	128831 Rs. ONE LAKHS TWENTY-EIGHT THOUSAND EIGHT HUNDRED THIRTY-ONE ONLY
82	Small EPABX System with In built 4 Port voice mail.	No. of Extensions: 48, No. of Junctions: 8, No. of Expandable Ports: 128, Operator's Console: 01, Compatible: ISDN	NOS.	164810 Rs. ONE LAKHS SIXTY- FOUR THOUSAND EIGHT HUNDRED TEN ONLY
83	Small EPABX System with In built 4 Port voice mail.	No. of Extensions: 64, No. of Junctions: 16, No. of Expandable Ports: 256, Operator's Console: 01, Compatible: ISDN & Networking	NOS.	203112 Rs. TWO LAKHS THREE THOUSAND ONE HUNDRED TWELVE ONLY
84	Small EPABX System with In built 4 Port voice mail.	No. of Extensions: 128, No. of Junctions: 24, No. of Expandable Ports: 512, Operator's Console: 01, Compatible: ISDN & Networking	NOS.	280004 Rs. TWO LAKHS EIGHTY THOUSAND FOUR ONLY

6-TERMS OF DELIVERY:	Free delivery at consignee's premises
7-EXCISE DUTY:	Inclusive @14.42%
8-SALES TAX:	Inclusive of CST / VAT @4%
9-DELIVERY PERIOD:	Within 7-9 weeks from the date of receipt of confirmed order

10-ANNUAL TURNOVER/MONETARY LIMIT:	Without . Limit
11-PAYMENT TERMS	As per Schedule-B
12-SLAB DISCOUNT CLAUSE:	Nil
13-PRICES:	FIXED
14-QUANTITY OFFERED:	Monetary Limit : Without Limit
15-MIN. QUANTITY IN SINGLE SUPPLY ORDER:	Without Limit
16-STATUS OF RC HOLDING FIRM:	SSI
17-PAYING AUTHORITY:	The Chief Controller of Accounts, Deptt. of Supply 16, AKBAR ROAD New Delhi -110011
18-INSPECTION AUTHORITY:	ADG(Q.A), Jeevan Tara Building, 5 Sansad Marg New Delhi
19-QUALITY ASSURANCE OFFICER:	Office of the Assistant Director Quality Assurance, Lalit Kunj, Opp Khanderao Markt Raj Mahal Road, Baroda GUJARAT -390001
20-PLACE WHERE THE STORES ARE TO BE TENDERED FOR INSPECTION:	At firm's premises at Vadodara
21-R/C IS DDOs OPERATED	Yes
22-PACKING & SPECIFICATION	see annexure

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Asstt. Director (S) / Section Officer / Dy. Director
For and behalf of the purchaser named in the Form DGS&D 1001.

All the R/C particulars including prices in respect of individual R/Cs are available on DGS&D website which can be accessed by all.
The DGS&D website is <http://dgsnd.gov.in>

RC SPECIFICATION:

1. EPABX System will conform to standard guarantee / warranty clause 18 of DGS&D- 1001 effective for a period of 12 months from the date of acceptance of stores by the consignee after installation at site i.e. from the date the copy of I. Note for balance payment is released by the consignee.

2 PAYMENT TERMS:

90% of the price of the stores of each consignment thereof shall be paid on production of pre-dispatch valid inspection note and provisional receipt certificate issued by the consignee for having the store received in full & good condition in the standard format given below: -

This is a provisional receipt, it only be taken as the receipt of the stores by the consignee and is without prejudice to his right of inspection and rejection under the general conditions of contract. It is issued on ` said to contain basis, the contractor remaining responsible for providing the total quantities actual delivered.

Balance 10% shall be paid on proving and final acceptance of system by the consignee after successful installation and demonstration at site and also submission of a bank guarantee on non judicial stamp paper as per the prescribed format for the balance 10% value of the consignment valid till warranty period indemnifying the purchaser against all losses incurred during the warranty /guarantee period.

The contractor shall furnish the following certificate along with each bill in respect of supplies made under this Rate Contract:-

'I/We have personally examined and verified and do hereby certify that the goods in respect of which the payment is being claimed have been actually deposited by me/us under RR No. _____ dated _____ duly drawn in favour of the consignee which is genuine and mentioned in the bill nab. I/We hold myself/ourselves personally responsible for the correction of this statement.

I/We further justify that the above mentioned RR No. _____ dated _____ has been forwarded to the consignee mentioned in the contract under REGISTERED POST AD on.

I/We confirm that bill has been preferred correctly as per the price authorized in the rate contract.

The certificate should be signed by an authorized person of the contractor and he should be same as signing the bill. His designation and the name of the contractor on whose behalf he has signed the bill should also be indicated below his dated signatures.

3. Octroi Duty: Normally, materials to be supplied to government Deptt. against government contracts are exempted from levy of town duty, Octroi duty, terminal tax and other levies of local bodies. The Local town/Municipal body regulations at times, however provide for such exemption only on production of such exemption certificate from any authorised officer. Wherever required, Contractor should obtain the exemption certificate from the purchase officer or indentor

concerned, to avoid payment of such local taxes of duties. In case Local town/Municipal body regulations do not provide for such exemptions the octroi duty shall be payable at actuals against documentary evidence of having paid such levies.

5. Pre-Inspected Stock- In order to meet urgent delivery to indenters, you will maintained sufficient quantity of pre-inspected stock of EPABX System.

Annexure- A Make & Model No.

Item no. 2 to 6 & 80 to 84 : Make & Model No. Matrix / Eternity- 16 S

Item No. 10 to 43 : Make Matrix

ANNEXURE

DETAILED SPECIFICATION FOR EPABX SYSTEMS

1. GENERAL

a) The EPABX system should be Digital Microprocessor based stored program control with latest Software Version. It should have facility to connect Computer Terminal, Telephone, and Paging System through suitable Interface common to all such devices. Tenderers shall indicate full details of the system offered including CPU speed and HDD Type/capacity in their offer.

b) The system shall be capable of working in a suitably ventilated non-air-conditioned environment. System design shall be immune to noise from various sources like power supplies, lighting system etc.,

c) The System shall ensure a very high degree of availability and maintainability through use of highly reliable components and appropriate structural & functional units. Provision of redundant control units in a suitable configuration shall be provided as an option.

d) All components should be rated for continuous operation of the system. It should be designed in such a way that any damage in any circuit/subassembly/assembly should be self-containing and should not be propagate to other parts of the system.

e) The EPABX shall be capable of pulse to tone conversion and vice versa to enable correct operation (originating & receiving calls) with the DTMF and dial pulse signaling having a speed range of 8-12 PPS and break ratio of 50 to 80%. Dialing out shall meet following limits.

Dial Speed : 10+/-0.5 PPS

Make/break ratio : 1:2, normal with break period between 65 to 68%.

IDP : >550 ms.

f) Call buffer memory shall be at least 1350 for Small Systems and 5000 for Large Systems. The tenderer shall indicate call buffer memory capacity offered.

g) The equipment shall be capable of working under the howling line & junction limits as under:

i. Extension loop resistance of 1200 ohms for large systems and 600 ohm for small systems.

ii. Junction Loop up to 1800 ohms.

iii. Insulation lower limit 20 k ohms.

h) Flexibility of opening & closing of limits & modification in class of service will be provided.

i) There must be protection of EPABX System from high voltage/current transient occurring on junction lines to the Exchange.

j) Power fail cut through shall be provided as specified under clause '3y' of SYSTEM FEATURE.

k) All cards of the same type & design shall be interchangeable without necessitating special adjustments.

System would be offered by the firms with Hot standby facility if they have provision for the same.

l) Cabinet design shall provide for adequate ventilation to dissipate heat due to energy loss.

m) The points for connecting supplies, the power supply to the different plug-in cards shall be standardized & mechanically interchangeable to prevent damage due to accidental interchange of cards.

n) Sub-assemblies & printed cards in the equipment shall be suitably marked. Identification of a type of card in its connector shall be possible without necessitating its removal. Any plug-in component shall be marked with sufficient information for its complete identification.

o) All instructions labels or any other marking on the equipment shall be perfectly legible.

p) Connecting cables between jacks shall be marked in their extremities with identical designation as on the fixed connecting flanges.

q) Fuses used shall have a suitable marking for the different rating to enable easy identification and replacement.

r) The items quoted shall have TEC approval for interconnection. TEC Approval will not be necessary for IP Gateways and DECT.

Tenders shall furnish a copy of TEC approval certificate along with tender for each item quoted and it should be valid on the date of tender opening. It will be the responsibility of the supplier to keep the TEC approval valid during the currency of the Rate Contract.

s) No. of extensions specified for each configurations are exclusive of I.P. Gateways and DECT extensions.

t) DECT Phones shall have a minimum talk time of 20 hours and a range of min.50 mtrs.

u) Each DECT Base Station shall be capable of handling minimum of 48 DECT Phones calls simultaneously.

v) The exchanges having in-built integrated DECT extensions shall be equipped with a card having 10 DECT extensions as base configuration.

2. POWER SUPPLY

a) The EPABX shall be suitable for operation on 230V +/- 10%, 50 +/-2 Hz AC or on 48 V DC power supply as per the customer requirement.

b) EPABXs operating on 230V AC shall have in built battery charging arrangement for providing battery back up for 2 h minimum. Batteries for this purpose shall be ordered separately.

c) Power back up for 230V systems can also be provided by external UPS which will also be ordered separately. There is a separate DGS&D Rate Contract for UPSs.

d) Power back up for 48V systems can be provided by Float Cum Boost Charger (FCBC) which has been included as a separate schedule and has to be ordered separately. The ratings of FCBC and batteries can be decided by the DDOs depending upon their power back up needs.

e) The derived power supply shall be suitably protected on the input side against over current and accidental reversal of polarity and on the output side against over

current and over voltage. Automatic recovery shall be possible.

3. SYSTEM FEATURES

- a) The EPABX System should have Digital PCM/TDM (non-blocking) technology.
- b) Tone and Ringing: The System shall provide the standard tones and ringing current as in the Public Telephone Network as follows:
 - (i) Ringing 75 V AC , 25 Hz.
 - (ii) Ring back tone 400 Hz. 0.4 sec ON, 0.4 sec OFF.
 - (iii) Dial tone 400 Hz modulated by 25 Hz.
 - (iv) Busy tone 400 Hz, 0.75 sec ON, 0.75 sec OFF.
 - (v) Operating Voltage 48 V +/- 4 V DC.
- c) The equipment and circuits for tones and ringing shall form part of main PABX equipment.
- d) The equipment should have Automatic Route Selection facility to determine least cost route automatically based on class of service.
- e) Extension-to-Extension Dialing: It shall be possible to establish internal calls automatically by dialing any number without assistance of the attendant.
- f) Direct Outward Dialing: It shall be possible to establish external calls automatically by dialing any number without the assistance of the attendant (subject to class of service).
- g) Provision of DID & DISA: It shall have facility for direct inward dialing and direct inward station access.
- h) Direct Outwards Station Access (DOSA): Any Extension can access the trunk lines of the System through personal pass code to make outward calls from outside. All DOSA calls remain in account of that particular Extension.
- i) Direct Station Selection (DSS): Just pressing a single key the operator or extension can directly call an extension or access the trunk line without hassles of pressing 3 digits.
- j) Multi Level Voice DISA: When ordered as an extra feature/card, this will enable the systems to provide auto attendant service to outside callers to directly access the desired extension by surpassing the operator. The caller should be step wise guided by multi-level voice messages.
- k) Access To Exchange Network: It shall be possible for an extension to get access to public network with or without the attendant in such cases, facility shall exist for the attendant to either dial the required No. or to merely extend the junction to the extension and permit the subscriber to dial the number.
- l) Privacy Of Call: Full privacy of conversation shall be available on all calls whether established directly or by the attendant. A warning tone of a specified frequency shall be applied when trunk-offering facility is exercised by the attendant on an extension user.
- m) Class Of Service: It shall be possible to allow an extension control over the telephone usage by providing him suitable class of service.
- n) The coding technique to be used is ALAW/CODEC per channel.

o) System should have provision for Automatic Last Number Redial up to 20 times on Junction Line.

p) During night, when the board is shut, external lines should be linked to any pre-defined extensions.

q) Provision for connecting recorded voice / answering to make available extensions to an incoming call without the help of operator.

r) Flexible Numbering Scheme: System should have provision for flexible numbering plan up to four digits for extensions.

s) Trunk Support: The System should support a following connectivity to satisfy all type of trunks & tie circuits.

Analog for all

For ISDN compatibility

In case of Small EPABX Systems : ISDN BRI

In case of Large EPABX Systems : ISDN BRI & ISDN PRI

For Networking Compatibility

In case of Small EPABX Systems : Digital ISDN and VOIP

In case of Large EPABX Systems : Digital ISDN, E1, E&M and VOIP

Generally system supporting ISDN PRI shall also compatible to E1 connectivity.

t) Universal Port Configuration: All ports of the System should be identical to facilitate flexible configuration of the System as per user needs.

u) Discriminate Ringing: The System should support discriminate ringing to indicate internal & external calls.

v) Multiple Consoles: The System should support multiple numbers of consoles for large EPBAX Systems.

w) Mixed Station Dialing: To support all the features irrespective of type of telephone instruments i.e., DTMF or DECADIC.

x) Versatile ASMDR The System should support ASMDR, which is a call accounting application that can record & print up to at least 3500 calls without dedicated printer.

y) Power Failure Transfer: In the case of power failure all P&T / CO lines become available on the pre-set Extensions.

Provision for Availability of Junction Lines shall be as under:

System of 4 & 8 Junctions : Availability of 2 Junctions

System of 24 & 32 Junctions : Availability of 4 Junctions

System of 64 Junctions : Availability of 8 Junctions

z) Programmable Class Of Service The System should support programmable class of service for P&T (STD/ISD/LOCAL) dialing as per need.

aa) Direct Call Billing In Rupees: The System should support direct call billing (near value) through parallel/serial port printer without computer.

bb) Call Billing Printout Options: The System should support versatile multiple combinations of direct printout options with total amount viz., Extension wise, Trunk wise. Today's call print out, Group wise printout, Particular date, Particular

Month, Particular Time, Particular Phone etc.

cc) Calling Line Identification (CLIP) : This is an optional feature and when ordered it enables the incoming calling No. is displayed on Key/Analog Phone even if the call is transferred by the operator, it is compatible to DTMF (Optional).

dd) Remote Maintenance: The System programming can even be done from remote locations.

4. EXTENSION FEATURES

a) Automatic Call Back: Facility shall exist for an extension user on encountering a busy signal on a called extension, to invoke the automatic call back feature by dialing a code before hanging up. When both the calling and called parties are free, the call should be automatically put through on no-answer the call may be disconnected after a specified period. (This facility should be available throughout the network if more than one EPABX are interconnected in a Private Network).

b) Call Forwarding: An extension with this class of service shall be able to transfer all incoming calls, temporarily to another pre-selected extension. Such requests shall be registered by dialing a code followed by the extension No. Facility shall also exist for cancellation of a request registered earlier. This facility should be available throughout the network if more than one EPABXs are inter-connected in a Private Network.

c) Consultation Hold: An extension engaged on an external call (incoming or outgoing) shall be able to hold the call while making internal call for private consultation. The external subscriber shall not overhear such consultation. There must be facility of music during hold condition.

d) Brokers Call: An extension engaged on an external call (incoming or outgoing) shall be able to hold the call while making another call than alternate between the two. The other party shall not over hear such consultation. There must be facility of music during hold condition. This facility should be available throughout the network if more than one EPABXs are inter-connected in a Private Network.

e) Automatic Call Transfer: It shall be possible for an extension user to transfer incoming calls to another extension with or without help of the attendant. This facility should be available throughout the network if more than one EPABXs are interconnected in a private network.

f) Executive/Secretary: A combination of call forwarding, consultation & hold to provide for executive to `selectively? answer calls. This facility should be available throughout the network if more than one EPABXs are interconnected in a private network.

g) Executive Over-Ride: There must be facility offering priority to 5 min extensions to over-ride on going conversations. This facility should be available throughout the network if more than one EPABXs are interconnected in a private network.

h) Access To Paging: Extensions and attendant shall have dial access to a loudspeaker or any other type of Paging System where such a system exists.

i) Conference Call: It shall be possible for an extension user (up to a maximum number of 6 to talk to each other at the same time on a conference circuit. One of the extension user or by the attendant may set up the conference call. This facility

should be available throughout the network if more than one EPABXs are interconnected in a private network.

j) Call Pick-Up: It shall be possible for an extension user to pick-up incoming calls ringing on another extension without the help of the attendant. This facility should be available throughout the network if more than one EPABXs are interconnected in a private network.

k) Call Re-Routing: It shall be possible for a call to be re-routed, without help of the attendant, to other pre-defined extensions when certain conditions apply. This facility should be available throughout the network if more than one EPABXs are interconnected in a private network.

l) Auto Call Disconnection: For large EPABXs, the system should facilitate to fix the time of call beyond which it will be automatically disconnected.

m) Dynamic STD Lock: The System should support that individual extension can lock outward dialing (STD/ISD/LOCAL) by a personal secret pass code to prevent misuse by others.

n) Paging On Key Phone: The caller can activate speaker phone of the called extension to communicate in urgency in own voice when Extension is idle.

o) Call Name & Extension number on Display (Internal CLI): Name as well as Extension No. of the caller is displayed on the Key Phone, facilitating to respond accordingly.

p) Background Music: The Key Phone user can enjoy the light background music channeled from System When Voice DISA Card incorporated.

q) Auto-Answer / Auto-Off: Key Phone can be programmed for auto-answer after pre-set number of incoming rings. The Key Phone is automatically disconnected when caller disconnects.

5. ATTENDANT'S CONSOLE FEATURES

Stand-alone or P.C. based Attendant Console with the following features:

a) The operator console should have soft/feather touch keys with easy to view display and busy lamp field for extensions. It will have easy handling facility for all internal & external calls.

b) Answering an Incoming Call: Facility should exist for answering an incoming call, whether from an internal extensions or external junction. It should be possible to identify the type of call that is internal, external line etc., from the call indicator.

c) Call Queuing: All incoming calls should be presented to the console in order of the arrival. Facility should exist for giving preference to junction calls and from tie lines over calls from internal extensions.

d) Serial Call: Facility should exist in Large systems to extend an incoming call as serial call which should come back to attendant on completion of call permitting the attendant to route the call to another extension and so on.

e) Call Waiting Display: An indication should be given when there is an unanswered call waiting in the queue. The lamp shall flash if number of calls waiting in the queue are two or more or if a call has been waiting for more than a predetermined

time.

f) Call Selection: Facility should exist to the attendant to select which incoming call to be answered first.

g) Call Hold Facility: It shall be possible for the attendant to place an incoming junction call on hold pending further processing.

h) Setting Up External Calls: Facility shall exist for enabling the attendant to set up the external calls for the extensions, which are allowed to access the public network. The attendant may either dial the number himself or merely extend the junction to the authorized extension user.

i) Trunk Offering: The attendant shall be able to offer an incoming call to busy extension. A tone shall however, alert the talking parties when the attendant barges-in on a connection.

j) Provision for Remote Supervisor Control.

k) Position Busy: When more than one console is in use. It shall be possible for a console to prevent further incoming calls from being assigned to it by busying itself. When a console is so busied all the waiting calls queued for the particular console shall be transferred to other console/extensions. Incoming calls in cases where two consoles exist shall be equally distributed. Facility shall exist during absence of the attendants for incoming external calls to be forwarded to one common or several individual extensions.

l) Night Service: It should be possible for all incoming calls to be transferred to certain pre-fixed extensions, in case this option has been exercised during the night.

m) Head Phone Connectivity: The operators can plug-in headphone to handle the call traffic efficiently while keeping her/his hands free for other jobs.

6. SERVICE OBJECTIVES

Following service objectives shall be met :

a) Under overload conditions, the lost call figures applicable shall be one in 200 for extensions to extensions call and one call in 100 for junction calls, overload being defined as 10% increase in occupancy of speech network and simultaneous 25% increase in the number of calls.

b) The selection time under full load is defined as the time interval between the instant at which the required information for selection of the outlet has been received at the inlet and the instant at which outlet is ceased shall not exceed in 99% of the cases under traffic overload 1.5 seconds.

c) The assumption to be made whilst dimensioning the links, junctions and attendants console shall be following:

a. Total originating & terminating traffic per extension (including junction traffic) 0.2 erlang during peak busy hour.

b. Total junction traffic per extension 0.1 erlang during peak busy hour.

c. Average holding time of calls 0.90 seconds.

d) The switching network shall provide access to the links & junction on fully non-blocking basis.

e) The equipment design shall be such that any special case and precaution on the part of maintenance personnel are kept to an absolute min. And no preventive maintenance is required.

f) The System shall have inherent capability to monitor its own performance and to detect, analyze and locate faults.

g) Fault repair at site should normally consist of only replacing the faulty card or plug-in modules.

h) The System should have remote maintenance facility.

7. TESTING

a) Acceptance tests: Facilities to be available at the place of inspection for-

i. Verification of all features / functional performance of the Machine.

ii. High Voltage (Flash Test at 1000 V)

iii. Measurement of loop resistance.

b) Documentation Requirements for Stores Offered for Inspection against R/C for Imported EPABX: Successful tenderers shall be required to meet / furnish the following for inspection of bulk supplies for each & every lot.

i. Catalogue/specification sheet of the manufacturer

ii. TTC for the product duly indicating the serial number of the tested machine and actual test results values for all major specification parameters as well as for environment tests, where applicable.

iii. Manufacturers test certificate, back up guarantee/warranty and after sales services support for the machine serial numbers offered from the authorized official of the foreign manufacturer in the following format:

I/We who are the manufacturers of -----(name and description of the goods offered) having factory(ies) as provided for the R/C at ----
----- (Name & Complete address of the factory(ies) hereby certify that the following machine/model Nos. bearing Sl. Nos. mentioned against each were exported by us to M/s ----- (Name & address of the Indian supplier)

Item	Model No.	Machine Sl nos	Invoice No
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The aforementioned machines were tested in our premises and found to be satisfactory as per the contract specifications.

We hereby extend back up guarantee/warranty and after sales services support in case the Indian supplier do not perform their obligations. We also undertake to supply spare parts for 7 years from the date of supply of machine to consignee.

The above certificate should be on the letter head of the Manufacturer and should be signed by the legally competent officer of the company or by authorized person and having power of attorney to legally bind the manufacturer along with copy of such authorization.

c) Environmental Testing: The EPABX system and all the other equipment offered shall meet the requirement of following environmental tests:-

(i) Cold Test: At 0 Degree C for 2 hrs. As per IS 9000/Pt 2/Sec 4/1977.

(ii) Dry Test: At 45 Degree C for 16 hrs. As per IS 9000/Pt 3/Sec 5/1977.

(iii) Damp Heat (Steady State) Test: At 40 Degree C & 95% RH for 2 cycles as per IS9000/Pt 5/Sec 1/1977.

After recovery of 1&1/2 hour environmental tests as mentioned above, the functional performance/features of EPABX shall be checked and results should be satisfactory.

Environmental test shall be carried out at a Govt.lab.In case of Fortune 500 Global Companies,the manufacturer's own test report shall also be acceptable provided the test report is a detailed account of all the tests carried out.

8. MAINTENANCE MANUALS

Two sets of each of the following operation and maintenance manuals shall be supplied along with the equipment.

i. General write-up of overall System specification & description of all the equipments explaining features, facilities, functions & principals.

ii. Operating Manual.

iii. Detailed description of entire software, if applicable.

iv. Maintenance of instruction manual including maintenance test schedule fault deduction and trouble shooting procedures.

v. The derived power supply shall be suitably protected on the input side against over current and accidental reversal of polarity and on the output side against over current and over voltage. Automatic recovery shall be possible

NOTE

Under Schedule 4, Additional items for EPABX System -For Voice Mail System 4- port for use with PC, PC will not be the part of supply and to be purchased separately

ADD-ON Items of EPABX System

Specification: These items shall be used to enhance the specifications of basic systems and shall comply as per detailed specifications under GTR.

Small EPABX System with In built 4 Port voice mail.

Specification :Small EPABX systems with in built 4 port Voice mail shall comply as per the detailed specification under GTR and shall be supplied in one of the following configurations.

Small EPABX Systems Configuration

Specification : Small EPABX systems Configuration shall comply as per the detailed specification under GTR and shall be supplied in one of the following configurations: