

- Office PBX functionality
- 3G/4G channel reservation
- IPsec encryption
- TR-069/DHCP-based autoprovisioning
- Maximum line length—6 km
- Measurement of subscriber's line parameters



**TAU-4.IP** and **TAU-8.IP** VoIP gateways are optimal solutions that can be used to provide advanced VoIP services to corporate clients via analogue phone devices.

### Business solution

Due to the wide function set, TAU-4.IP and TAU-8.IP can be used as an independent mini office PBX with internal switching and basic set of value added services as well as in an interaction with an IP PBX.



### High-Quality Sound

A high-performance hardware platform based on a state-of-the-art Mindspeed Technologies chip, support for all popular audio codecs used in VoIP networks (G.711, G.723.1, G.726, G.729), echo cancellation, silence detector, comfort noise generator, DTMF signals receipt and generation and traffic prioritization (QoS) ensure the high quality of the voice data.

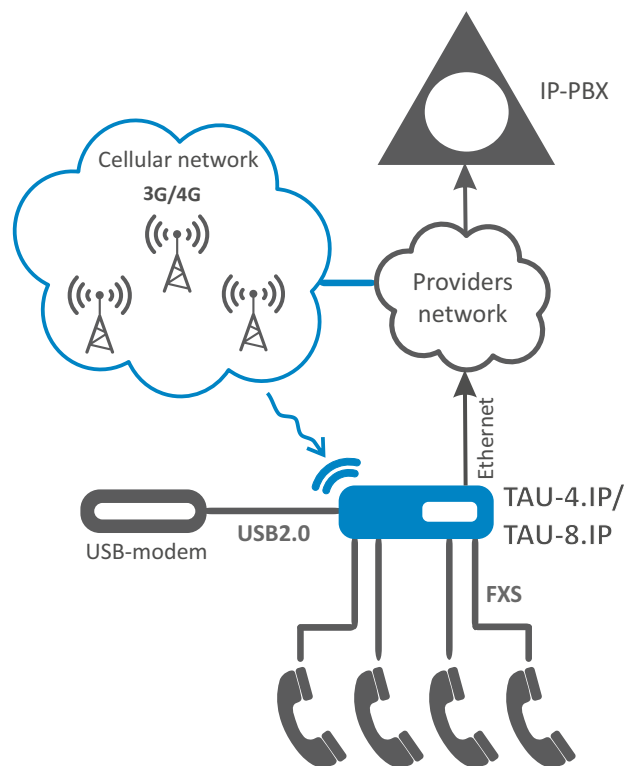
### Reservation

In case of loss of the main connection to the Internet, there is a possibility of automatic switching to a backup 3G/4G channel. If there is no a backup channel, the connection between gateway subscribers is saved.

### Easy-to-Use

Centralized configuration downloading, intellectual firmware update and collection of data on subscriber gateway status can be realized through Eltex.ACS system via TR-069. Eltex.ACS provides simplicity of Eltex CPE management and reduces operating expenses.

Scheme of using TAU-4.IP, TAU-8.IP



### Interface configuration

Name	WAN	FXS	FXS
TAU-4.IP	1x100M	4	1xUSB2.0
TAU-8.IP	1x100M	8	1xUSB2.0

## Features and capabilities

### Interfaces

- 4 FXS ports for TAU-4.IP
- 8 FXS ports for TAU-8.IP
- 1 WAN port 10/100Base-T
- 1 USB port

### VoIP protocols

- SIP

### Voice codecs

- G.711 (a-law,  $\mu$ -law)
- G.723.1
- G.726 (24 Kbps and 32 Kbps)
- G.729 (A/B)

### Fax

- T.38 UDP Real-Time Fax
- G.711 (a-law,  $\mu$ -law) pass-through

### Voice standards

- VAD (Voice Activity Detector)
- CNG (Comfort Noise Generation)
- AEC (Acoustic Echo Cancellation, G.168 recommendation)

### Functional features

- Payphones connection (polarity reversal, tariff impulses 12/16 KHz)
- Measurement of customer line physical parameters
- Internal switching is saved in case of a SIP-server connection failure
- VAS management via a phone
- Distinctive Ring
- Keep-alive during operation behind NAT

### DTMF

- Detection and generation of signals
- Transmission by INBAND, RFC 2833, SIP INFO methods

### Value Added services

- Call Hold
- Call Transfer
- Call Waiting
- Calls forwarding when busy
- Calls forwarding when no reply
- Calls forwarding unconditional
- Number identification (FSK Type I, FSK Type II, DTMF)
- Calling Line Identification Restriction (CLIR)
- Hotline/Warmline
- Call Group
- 3-Way Conference
- Pickup Group
- Hunt group
- 3-Way Conference gathered on a server (RFC 4579)

### VoIP functions

- Internal connections switching
- Operation without a SIP server
- Flexible dialplan
- 3G/4G reservation
- Management profiles for FXS ports
- SIP profiles (support for up to 8 profiles)
- Geographical redundancy of a SIP server (up to 4 backup SIP servers)
- Settings appliance without reboot
- Voice transmission through a protected channel (encryption through IPsec)
- IMS (3GPP TS 24.623) for Call Hold, Call Waiting, 3-Way Conference, Hotline management
- SIP server appliance from DHCP-option 120
- Support for the operation behind NAT (STUN and Public IP)
- Self call-control signals settings

### Quality of service (QoS)

- DSCP and 802.1p assignment for SIP and RTP packets
- Bandwidth redundancy

### Network functions

- Different protocols for connection to a service provider network (Static, DHCP, PPPoE, PPTP, L2TP)
- Local DNS server
- Static and dynamic routing
- VLAN per service (VLAN for each service: Internet, VoIP, Management)
- Firewall
- Operation via 3G/4G USB modems
- Print server
- IPsec (for voice transmission and remote control)

### Management

- WEB (multilingual\*)
- SNMP (phone parameters configuration, monitoring and statistics gathering)
- Telnet
- Syslog
- SSH
- TR-069 (operation through Eltex.ACS server is recommended)
- DHCP-based autoprovisioning (43, 66, 67 DHCP options)
- Management via IPsec encrypted channel

### Security

- Username and password authentication
- Firewall
- Distinction of access rights for admin/user

### USB port

- USB-storage connection with FAT/FAT32/EXT2/EXT3/NTFS file systems – files exchange via a network according to FTP protocol
- USB 3G/4G modems connection – 3G/4G channels reservation
- Printer connection – setting up of a print server

\* Supported in the firmware version 1.2.1 and higher

## Functionality

### Technical characteristics

- CPU Mindspeed
- SDRAM 256 MB
- Flash 32 MB
- OS Linux

### Physical characteristics

- Power adapter: 12V DC, 2A
- Power consumption:
  - up to 11 W for TAU-4.IP
  - up to 16 W for TAU-8.IP
- Operating temperature: from +5°C to +40°C
- Operating humidity: up to 80%
- Dimensions: 218x120x49 mm, desktop case
- Weight: no more than 0.3 kg

### Specifications

- RFC 3261 SIP 2.0
- RFC 3262 SIP PRACK
- RFC 4566 Session Description Protocol (SDP)
- RFC 3263 Locating SIP servers for DNS lookup SRV and A records
- RFC 3264 SDP Offer/Answer Model
- RFC 3311 SIP Update
- RFC 3515 SIP REFER
- RFC 3891 SIP Replaces Header
- RFC 3892 SIP Referred-By Mechanism
- RFC 4028 SIP Session Timer
- RFC 2976 SIP INFO Method
- RFC 2833 RTP Payload for DTMF Digits, Flash event
- RFC 3108 Attributes ecan and silenceSupp in SDP
- RFC 4579 SIP Call Control - Conferencing for User Agents
- RFC 3361 DHCP Option 120
- RFC 3550 RTP A Transport Protocol for Real-Time Applications

## Ordering information

Name	Description	Image
TAU-4.IP	VoIP-gateway TAU-4.IP: 4xFXS, 1xWAN, 1xUSB, SIP	
TAU-8.IP	VoIP-gateway TAU-8.IP: 8xFXS, 1xWAN, 1xUSB, SIP	

### Related software

ACS-CPE-256	ACS-CPE Option of Eltex.ACS system for Eltex CPE auto configuration: 256 subscribers
ACS-CPE-512	ACS-CPE Option of Eltex.ACS system for Eltex CPE auto configuration: 512 subscribers
ACS-CPE-1024	ACS-CPE Option of Eltex.ACS system for Eltex CPE auto configuration: 1024 subscribers

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## About EltexAlatau

**EltexAlatau** company is one of the first communication equipment manufacturers in Kazakhstan established in 2012. The main focus of the enterprise is a set of solutions and the opportunity of their seamless connection to the customer's infrastructure.