

- Data routing
- Hardware acceleration
- Multiprotocol Label Switching (MPLS)
- Construction of secure network perimeter (NAT, Firewall)
- Intrusion prevention and detection (IPS/IDS)
- Service Level Agreement (SLA)
- Filtering of network data by various criteria (including filtering by applications)
- Organization of secure network tunnels between different offices of a company
- Remote connection of staff members to an office
- Internet channel management and bandwidth allocation within an office using QoS
- Pairing with equipment of leading manufacturers
- Organization of redundant connection (by means of wires or 3G/LTE modem)



ESR-15VF



ESR-15R

ESR-15VF and ESR-15R are service routers designed for connection of small and middle-sized offices in enterprise networks. The functionality of firewall and router allows ensuring security with various Internet connection options. The device supports advanced routing, WAN organization and network security functions.

ESR-15VF has FXS ports that allow installing up to three analog handsets and connecting them to a corporate telephone network without VoIP gateways.

The key elements of ESR service routers are data processing hardware acceleration means that ensure a high level of performance. Hardware and software processing is distributed among the units of the device.

Technical features

	ESR-15VF	ESR-15R
Interfaces		
Ethernet 1000BASE-X SFP		2
Ethernet 10/100/1000BASE-T	8	4
Console RS-232 (RJ-45)		1
FXS	4	–
USB 2.0		2
Performance		
Firewall/NAT/routing (1518B frames)		1.15 Gbps; 94.7k pps
Firewall/NAT/routing (74B frames)		67 Gbps; 113.2k pps
Firewall/NAT/routing (IMIX) ¹		564.7 Mbps; 102.3k pps
L2 switching (1518B frames)		1.15 Gbps; 94.7k pps
IPsec VPN (1456B frames)		249.7 Mbps; 21.4k pps

Functionality for firmware version 1.20.

¹8:74;5:512;7:1518.

Technical features (continued)

	ESR-15VF	ESR-15R
Performance		
IPsec (IMIX) ¹		130.5 Mbps; 24.4k pps
Single IPsec tunnel (74B frames)		8 Mbps; 13.4k pps
Single IPsec tunnel (1456B frames)		128.3 Mbps; 11k pps
Single IPsec (IMIX)		65.3 Mbps; 12.2k pps
IPS/IDS 10k rules		35.8 Mbps; 9.5k pps
System features		
VPN tunnels		10
Static routes		1k
Concurrent sessions		4k
VLAN support	up to 4k active VLANs in accordance with 802.1Q	
BGP routes		1M
OSPF routes		30k
RIP routes		1k
MAC table		2k entries per bridge
FIB size		1M
VRF		32
Physical specifications and environmental parameters		
Maximum power consumption	22 W	18 W
Power supply	100–264 V AC, 50–60 Hz	
Operating temperature	from 0 to +40 °C	
Storage temperature	from -40 to +70 °C	
Operating humidity	no more than 80 %	
Storage humidity	from 10 to 95 %	
Dimensions (W × H × D)	267 × 44 × 160 mm	
Weight	1.534 kg	1.405 kg

¹Functionality for firmware version 1.20.

¹8:74;5:512;7:1456.

Features and capabilities

Interfaces

- USB 3G/4G/LTE modem
- E1 TopGate SFP

Remote Access VPN clients

- PPTP/PPPoE/L2TP/OpenVPN/IPsec XAUTH

Remote Access VPN server

- L2TP/PPTP/OpenVPN/IPsec XAUTH

Site-to-site VPN

- IPsec: “policy-based” and “route-based” modes
- DMVPN
- DES, 3DES, AES, Blowfish, Camellia
- IKE MD5, SHA-1, SHA-2 message authentication

Tunneling

- IPoGRE, EoGRE
- IPIP
- L2TPv3
- LT (inter VRF routing)

L2 functions

- Packet switching (bridging)
- LAG/LACP (802.3ad)
- VLAN (802.1Q)
- Logical interface
- LLDP, LLDP MED
- MAC-based VLAN

L3 functions (IPv4/IPv6)

- NAT, Static NAT, ALG
- Static routes
- RIPv2, OSPFv2/v3, IS-IS, BGP
- Route filtering (prefix list)
- VRF
- Policy Based Routing (PBR)
- BFD для BGP, OSPF, static routes

BRAS (IPoE)¹

- Subscriber termination
- White/black URL lists
- Quotas for traffic volume, session time, network applications
- HTTP/HTTPS Proxy
- HTTP/HTTPS Redirect
- Session accounting via Netflow protocol
- Interaction with AAA, PCRF servers
- Bandwidth management by offices, SSIDs and user sessions
- User authentication by MAC or IP address

Network security functions

- Intrusion Prevention/Detection system (IPS/IDS)¹
- Interaction with Eltex Distribution Manager for obtaining licensable content — rule sets distributed by Kaspersky SafeStream II¹

- Web filtering by URL, by content (cookies, ActiveX, JavaScript)
- Zone-based Firewall
- Filtering based on L2/L3/L4 fields and applications
- Support for access control lists (ACL) based on L2/L3/L4 fields
- Protection against DoS/DDoS attacks and notification on them
- Logging of attack and rule triggering events

Quality of Service (QoS)

- Up to 8 priority or weighted queues per port
- L2 and L3 traffic prioritization (802.1p (CoS), DSCP, IP Precedence (ToS))
- RED, GRED congestion avoidance algorithms
- Priority re-marking mechanisms
- Policy-map
- Bandwidth management (shaping)
- Hierarchical QoS
- Session labeling

IP addressing management (IPv4/IPv6)

- Static IP addresses
- DHCP client
- DHCP Relay Option 82
- Embedded DHCP server, 43, 60, 61, 150 options support
- DNS resolver
- IP unnumbered

Network reliability assurance means

- VRRP v2,v3
- Routes tracking based on VRRP
- WAN interfaces load balancing, data stream redirection, channel switching during QoS control
- Firewall sessions backup

Management and monitoring

- Support for standard and extended SNMP MIB, RMONv1
- Embedded Zabbix agent
- Authentication methods: RADIUS, TACACS+, LDAP
- Protection against configuration errors, automatic configuration recovery. Ability to restore the factory configuration
- CLI
- Syslog
- System resource usage monitoring
- Ping, traceroute (IPv4/IPv6), packet information in console output
- Firmware upgrade, configuration upload and download via TFTP, SCP, FTP, SFTP, HTTP(S)
- NTP
- Netflow v5/v9/v10 (export for URL statistics for HTTP, host for HTTPS)
- Local control via RS-232 (RJ-45) console port
- Remote control via Telnet, SSH (IPv4/IPv6)
- Displaying information on services/processes
- Local/remote router configuration storage

Functionality for firmware version 1.20.

¹ Activated by license.

Features and capabilities (continued)

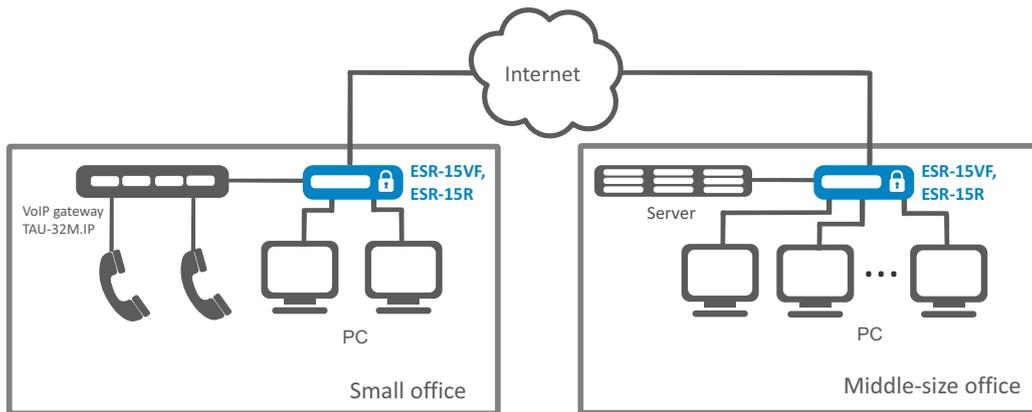
MPLS

- LDP
- 2VPN VPWS
- L2VPN VPLS Martini Mode
- L2VPN VPLS Kompella Mode
- L3VPN MP-BGP

SLA control functions

- Eltex SLA
- Channel parameters evaluation:
 - Delay (one-way/two-way)
 - Jitter (one-way/two-way)
 - Packet loss (one-way/two-way)
 - Packet Error Rate
 - Out-of-order delivery

Use case



Ordering information

Name	Description
ESR-15VF	ESR-15VF service router, 2×Ethernet 1000BASE-X SFP, 8×Ethernet 10/100/1000BASE-T, 2×USB 2.0, 4×FXS, 4 GB RAM, 100–264 V AC
ESR-15R	ESR-15R service router, 2×Ethernet 1000BASE-X SFP, 4×Ethernet 10/100/1000BASE-T, 2×USB 2.0, 4 GB RAM, 100–264 V AC

Functionality for firmware version 1.20.

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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.