– **IP PBX for up to 200 subscribers**
– **Up to 50 calls simultaneously**
– **Up to 16 FXS/FXO ports**
– **4 LAN ports**
– **Call center functions**
– **Call recording**

SMG-200 is an enterprise PBX for 200 subscribers with a full set of Value Added Services (VAS).

SMG-200

The basic configuration of the enterprise IP PBX SMG-200 is designed to connect up to 100 SIP subscribers and can be extended to connect up to 200 subscribers when purchasing the appropriate software[1]. 16 RJ-11 ports can be used to connect analog telephones as well as for connection to land lines. LAN ports are designed for connection to carriers' networks using SIP trunks, as well as to connect VoIP gateways (e.g., TAU-24 supporting for 24 FXS ports) to increase the number of FXS/FXO ports. Call recordings and CDR files are stored on the SD card or USB drive. It is also possible to automatically upload files to an FTP server.

Networking of separated offices

The SMG-200 allows clients to organize an enterprise telephone network between remote offices of the company with minimal costs. Landline phone numbers in all offices remain the same, as customers will continue calling the known numbers. Employees from different offices can call each other on short numbers absolutely free, thus reducing the cost of intercity and international calls.

Multiservice platform

The variety of services allows clients to create the most efficient individual call processing scenarios. The SMG-200 supports conference calls, call recording, multiple channels and interactive voice menu.

Functional compatibility

Strict compliance with modern protocols, recommendations and standards ensures 100% functional compatibility of SMG-200 with equipment from different vendors: digital PBX, IP PBX, Softswitch, VoIP gateways, SIP phones, SIP software clients, etc.

Smart IP network protection

The IP PBX SMG-200 has intelligent protection against unauthorized external connections of SIP subscribers (dynamic firewall, static firewall, white/black lists, etc.) and connections via http/https/telnet/ssh.

High quality voice processing

The high quality of voice processing is provided by the up-to-date hardware platform, support for main audio codecs used in VoIP networks (G.711, G.722, G.726, G.729), echo cancellation, silence detector, comfort noise generator, receiving and generating DTMF signals, as well as traffic prioritization mechanisms (QoS).

[1] *Optional.*

Features and capabilities

Interfaces
– 16 × FXS/FXO RJ-11 ports
– 4 × Ethernet 10/100/1000BASE-T ports (RJ-45)
– 1 × USB 2.0; 1 × USB 3.0
– 1 SD card slot (SDHC)
– 1 COM port (RS-232, RJ-45)

VoIP protocols
– SIP, SIP-T/SIP-I
– H.323

Advanced SIP/SIP-T/SIP-I functions
– SIP, SIP-T/SIP-I interaction

Voice codecs
– G.711 (a-law, μ-law)
– G.722
– G.726
– G.729 (A/B)
– OPUS[1]
– AMR[1]

Fax transmission
– G.711 (a-law, μ-law) pass-through

Voice standards
– VAD (Voice Activity Detector)
– CNG (Comfort Noise Generation)
– AEC (Acoustic Echo Cancellation, G.168 recommendation)
– AGC (Automatic Gain Control) (for FXS/FXO ports)

Functions
– Interactive Voice Response (IVR) system with graphic editor
– Call queue:
  – Various algorithms for choosing operators
  – Call distribution considering repeated client requests
– Reporting system by operators/groups of operators (processed calls, missed calls, average waiting time, etc.)
– Pulse and tone dialing
– Phone book:
  – Creating a phone book from the station subscribers list
  – Transferring a phone book to subscribers via LDAP
  – Obtaining a display name from the LDAP server
– Video processing:
  – Transmitting a video stream using Video Offroad mode

Call management
– Number modification before and after routing
– Call recording by parameters
– Routing by access category
– Subscriber lines restriction
– Subscriber service mode configuration
– Trunk group cut-off
– Direct connection of trunk groups
– Prefix for multiple trunk groups
– Limiting the number of simultaneous calls to the SIP interface
– Ingress load limiting (call per second) for a trunk group
– Interaction with the STUN server via SIP interface
– Dialing rules for FXO ports
– Hotline for FXS ports
– Routing by Called Party Number (CdPN) and/or Calling Party Number (CgPN)

Quality of Service (QoS)
– Diffserv assignment for SIP
– Diffserv assignment for RTP

DTMF
– Transmission via INBAND, RFC 2833, SIP INFO, SIP NOTIFY
– Ability to auto-detect the method of receiving DTMF

Value Added Services (VAS)
– Call Forward:
  – Call Forwarding on Out of Service (CFOS)
  – Call Forwarding on No Reply (CFNR)
  – Call Forwarding Unconditional (CFU)
  – Call Forwarding on Busy (CFB)
  – Call Forwarding on Time (CFT)
– Call Transfer
– AutoCLIP for FXO ports
– Music on Hold (MOH)
– Call Hold
– SIP-forking support for SIP subscribers
– Call Hunt
– Call Pickup
– Call Parking
– Busy Lamp Field
– Add-on conference (CONF)
– Conference based on subscribers list
– 3-Way conference
– Intercom
– Paging Call
– Call Queue
– Call Back when the position in queue is reached[1]
– Call Recording
– PIN Code Access
– Follow me
– Follow me on No Response
– Do Not Disturb (DND) with whitelist
– Blacklist
– Calling Line Identification Presentation (CLIP) in FSK formats (ITU-T V.23, Bell 202), DTMF, “Russian CLI”
– Output of the caller's name and the time of the call in FSK mode
– Calling Line Identification Restriction (CLIR) (for FXS ports)

[1] *Not supported in the current firmware version.*

Features and capabilities (continued)

– Intervention
– Voice mail
– One Touch Record
– Speed Dial for FXS ports
– Anonymous call
– Reject anonymous calls
– Reminder

Flexibility

– Uploading/downloading configuration as a single file
– Creating multiple network interfaces for telephony (SIP, RTP) with different IP addresses
– Operation with multiple dial plans
– Voice activity control (by the presence of RTP or RTCP)[1]

Management and monitoring

– Alarm logging with the option of storing entries on the syslog server
– Storing traces on SD card/USB storage device
– Alarm reporting via SNMP
– FXS lines testing and monitoring
– Telephone connection display (FXS)
– Automatic logging activation after gateway restart
– Monitoring of active sessions of the web interface users

Billing

– Billing data is recorded to CDR file. Simultaneously, CDR file is recorded to a local SD disk, USB storage device or remote FTP server
– RADIUS Accounting
– Supported billing systems:
  – Hydra Billing
  – LANBilling
  – PortaBilling
  – NetUP
  – BGBilling
– Integration with other systems

Security

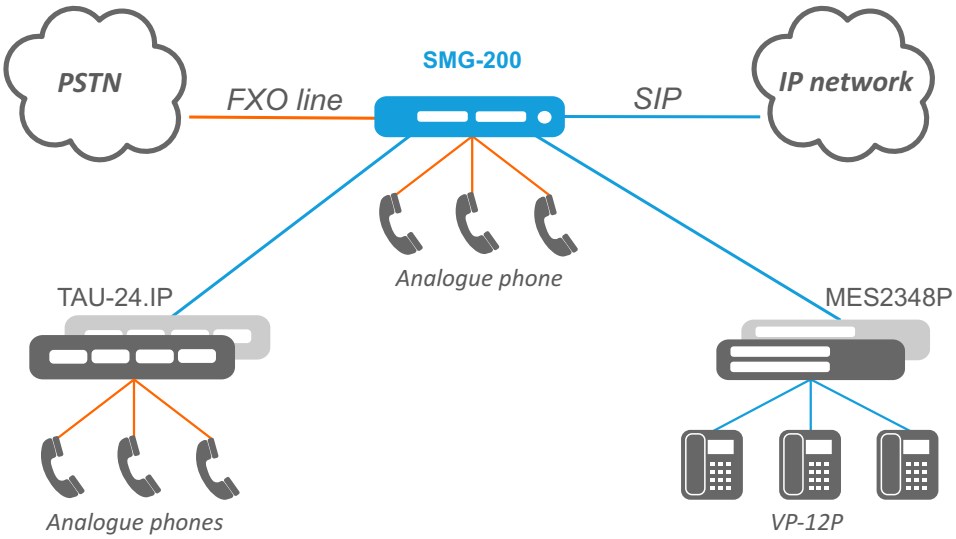
– Black and white IP address lists for registration
– Logging of all access attempts to the device
– Automatic IP blocking after unsuccessful login attempts or/and access via http/https/telnet/ssh
– List of IP addresses allowed to manage the device
– Multilevel web interface access permission
– SIP subscribers authentification
– RADIUS authorization (RFC 5090, Draft-Sterman)

Physical specifications and ambient parameters

Operating temperature	From 0 to +40 °C
Relative humidity	Up to 80 %
Power supply	AC: 220 V+-20 %, 50 Hz; Lead-acid battery: 12 V; – Battery charge current: 1.6+-0.1 A; – Low battery voltage threshold indication: 11 V; – Threshold voltage for battery deep discharge protection: 10-10.5 V.
Maximum power consumption	Up to 40 W during battery charge, up to 20 W without battery charge
Dimensions (W × H × D)	430 × 44 × 203 mm
Form factor	19", 1U
Weight	2.47 kg

[1] *Not supported in the current firmware version.*

Use case



Ordering information

Name	Description
SMG-200	IP PBX SMG-200: 100 SIP subscribers (can be extended to 200), 4×10/100/1000BASE-T ports (RJ-45), 1×USB 2.0 port, 1×USB 3.0 port, 16×FXS/FXO ports
SMG-200 modules	
M8S	M85 subscriber set submodule: 8 analog subscriber ports (FXS)
M8O	M8O PBX subscriber line submodule: 8 analog ports (FXO)

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About Eltex

Eltex Enterprise is a leading Russian developer and manufacturer of communication equipment with 30 years of history. Complete solutions and their seamless integrability into the Customer's infrastructure are the priority growth areas of the company.