ELTEX
Integrated Networking Solutions

– **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
High-end functionality and seamless operation at maximum load allows TAU-4/8.IP to be used as a separate, independent mini PBX with internal commutation and basic set of VAS. Support of advanced standards ensures seamless integration with independent IP-PBX solutions.

High-Quality Sound
A high-performance hardware platform based on an advanced chip by Mindspeed Technologies supports 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.
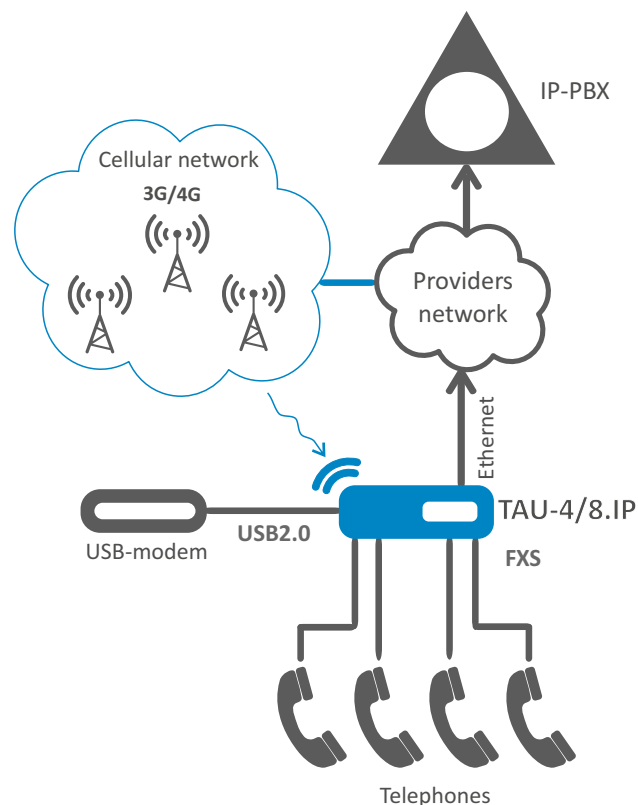
Reservation
In case of the main connection to the Internet loss, there is a possibility of automatic switching to a backup 3G/4G channel. If there is no backup channel, the connection between gateway subscribers is saved.

Easy-to-Use
The opportunity of centralized configuration downloading, intellectual firmware update and collection of data about subscriber gateway states is realized in Eltex.ACS via TR-069 protocol. The system provides simplicity of Eltex CPE management and reduces operating expenses.

Scheme of using TAU-4/8.IP

Interface configuration

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

Functionality

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

VoIP protocols
– SIP

Voice codecs
– G.711 (a-law, μ-law)
– G.723.1
– G. 726 (24 Kb/s and 32 Kb/s)
– G.729 (a/b)

Fax
– T.38 UDP Real-Time Fax
– 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)

Functional features
– Payphones connection (polarity reversal, tariff impulses 12/16 KHz)
– Measurements of customer line physical parameters
– Internal connection switching in case of connection loss with SIP-server
– VAS management from telephone
– Distinctive Ring
– Keep alive in case of working 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 of Caller ID
– Hotline/Warmline
– Call Group
– 3-Way Conference
– Pickup Group
– Group of Serial search
– 3-Way Conference, gathered on server (RFC 4579)

VoIP functions
– Internal connection switching
– Work without SIP-server
– Flexible numeration plan
– 3G/4G reservation
– Setting profiles for FXS-ports

– SIP profiles (up to 8 profiles)
– Geographical reservation of SIP-server (up to 4 backup SIP-servers)
– Settings appliance without reboot
– Voice transmission through protected channel (encryption by IPsec)
– IMS (3GPP TS 24.623) for Call Hold, Call Waiting, 3-Way Conference, Hotline management
– SIP-server appliance from DHCP-option 120
– Work behind NAT (STUN и Public IP)
– Self call-control signals settings

Quality of service (QoS)
– DSCP and 802.1p assignment for SIP and RTP packets
– Bandwidth reservation

Network functions
– Different protocols for connection to service provider network (Static, DHCP, PPPoE, PPTP, L2TP)
– Local DNS-server
– Dynamic/static routing
– VLAN per service (VLAN for each service: Internet, VoIP, Management)
– Firewall
– Work 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 (working with Eltex.ACS server is recommended)
– DHCP-based autoprovisioning (43, 66, 67 DHCP-options)
– Management via IPsec encrypted channel

Security
– Login and password authentication
– Firewall
– Distinction of access rights for admin/user

USB-port
– USB-storage connection to file systems FAT/FAT32/EXT2/EXT3/NTFS – files exchange in network according to FTP protocol
– USB 3G/4G modems connection – 3G/4G channel reservation
– Printer connection – print server setting

* Supported by firmware version 1.2.1 and higher

Functionality

Technical characteristics
– CPU Mindspeed
– SDRAM 256 Mb
– Flash 32 Mb
– Linux

Physical characteristics
– Power adapter: 12V DC, 2A
– Power consumption: up to 28 W
– Temperature: +5 °C to +40 °C
– Humidity: up to 80%
– Dimensions: 218x120x49 mm
– 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	
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	

Contact us

+7 (383) 274 10 01
+7 (383) 274 48 48

eltex@eltex.nsk.ru

www.eltex.nsk.ru

About Eltex

Eltex company is leading Russian developer and manufacturer of telecommunications equipment with 20 years of history. Integrity of solutions and seamless integration capability into Customer infrastructure is priority area of company development.