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 to provide corporate clients with advanced VoIP services via analogue phones.

Business solution

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

High-Quality Sound

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

Redundancy

In case of a loss of the main connection to the Internet, an opportunity of automatic switching to a redundant 3G/4G channel can be used. If there are no redundant channels, call forwarding between gateway subscribers is available.

Easy-to-Use

Centralized configuration download, intellectual firmware update and opportunity to collect data on subscriber gateways' status are implemented in Eltex.ACS via TR-069. The system reduces operating expenses (OPEX) and provides simplicity of Eltex CPE management.

TAU-4.IP

TAU-8.IP

Interface configuration

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

Current firmware version 2.6.3

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, μ-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, 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, meter impulses 12/16 KHz)
– Subscriber line's physical parameters measurement
– Internal switching in case of a SIP-server connection failure
– VAS management via a phone
– Distinctive Ring
– Keep-alive during operation behind NAT
– Calling Party Control (CPC)

DTMF
– Signal detection and generation
– Transmission by INBAND, RFC 2833, SIP INFO methods

Value Added services
– Call Hold
– Call Transfer
– Call Waiting
– Call forwarding when busy (CFB)
– Call forwarding on no reply (CFNR)
– Call forwarding unconditional (CFU)
– Number identification (FSK Type I, FSK Type II, DTMF)
– Calling Line Identification Restriction (CLIR)
– Hotline/Warmline
– Call Group
– 3-Way Conference
– Pickup Group
– Hunt groups
– A dedicated server for 3-Way Conferencing (RFC 4579)

VoIP functions
– Internal connection switching
– Operation without a SIP server
– Flexible dial plan
– Management profiles for FXS ports
– SIP profiles (support for up to 8 profiles)
– Geographical redundancy of a SIP server
  (up to 4 redundant SIP servers)
– Application of settings 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
– Using SIP servers from DHCP-option 120
– Support for operation behind NAT (STUN and Public IP)
– Setting custom call-control signals

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

Security
– Username and password authentication
– Firewall
– Access rights differentiation for admin/user
– Password encryption
– Digest authorization

* Supported in the firmware version 1.2.1 and higher

Features and capabilities

USB port

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

Technical features
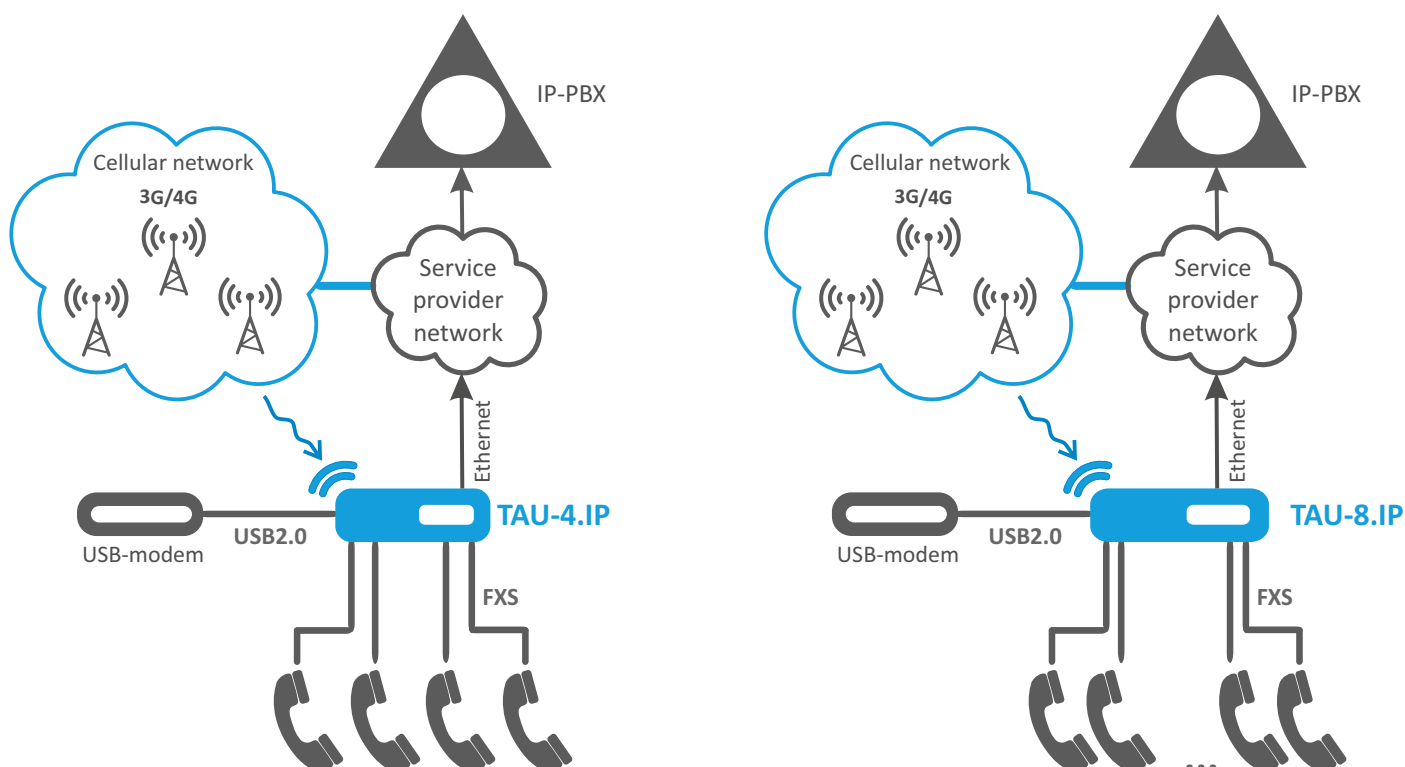
– CPU Mindspeed
– SDRAM 256 MB
– Flash 32 MB
– OS Linux

Physical features

– 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

Use case

ELTEX
Integrated networking solutions

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	