ELTEXALATAU

Integrated networking solutions

TAU-1M.IP

- •1xFXS •2xLAN •1xWAN •1xUSB
- **– Triple Play**
- **– VLAN per service**
- **– Autoprovision (TR-069, DHCP)**

TAU-2M.IP

- •2xFXS •1xLAN •1xWAN •1xUSB
- **– High quality Voice**
- **– Faxing**
- **– USB 3G/4G modems support**

Home terminal
TAU-1M.IP is an access gateway with embedded router. The device has FXS port for analogue telephone connection, 2 LAN 10/100BASE-T ports for TV or Set-Top boxes connection. The terminal connects to service provider networks via WAN 10/100BASE-T port and has a USB port for 3G/4G modems or USB storage device connection.

Eltex.ACS (TR-069) management system
Eltex.ACS autoconfiguration system is implemented on the basis of TR-069 protocol, provides operator with a convenient functionality for management of firmware versions and configurations of customer devices. Eltex.ACS loads an individual configuration into a device automatically, in accordance with the subscriber's account data. A function of intellectual upgrading of firmware versions works succes- sively with the devices on the network by updating the groups of devices according to assigned queue discipline. System Eltex.ACS is provided with NorthBound Interface (NBI) for interacting with OSS complexes.

Ease of usage
User-friendly control interface, supporting means of group- type automated control on the basis of TR-069 and DHCP (DHCP-autoprovision) protocols ensure ease of using unlim- ited number of TAU-1M.IP gateways on the operator's network.

Office terminal
TAU-2M.IP is an access gateway which is intended for con- necting analogue telephone and facsimile sets to an IP network. The service is provided via a converge data trans- mission network, where different IP-PBX can be used.

Faxing
Transmission of facsimile messages is implemented by means of audiocodec G.711 pass-through and according to T.38 protocol.

High Quality Voice
High performance hardware platform based on up-to-date Realtek chipset, support of all basic audio codecs used in VoIP- networks (G.711, G.723.1, G.726, G.729), echo elimina- tion functions, silence detector, comfort noise generator, DTMF signal reception and generation, as well as traffic prioritization mechanism (QoS) provide high quality of voice data.

Channel redundancy
In case of loss of connection with primary SSW, the device switches to a reserved SSW and monitors state of the primary one. If the device loses connection with both IP servers, calls between local subscribers still can be switched.

Technical features

Interfaces
– 1 FXS port for TAU-1M.IP
– 2 FXS ports for TAU-2M.IP
– 1 WAN 10/100BASE-T port
– 2 LAN 10/100BASE-T ports for TAU-1M.IP
– 1 LAN 10/100BASE-T port for TAU-2M.IP
– 1 USB 2.0 port

VoIP protocols
– SIP

Voice codecs
– G.711 a-law, μ-law
– G.722
– G.723.1
– G.726
– G.729 (A/B)

Faxing
– T.38 UDP Real-Time Fax
– a-law, μ-law G.711 pass-through

Voice standards
– VAD (Voice Activity Detection)
– CNG (Comfort Noise Generation)
– AEC (echo cancellation, G.165, G.168 recommendations)

DTMF
– DTMF signals detection and generation
– Transmission via INBAND, RFC 2833, SIP INFO

Value Added Services
– Call Hold
– Call Transfer
– Notice of new call arrival (Call Waiting)
– Call forward on busy (CFB)
– Call Forward No Reply (CFNR)
– Call Forward Unconditionally (CFU)
– Caller ID
– Calling line identification restriction (CLIR)
– Hotline/Warmline
– Call Group
– 3-Way conference

VoIP functionality
– Internal connections switching
– Operating without SIP-server
– Flexible numbering plan
– Parameters profiles for ports
– Settings are applied without rebooting
– IMS (3GPP TS 24.623) support for Hold, CW, 3-Way conference, Hotline
   services management
– SIP TLS support
– # symbol transmission as %23

Quality of Service (QoS)
– Diffserv and 802.1p priority assignment for SIP and RTP
– Traffic prioritization according DSCP and 802.1p

Types of connections
– Static IP address
– DHCP-client
– PPPoE
– PPTP
– L2TP

Current firmware version - 1.15.0

Network Functions
– Bridge and router mode
– NAT
– Static routing
– VLAN per service (Internet, VoIP, IPTV)
– IGMP
– DHCP-, DNS- server on LAN
– Port forwarding
– Firewall
– 3G/4G-router mode
– UPnP
– Automatic redundancy of «3G/4G router» and «Wire connection»
   modes

Supported 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
– RFC 3611 RTP Control Protocol Extended Reports (RTCP XR)

Management
– WEB (English and Russian versions)
– Telnet
– FTP
– Syslog
– SSH
– TR-069 (recommended to work with Eltex.ACS server)
– DHCP autoprovisioning (periodically and scheduled)
– SNMP (configuration and monitoring)

Security
– Username and password verification
– Firewall
– Access rights delimitation admin/user/viewer

USB-port
– USB-drive connection with FAT/FAT32/EXT2/EXT3/NTFS file systems
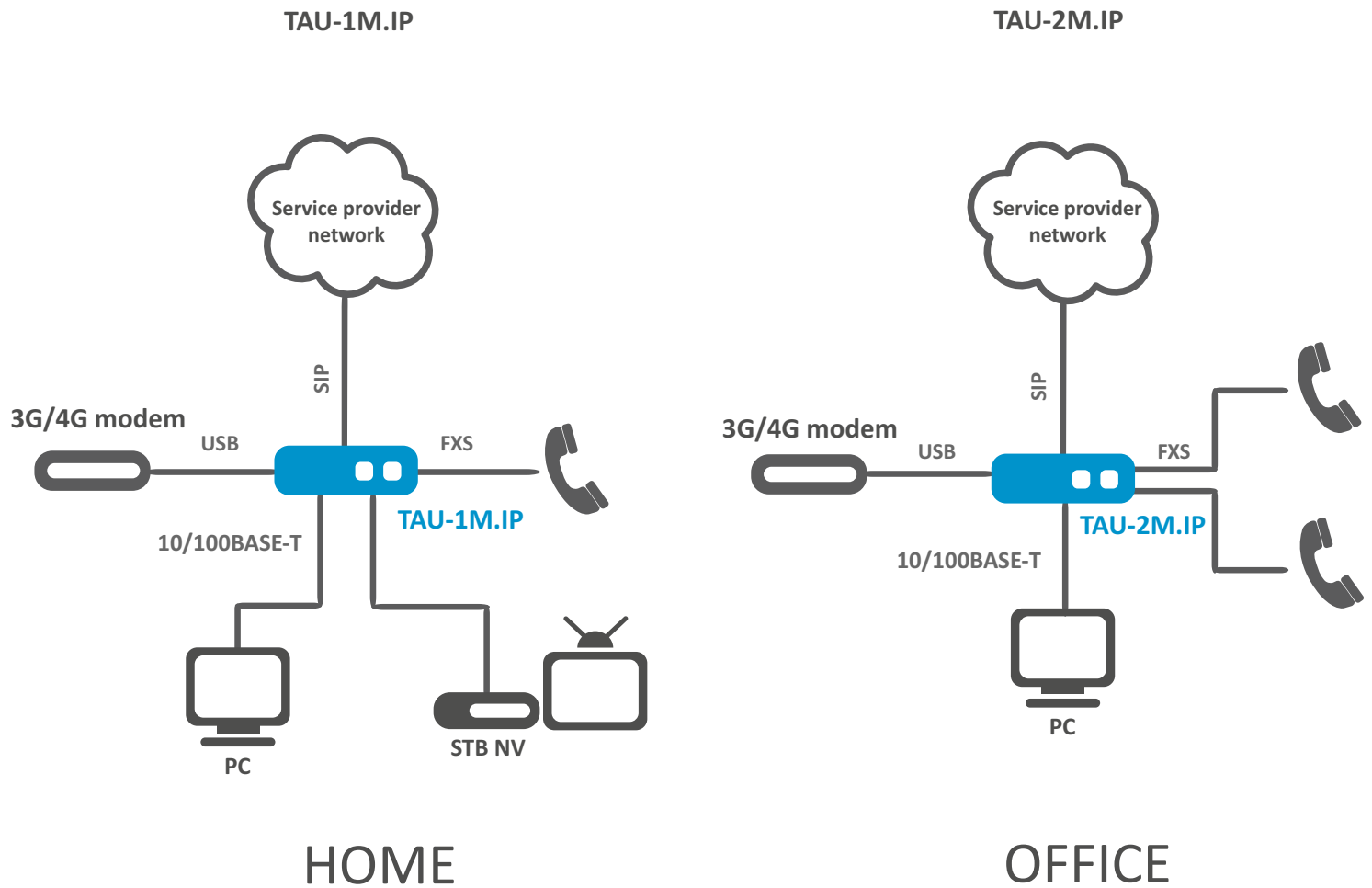– USB 3G/4G modem connection - operating in 3G/4G router mode

Main technical features
– Realtek 8972C processor
– SDRAM 128 MB
– SPI Flash 8 MB
– OS Linux

Physical characteristics
– Power adapter 12 VDC, 1 A
– Power consumption: no more than 6 W (TAU-1M.IP),
                    no more than 7,2 W (TAU-2M.IP)
– Operating temperature: from +5 °C to +40 °C
– Operating humidity: 80% max.
– Dimensions (WxDxH): 122x96x33 mm, desktop case

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Integrated networking solutions

Application diagram

TAU-1M.IP

3G/4G modem
USB
SIP
FXS
TAU-1M.IP
10/100BASE-T
PC
STB NV

Service provider network

HOME

TAU-2M.IP

3G/4G modem
USB
SIP
FXS
TAU-2M.IP
10/100BASE-T
PC

Service provider network

OFFICE

Ordering Information

Name	Description	Image
TAU-1M.IP	TAU-1M.IP - VoIP subscriber gateway with built-in router: 1xFXS, 1xWAN, 2xLAN, 1xUSB, SIP	
TAU-2M.IP	TAU-2M.IP - VoIP subscriber gateway with built-in router: 2xFXS, 1xWAN, 1xLAN, 1xUSB, SIP	
Software		
ACS-CPE-256	ACS-CPE-256 option of Eltex.ACS system for Eltex CPE auto configuration: 256 subscriber devices	
ACS-CPE-512	ACS-CPE-512 option of Eltex.ACS system for Eltex CPE auto configuration: 512 subscriber devices	
ACS-CPE-1024	ACS-CPE-1024 option of Eltex.ACS system for Eltex CPE auto configuration: 1024 subscriber devices	

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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.