OFFICE OF THE COMMISSIONER INCOME TAX OFFICE-I,

PMT Commercial Building, Shankarsheth Road, Swargate, Pune-411037.

No. PN/ITO(Admn-II)/EPABX install./2013-14 Dt: September 12, 2013

TENDER NOTICE

The following items are required for the Income Tax Office at the PMT Building, Shankarsheth Road, Swargate, Pune-411037:

1) Small EPABX Systems Configuration:

No. of Extensions	No. of Junctions	No. of expandable ports	Operator's Console	Compatible
64	16	256	01	ISDN and Networking

2) Small EPBAX system configuration add-on items

Price of Line Extension Card per Line.

The technical specifications of the items are as per Annexure-A.

2. The requisite bid may be submitted in sealed envelopes to the Income-tax Officer(Admn-II), Ground floor, 'B' Wing, Office of the Commissioner of Income-tax-I, PMT Building, Shankarsheth Road, Swargate, Pune-411037, by 17-9-2013.

(R.H.BOKIL)
Income-tax Officer(Admn-II),
for Commissioner of Income-tax-I,
Pune.

The details of stores are as under

1. Small EPABX Systems Configuaration

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Schedule 1 Small EPABX Systems Configuration

ANNEXURE-A
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.

(b) The system shall be capable of working in a suitably ventilated non-airconditioned 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 ohms 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.

(1) 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.

Tenderers 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.

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+or — 10% 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. They shall indicate the switching IC/CHIP used. They shall furnish calculation showing the non blocking technology /switching.

(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.

(1) 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 El 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.

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

(ii) 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.

(iii) 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).

(iv) 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.

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.

(1) Auto Call Disconnection: For large EPABXs, the system should facilitate jto 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.

(1) 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 :

i. Total originating & terminating traffic per extension (including junction traffic) 0.2 erlang during peak busy hour.
ii. Total junction traffic per extension 0.1 erlang during peak busy hour.
iii. Average holding time of calls 0.90 seconds.
iv. The switching network shall provide access to the links & junction on fully non-blocking basis.
v. 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.
vi. The System shall have inherent capability to monitor its own performance and to detect, analyze and locate faults.
vii. Fault repair at site should normally consist of only replacing the faulty card or plug-in modules.
viii. The System should have remote maintenance facility.

INDENTOR TO NOTE

(a) Small EPABXs operating on 230V +or — 10%AC shall have in built battery charging arrangement for providing battery back up for 2 hrs minimum. Batteries for this purpose shall be ordered separately.(Details of battery shall be indicated.

(b) 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.

(c) Power back up for 48V system can be provided by Float Cum Boost Charger (FCBC) which has been included as a separate Schedule No 4 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.

(d) Under schedule 6, Additionl items for EPABX System-For Voice Mail System 4-port for use with PC, PC to be purchased separately.

Schedule 2 Small EPABX system configuration add-on items

These items are accessories to EPABX system and shall be suitable for the EPABX quoted as per Annexure-A.

(a) Firms shall quote for the price of line extension card per line and they shall indicate the minimum number of lines to be ordered per extension card. They shall also indicate number of lines per card available.

(b) Firms shall quote for the price of junction extension card per junction and they shall indicate the minimum number of junctions to be ordered per extension card.They shall also indicate number of junctions per card available.

(c) Firms shall quote for the price of digital line extension card per digital line and they shall indicate the minimum number of digital lines to be ordered per extension card.They shall also indicate number of digital lines per card available.