



Exploration & Production

GENERAL SPECIFICATION

TELECOMMUNICATIONS

GS EP TEL 110

Design and installation of PBX

04	10/2009	Standard updates and general revision
03	10/2006	QoS and IP / red digital phone.
02	10/2005	Addition of EP root to GS identification
01	10/2003	General Revision
00	05/2001	First issue
Rev.	Date	Notes



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1. Scope

NOTE: SPECIFICATION FROM **GS EP TEL 111 should be given first consideration over this SPECIFICATION FOR INSTALLATION OF PBX IN NEW SITES.**

The document defines the minimum requirements for the supply of a PBX. The number of technical points specific to each project will be listed in the particular specifications of the project.

The contracting parties mentioned in this General Specification are listed hereafter:

- **COMPANY:** the party which signs the contracts and purchase orders
- **CONTRACTOR:** the fabrication CONTRACTOR on the yard or the construction CONTRACTOR on the final site
- **VENDOR:** the supplier of the equipment

The verbal forms used to indicate levels of requirement are specified in [ISO/IEC Directives, Part 2](#) and [Characteristics of good requirements](#), INCOSE symposium 1996.

2. Reference documents

The table below lists references from international organisations such as the EC, ETSI, ITU and others from national organisations such as the Telecommunication Research Centre of France Telecom (France Télécom R&D).

As a rule, the PBX shall be approved by the competent authorities of the country concerned. There follows a non-exhaustive list of norms and standards by which the PBX shall comply. However, exceptions can be accepted according to the characteristics specific to each country.

Where national regulations exist, their provisions and those of the standards and codes to which they refer shall apply, supplementing or amending the provisions of this document.

If there are no national regulations covering all or part of the subject of this document, the reference documents shall be strictly applied, as supplemented by the provisions of this document.

Only the main reference documents are mentioned; the CONTRACTOR shall be responsible for complying with all secondary reference documents dealing with the subject of this document.

The reference documents listed below form an integral part of this General Specification. Unless otherwise stated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the EFFECTIVE DATE of the CONTRACT.

Standards

Reference	Title
98/482/EC (ETSI – TBR 21)	On a common technical regulation for the attachment requirements for connection to the analogue public switched telephone networks (PSTNs) of terminal equipment (excluding terminal equipment supporting the voice telephony service) in which network addressing, if provided, is by means of dual tone multi-frequency (DTMF) signalling
ETSI – EN 300 175-x	Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI);
ETSI – NET 3	Integrated Services Digital Network (ISDN); Attachment requirements for terminal equipment to connect to an ISDN using ISDN basic access
ETSI – NET 4	Attachments to the Public Switched Telephone Network (PSTN); General technical requirements for equipment to be connected to an analogue subscriber interface in the PSTN
ETSI – NET 5	Integrated Services Digital Network (ISDN); Attachment requirements for terminal equipment to connect to an ISDN using ISDN primary rate access
ISO/IEC Directives, Part 2	Rules for the structure and drafting of International Standards
ECMA-143	Private Integrated Services Network (PISN) - Circuit Mode Bearer Services - Inter-Exchange Signalling Procedures and Protocol (QSIG-BC), 4 th edition
ECMA-165	Private Integrated Services Network (PISN) - Generic Functional Protocol for the Support of Supplementary Services - Inter-Exchange Signalling Procedures and Protocol
IEEE 802.1P	LAN layer #2 QoS and CoS protocol for traffic prioritization.
IEEE 802.1Q	Standard method for tagging the Ethernet frames with VLAN membership information
ITU-T G.107	The E-model, a computational model for use in transmission planning
ITU-T G.114	The QoS suite protocols describing the maximum delays for the voice packets
ITU-T G.703	Physical/electrical characteristics of hierarchical digital interfaces
ITU-T G.704	Synchronous frame structures used at 1544, 6312, 2048, 8488 and 44 736 kbit/s hierarchical levels
ITU-T G.711	Pulse code modulation (PCM) of voice frequencies
ITU-T G.723	To 24 and 40 kbps for digital circuit multiplication equipment application
ITU-T G.726-727	40, 32, 24, 16 kbps adaptive differential pulse code modulation (ADPCM).



Reference	Title
ITU-T G.728	Coding of speech at 16 kbps using low delay code excited linear prediction
ITU-T G.729	Coding of speech at 8 kbps using conjugate structure algebraic code excited linear prediction (CS-ACELP)
ITU-T G.821	Error performance of an international digital connection operating at a bit rate below the primary rate and forming part of an Integrated Services Digital Network
ITU-T Q.400 Q.490	Specifications of Signalling System R2
ITU-T Q.552	Transmission characteristics at 2-wire analogue interfaces of digital exchanges
ITU-T Q.553	Transmission characteristics at 4-wire analogue interfaces of digital exchanges
ANSI T1.409	Network to Customer Installation Interfaces - Analog Voicegrade Special Access Lines Using E&M Signaling
ITU-T H.323	IP protocol for trunkink and IP phones
IETF-SIP	Session Initiation Protocol for Trunking and IP phones



Professional Documents

Reference	Title
BTNR 181	Signalling system AC15-A/E
ST/PAA/TPA/STP/1561	Access to private customer premises equipment on the 64 kbit/s digital connectivity telephone network
ST/PAA/RDS/SHD/1170	Digital network access, X.21 interface
ST/PAA/TPA/STP/1021	Metering pulse reception and automatic message accounting systems
ST/PAA/TPA/STP/1022	Direct dialling-in private switching systems
ST/PAA/TPA/STP/1728	Direct dialling-in private switching systems
ST/PAA/RSD/RVA/688	L1 tieline signalling system
ST/PAA/TPA/STP/1066	Permanence and quality of service of private switching systems
ST/PAA/TPA/STP/1024	Transmission characteristics for private telephone switching systems
ST/PAA/TPA/AGH/1257	Automatic calling modems
ST/PAA/TPA/AGH/1764	Automatic answering modems
ETSI - T/TR 02-07 E (CSE I-13-20)	Mechanical environment

Regulations

Reference	Title
99/5/EC (03/99) (R&TTE directive)	Directive on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity
ETSI EN 60 950	Safety of Information Technology Equipment Including Electrical Business Equipment
EN 55 022	Limits and methods of measurement of radio disturbance characteristics of Information Technology Equipment (ITE)
EN 55 024	Information Technology Equipment - Immunity characteristics - Limits and methods of measurement
EN 50 082-1	Immunity requirements for Light Industrial and Household Equipment