

**OFFICE OF THE CHIEF COMMISSIONER OF INCOME TAX, KOLKATA-I
P-7,CHOWRINGHEE SQUARE,KOLKATA-700069**

No. DC/HQRS./CO-ORD./1263/S-10/Pt. II/10-11/982

Dated : 08.03.2011

**TENDER NOTICE
SUPPLY/INSTALLATION/COMMISSIONING OF IP PBX/VOICE SERVER AT
UTTARAPAN BUILDING,UTTARAPAN COMPLEX, MANICKTALA CIVIC CENTRE,
ULTADANGA , KOLKATA-54.**

Sealed tenders are invited from reputed vendors including Government vendors for supply/installation/commissioning of IP PBX/Voice Server at Uttarapan Building,Uttarapan Complex, Manicktala Civic Centre, Ultadanga , Kolkata – 54 .

A. General Requirement

- The Bidder must be an Original Equipment Manufacturer (OEM)
Or
Bidder should produce an undertaking from OEM that the bidder is authorized to quote for this tender and will provide support and spares directly for the offered system and also that the offered system is latest being manufactured by its OEM. The authorization should be tender specific and addressed to the issuing tender authority.
- Under both conditions, the OEM should have direct presence in India, preferably in Kolkata.
- The bidder must provide atleast 10 customer details with complete contact numbers where they have commissioned similar or higher capacity exchange and working for more than 3 years. Out of the above at least 05 or more similar or higher capacity installations should be in Government, preferably in Income Tax establishments.
- The offered system should have a valid TEC approval. TEC approval certificate copies for ISDN connectivity should be enclosed along with the offer.
- The TEC Certification should be in the name of the OEM participating in the tender.
The TEC Certification should be as per specifications in the name of the offered model.
- The OEM of the quoted equipment should be Internationally reputed and operative in India for at least last 10 years.
- The bidder or its principal dealing in similar products should not be black listed by any Government body in India (Self declaration should be provided from competent authority).
- The equipment quoted by bidder must be Q Sig compliant and the OEM should be a member of ECMA. Necessary documents in support of the same to be provided with the offer.
- The bidder must have a full fledged Service Center in Kolkata and should provide detail of all service personnel.
- Bidder should provide 36 months onsite comprehensive warranty support on all equipments.
- Bidder should also quote AMC rate for five years applicable after the warranty period.

- Bidder is required to quote their Income Tax PAN and also submit copy of the current Sales Tax clearance certificate.
- The Tender will be in two bid system. The separate sealed bid should be put in a single envelop and submitted as mentioned in the tender notice
- An EMD amount of Rs 25,000 should accompany with the tender, otherwise the tender will be rejected.

B. Technical Specification for Server Based IP-PBX System

1.0 Introduction

Under the scope of this project Dept. of Income Tax intends to procure IP PBX/ Voice Server. The proposed systems shall be an IP based simplex communication server, fully modular and fully non-blocking type having distributed architecture and having future provisions for fully duplicated main system controls.

2.0 SCOPE OF WORK:

- 2.1 Dept. of Income Tax seeks state of the art communication systems inclusive of 8 party conferencing facility under the present tender. The proposed system will be a rack based IP communication server/chassis, fully modular and fully non-blocking type having distributed architecture and having future provisions for fully duplicated main system controls.
- 2.2 The complete work shall be executed on complete supply, installation & commissioning basis to the extent of scope of work specified in this Technical Specification. The bidder shall take responsibility for the guaranteed continuous operation of the complete system. The bidder has to indicate the different equipments offered, submit the complete technical details of the equipments and design for the offered solution for fulfilling the requirement/ scope given in the bid (technical, Instruction to Bidders etc).
- 2.3 All items of the equipments / accessories in this specification shall be new and complete in all respect and equipment / material not covered in this specification but essential for completion of the project shall be included by the bidders in their scope of work.
- 2.4 The scope of work/ supply include supply of Communication Server along with phones and other accessories. The proposed solution is to be designed in such a way to take care of intercom, incoming and outgoing calls.
- 2.5 The scope of work shall include design, supply, erection, testing, commissioning of the complete system as per the scope of work / supply given in the bid & layout to be submitted by the bidder.
- 2.6 The scope of the bid also includes supply, install & commissioning of all related equipments & accessories like FCBC, battery, MDF etc required for the successful completion of the work.
- 2.7 **The following shall also be included in the scope of work :**
 - a. Submission of documents supported with manufacturer's catalogues.
 - b. Free training to administrative and maintenance staff of DEPT OF INCOME TAX (minimum 5) in operation & fault identification/rectification of the system at location to be mutually agreed by the bidder & the purchaser.

- c. All other associated work as required for completion of the work irrespective of whether these are specifically mentioned in TS shall be considered within the scope of the bidder for which no payment shall be admissible.
- 2.8 Necessary backup arrangements in the form of UPS, sealed maintenance free battery backups, etc. for operation of the systems should be taken care. Any application software, Earthing and all other accessories as required for completion of the project shall be within the scope of the bidder.
- 2.9 It will be at DEPT OF INCOME TAX's discretion to refer to the OEM's global / regional headquarters or to confirm the features offered by the bidder as may be deemed necessary by DEPT OF INCOME TAX. Strict penalty actions will be taken against a bidder claiming compliance to the technical requirement given in the bid but failing to comply with the requirement as indicated in the tender.

3.0 SYSTEM ARCHITECTURE & DESIGN:

Based on the scope of work / supply as mentioned above and in successive paras & other document of the bid, the bidder is to design the solution and submit the architecture of the solution offered. The bidder may be called to make presentation on the solution proposed by the purchaser.

The proposed solution architecture should have the following

- 3.1 The communication server must be highly reliable ensuring uptime of atleast 99.99%. The offered solution must have the facility to future upgrade to HOT DUPLICATED Architecture for Control and Signaling units and PSU duplication.
- 3.2 The proposed communication system should have a highly secured, encrypted IP (atleast 128 bit AES) supporting hybrid extensions i.e. Analog and IP Extensions (Wired and Wireless) as well as Hybrid Trunks e.g. Analog CO, E&M Circuits, Digital Trunks (BRI and PRI), IP Trunks (H.323 & SIP)
- 3.3 The system should provide techniques of storage media like Compact Flash, HDD, DVD etc for higher reliability. The HDD must atleast have a storage capacity of at least 74 GB SAS.
- 3.4 Loop Resistance without telephone sets. As under: -
 - (i) Normal Analog Subscribers with CLI 1200 Ohms or more
 - (ii) Long Line Analog Subscribers - 1600 Ohms or more.
 - (iii) Digital Subscribers 600 Ohms or more.
- 3.5 It is desired that analog extensions of each exchange should be able to work over desired distances for which the loop resistance of cards should be min 1600 ohms without telephone sets. In addition, loop resistance of each of the trunk card to be specified.
- 3.6 The offered System should support:-
 - (i) Unified Messaging.
 - (ii) Digital Telephones.
 - (iii) Direct Inward Dialling (DID).
 - (iv) Direct Outward Dialling (DOD).
 - (v) Calling Line Identification (CLI).
 - (vi) Data Communication.
 - (vii) PC based Operator Consoles.
 - (viii) IP Line and Trunk interface.
 - (ix) Voice over IP.

TECHNICAL SPECIFICATIONS for IP PBX SERVER

- 4.0 The main Communication Server must be based on packet switching there by supporting hybrid extensions and trunk types. It must be based on mainstream microprocessors with hardened operating system, Fully Non Blocking for the designed capacity. The mainstream microprocessor should atleast be 32 bit or 64 bit e.g. Intel Pentium 4, Intel Xeon, AMD Athlon, AMD Opteron.
- 4.1 The communication server should offer BHCC of atleast 2,50,000 per server processor to ensure superior traffic handling capacities.
- 4.2 The offered system should be modular in design. The architecture of IP PBX should be capable of seamless migration to its maximum capacity by simply adding peripheral cards on the set of control server without compromising on any functions/features of this system or any degradation of service.
- 4.3 The system should be able to provide hybrid end points i.e both IP and TDM (analog/digital). They should provide support for 100% IP or 100% TDM endpoints.

5.0 DESIRED FEATURES & FACILITIES OF IP PBX

The offered solution should provide the following features as a part of its telephony functions,

- 5.1 **Station Call** - User can dial any extension anywhere in central location and other distributed location by dialing simple extension number.
- 5.2 Support **pulse as well as tone dialing** from an extension
- 5.3 **Authorization Codes** - 5-7 digit authorization code to make outgoing toll calls for ensuring no misuse of the system
- 5.4 **Automatic Call Back** - User can register ACB feature to any extension across all locations between media gateway of thie offered system
- 5.5 **Call pickup** within the group as well as outside the group
- 5.6 **Alternate Routing** - Automatically re-route calls which encounter a busy trunks on the initial route. Automatic digital translation is carried out by the system. Provides the possibility of reaching external destinations via different routes.
- 5.7 **Call Detail Recording** - Records detailed call information on all incoming and outgoing calls on specified trunk groups and stations, including those administered for intraswitch recordings, and send this information to any printer or other CDR security device. This detail should be made available for any point of time/duration as and when required. Necessary hardware and software if required to be quoted separately.
- 5.8 **Malicious Call Tracking/Record** - Records detailed call information on all incoming calls(trunks & stations) on any station at any point of time. This information can be stored in any file and can be send to any printer or other CDR security device.
- 5.9 **Class of Restriction** - Defines different call origination and termination privileges. There should be support for minimum upto 50 CORs in the system.
- 5.10 **Class of Service** - Defines whether or not voice terminal users may access the following features and functions:

Automatic Callback, Call Forwarding, Call Forward, Busy/Don't Answer, Data Privacy, Extended Forwarding, Extended Call Forward Busy/Don't Answer, Priority Calling, Restrict Call Forwarding Off-Net, Personal Station Access, Trunk-to-Trunk Transfer Restriction Override, Off-Hook Alert & Console Permission .
- 5.11 **Direct Inward Dialing** - The proposed system must support direct inward dialing for external parties to call in.

- 5.12 **Direct Inward Station Access** - This feature must be optionally available, allowing an outside caller to access switch features by dialing a special telephone no. Without attendant assistance, it should permit remote access to the server and long-distance facilities from off-premise stations. For security, there should be the option of turning off this feature.
- 5.13 **Day/Night Trunk Control** - To reduce cost and improve system security it should be possible to restrict the access to certain trunks depending on time of day.
- 5.14 **Distinctive Ringing** - To provide audibly different ringing patterns between internal, external and special feature calls.
- 5.15 **Flexible numbering plan** - Support up-to 5-10 Digit for an extension number & Allow phone number assigned to a station to be changed through software.
- 5.16 **Music on Hold** - To Provide music and/or a recorded announcement to callers on hold.
- 5.17 **System Traffic Reports** - Traffic statistics should be provided on incoming and outgoing trunk groups, attendant consoles, station hunt groups, and individual stations. The information reported must include the number of calls and call duration. The Bidders must describe the proposed system's traffic reporting capabilities.
- 5.18 **System Abbreviated Dialing** - To have the ability to store a list of frequently called numbers that will be available on a system-wide basis to all users.
- 5.19 **Uniform Numbering Plan** - The system shall permit a uniform numbering plan (Closed Numbering Plan) system to be used to simplify access to all extensions of the network. The system must be able to implement a uniform numbering plan based on 5 digit extension numbers for all sites.
- 5.20 **CLI (Caller Line Identification) facility:** Calling Numbers (internal & external) should be displayed on all analog extensions (FSK support phone).
- 5.21 **Unified Messaging:** The system should be configured to support voice unified messaging based voicemail mail facility for all users distributed over different locations for internal as well as external callers.

6.0 Networking

- 6.1 The systems should be QSIG ready. The systems shall support QSIG international signaling standards necessary for multi make/Vendor IP PBX networking and should be enabled in the system.
- 6.2 The systems should be ECMA Certified. (Necessay document to be provided.)
- 6.3 CEPT (2Mbps) cards for Direct Inward dialing (DID) and also for future connectivity with other exchanges of Dept Of Income Tax department. Should be capable of accepting E1 /PRI trunks, E&M trunk, CO lines and loop dial trunks in future, if required. The system should support Dial pulse/DTMF protocols for the extension side & LD/OD/2W, 4W E&M / MFC / MFR2 / CEPT protocols on the CO side.
- 6.4 IP Networking: The system shall be upgradable f integrated Voice over IP Networking over LAN/ WAN. System shall support IP trunking using SIP or H.323. The IP trunking should provide similar features as QSIG signaling on a TDM interface. System should allow fallback to TDM routes in case of non availability of IP network. The system shall also have capability of interfacing remote unit through IP network.

7.0 Scope of Supply & Scope of work for Main Communication Server located at Dept of Income Tax, Uttarapan Complex:

- 7.1 Supply/ Installation / Commissioning of Communication server including control, processing, memory and power card with provision for future upgradation to HOT Standby duplex architecture WITHOUT replacement of the existing server.
- 7.2 The system should have the following features:
- a> 72 Analogue extension CLI Ports. 16 CO (P&T) Ports
 - b> Ports supporting atleast 10 IP extensions
 - c> Must have the feature to connect soft phone/video phone in future
 - d> System must have 1 software based operator consoles
 - e> System should have Unified Messaging System currently enabled for voice mail for all the users and Auto Attendant feature; provision for fax-mail and email integration
 - f> System should be expandable up to 250 extensions and should have provision for 12,000 users.
- 7.3 Necessary PC or server must be provided for software based operator console. administration purposes, um.
- 7.4 Krone Type MDF & IDF should be provided.

8.0 TECHNICAL SPECIFICATION OF OTHER RELATED EQUIPMENT

8.1 MAIN DISTRIBUTION FRAME & ACCESSORIES

Required sets of MDF accessories of required capacities shall be supplied, installed and commissioned satisfactorily. The job includes the Supply, Erection, Testing and Commissioning of connection modules of suitable capacity, fitted with Integrated Protection Module (IPM) on all lines and stainless steel back-mount with acrylic cover on these modules. The job also covers supply, laying and termination of all MDF cables from proposed system to MDF in required cable racks/trenches. The cable shall be laid on cable rack/trenches in such manner that rodent entry is blocked. The job also includes necessary civil and fabrication job required to complete the project in all respect.

Preferred make : KRONE

8.2 IP Phone Specification:

- o Atleast 6 Line Display(240x128) pixels - Tilttable
- o Backlit display
- o 8 push button fixed function keys with 6 LED's
- o 6 freely programmable touch keys with LED's
- o Should have volume adjustment and navigation alignment keys
- o Should have headset jack for corded or cordless headsets
- o Integrated Ethernet switch -10/100 Base T
- o Should have Audio Protocols G.729AB (8 kbit/s), G.711 (64 kbit/s a/μ-law), G.722 (64KBIT/S)
- o Must be full duplex handsfree
- o Must have Echo canceling for local echo (AEC) full duplex feature
- o Must support Layer 2 Authentication 802:1x
- o PoL class should be Class 2
- o Power over Ethernet support

8.3 PC/Server FOR SYSTEM ADMINISTRATION & SOFTWARE BASED OPERATOR CONSOLE

(HP/Lenovo/Dell)

The PCs shall have to be configured atleast with the following:

- Atleast Intel P4 / Core Duo
- 2.4 GHz or higher
- 2 GB RAM
- 120 GB HDD
- Micorosoft Windows XP Professional / Appropriate OS.
- AntiVirus License
- Network Ethernet Card / Onboard NIC support
- DVD ROM,Keyboard amd Mouse
- 17” TFT Display

C. General Requirements

SL#	Components	Qty
1	19” Rack Mount Communication Server [IPPBX] upgradable to Hot Duplication Server (Compliant with QSIG / ECMA)	01
2	Analog Ports	72
3	CO (P&T) Ports	16
4	Unified Messaging System (UMS) with provision for email, fax – mail integration; currently enabled for Voice mail licenses for all users and Auto Attendant Feature (PC Workstation included)	Package
5	Software based Operator Console License including Headset	01
6	IP Phone with 6 line monochrome tiltable display, duplex handsfree talking, headset jack, 8 fixed and 6 freely programmable touch keys	02
7	Warranty Cost for 3 years	
8	100 Pair System-Side MDF with Krone Modules and IPM for for all extensions and trunks	01
9	PC with UPS for Software based Operator Console, 17”TFT Monitor and Windows 7 or latest OS Make: HP / Dell / Lenovo	
10	Online UPS / FCBC with min. 30 min battery backup Make (APC / Emerson / Dyna)	01
11	19” Rack for housing of server Make: APW President / Valrack	01

D. Optional Items

SL#	Components	Unit Price (INR)
1	Call Billing Software	



2	Analog Push Button Telephone with adjustable ringer volume, Redial key	
3	Analog CLI Phone without requirement for batteries/external power	
4	04 Port GSM Router Make: Accord / Visiontech	
5	Cost of upgradation to Hot Standby Duplex architecture without replacing existing server including warranty cost for three years.	

E. Rates and Prices

The rate quoted by the vendors for the general requirements as mentioned in Column 'C' above should be composite and inclusive of all taxes and other incidental charges like installation/commissioning/training charges etc...The rates of "optional items" as mentioned in column 'D' above should be of 'per unit' and inclusive of all taxes and other incidental charges like installation/commissioning/training charges etc. The prices quoted shall be written in figures and words as well.

F. Final Payment

The vendor shall submit the bill on completion of satisfactory commissioning along with the completion certificate obtained from the respective office. Payment will be made as per Govt. rules.

2. The bidders should submit technical and financial bids in separate sealed envelopes. The nature of bids, whether "technical" or "Financial" should be clearly marked on the respective envelope. The bidders should put these two sealed envelopes in a bigger envelope duly sealed with superscription "Tender for supply/ installation/ commissioning of IP PBX/Voice Server at Uttarapan Building, Uttarapan Complex, Manicktala Civic Centre, Ultadanga , Kolkata – 54 .". Sealed quotation are to be deposited at the office of the undersigned (Room No.42,2nd floor,P-7,Chowringhee Square,Kolkata-69) between 11:00 and 15:30 hours on all working days upto 04.04.2011. The 'financial' bids shall be opened only in respect of those vendors who qualify in the 'technical' bids. Tenders must accompany copies of I.T.PAN Card and VAT Registration Certificate. The evidence for filing of returns along with copy of balance sheet for financial year 2009-10 (Asst. Year 2010-11) should be enclosed. The tenders would be opened on 04.04.2011 itself at 16:00 hours when all the vendors or their representatives may make it convenient to be present.

3. The Income Tax Department reserves the right to accept or reject any tender on any of the above grounds or absence of infrastructure or without assigning any reason whatsoever.

(GOUTAM KR. MANDAL)
D.C.I.T.,HQRS.(CO-ORDINATION)
KOLKATA