

MAC-	MAC- MAC- . 128k MAC- MAC- .
	MAC- , , . MAC- VLAN. . MAC-, . MAC-, , , L2- .

OSI

3 (2 OSI).
3 – (2 OSI)

VLAN	VLAN (Virtual Local Area Network) – L2. VLAN , . VLAN: • VLAN , IEEE 802.1Q; • VLAN (port-based); • VLAN (policy-based).
(Spanning Tree Protocol) ¹	Spanning Tree . .

¹ ESR-1000

OSI

4 (3 OSI).
4 – (Layer 3)

IP-	.
	. : RIPv2, RIPv2, OSPFv2, OSPFv3, IS-IS, BGP.
ARP	ARP (Address Resolution Protocol) – . ARP . , .
DHCP	DHCP (Dynamic Host Configuration Protocol) . DHCP DHCP-. , (WAN).
DHCP	DHCP . DHCP- . DHCP-, , IP- – , .
DHCP Relay	DHCP Relay DHCP Discover- (unicast) DHCP Discover- .
(NAT, Network Address Translation)	– , IP- . NAT IP-, IP- IP-. NAT . NAT: • Source NAT (SNAT) – , ; • Destination NAT (DNAT) – , (NAT).

5 –

	– , , . , , . : • GRE – IP-/Ethernet- IP- c GRE (General Routing Encapsulation)-; • IPv4-IPv4 – , IP- IP- ; • L2TPv3 – L2- IP-; • IPsec – ; • L2TP, PPTP, PPPoE, OpenVPN – , -.
--	--

	, , . TFTP, FTP, SCP.
(CLI)	CLI RS-232 Telnet, SSH. (CLI) . CLI .
Syslog	Syslog .
ping, traceroute	ping traceroute – IP-.
-	. . 1 15, 15 .
	- . : • – , ; • – . RADIUS TACACS.
SSH/ c Telnet	SSH Telnet .
	, . – .

	. , , .
	. , , . .

	ESR-1700	4 x Combo Ethernet 10/100/1000BASE-T/1000BASE-X 8 x 10GBASE-R/1000BASE-X (SFP+/SFP) 2 x 1 x RJ-45 1 x OOB 2 x USB 2.0
	ESR-3100	8 x Combo Ethernet 10/100/1000BASE-T/1000BASE-X 8 x 10GBASE-R/1000BASE-X (SFP+/SFP) 1 x RJ-45 2 x USB 3.0 1 x SD-

ESR-1511	4 x Combo Ethernet 10/100/1000BASE-T/1000BASE-X 4 x Ethernet 10/100/1000BASE-T (RJ-45) 4 x 10GBASE-R/1000BASE-X (SFP+/SFP) 2 x 40GBASE-X (QSFP+) 1 x RJ-45 1 x OOB 2 x USB 2.0 1 x SD-
ESR-1500	4 x Combo Ethernet 10/100/1000BASE-T/1000BASE-X 4 x Ethernet 10/100/1000BASE-T (RJ-45) 4 x 10GBASE-R/1000BASE-X (SFP+/SFP) 1 x RJ-45 1 x OOB 2 x USB 2.0 1 x SD-
ESR-1200	4 x Combo Ethernet 10/100/1000BASE-T/1000BASE-X 12 x Ethernet 10/100/1000BASE-T (RJ-45) 8 x 10GBASE-R/1000BASE-X (SFP+/SFP) 1 x RJ-45 2 x USB 2.0 1 x SD-
ESR-1000	24 x Ethernet 10/100/1000BASE-T (RJ-45) 2 x 10GBASE-R/1000BASE-X (SFP+/SFP) 1 x RJ-45 2 x USB 2.0 1 x SD-
ESR-200	4 x Combo Ethernet 10/100/1000BASE-T/1000BASE-X 4 x Ethernet 10/100/1000BASE-T (RJ-45) 1 x RJ-45 1 x USB 3.0 1 x USB 2.0 1 x SD-
ESR-100	4 x Combo Ethernet 10/100/1000BASE-T/1000BASE-X 1 x RJ-45 1 x USB 3.0 1 x USB 2.0 1 x SD-

ESR-21	8 x Ethernet 10/100/1000BASE-T (RJ-45) 4 x 1000BASE-X (SFP) 3 x RS-232 1 x RJ-45 1 x USB 3.0 1 x USB 2.0 1 x SD-
ESR-20	2 x Combo Ethernet 10/100/1000BASE-T/1000BASE-X 2 x Ethernet 10/100/1000BASE-T (RJ-45) 1 x RJ-45 1 x USB 3.0 1 x USB 2.0 1 x SD-
ESR-14VF	8 x Ethernet 10/100/1000BASE-T (RJ-45) 1 x 1000BASE-X (SFP) 1 x RJ-45 4 x FXS 2 x USB 2.0
ESR-12VF	8 x Ethernet 10/100/1000BASE-T (RJ-45) 1 x 1000BASE-X (SFP) 1 x RJ-45 3 x FXS 1 x FXO 2 x USB 2.0
ESR-12V	8 x Ethernet 10/100/1000BASE-T (RJ-45) 1 x RJ-45 3 x FXS 1 x FXO 2 x USB 2.0
ESR-10	4 x Ethernet 10/100/1000BASE-T (RJ-45) 2 x 1000BASE-X (SFP) 1 x RJ-45 2 x USB 2.0
ESR-1511	1000BASE-X SFP 10GBASE-R SFP+ 40GBASE-X QSFP+

	ESR-1700 ESR-3100 ESR-1500 ESR-1200 ESR-1000	1000BASE-X SFP 10GBASE-R SFP+
	ESR-200 ESR-100 ESR-21 ESR-20 ESR-14VF ESR-12VF ESR-10	1000BASE-X SFP
		• •
L2- ()	ESR-1700 ESR-1511 ESR-1500 ESR-1200	160 /
	ESR-1000	88 /
	ESR-1511	10/100/1000 / 1/10/40 /
	ESR-1700 ESR-3100 ESR-1500 ESR-1200 ESR-1000	10/100/1000 / 1/10 /
	ESR-200 ESR-100 ESR-21 ESR-20 ESR-14VF ESR-12V(F) ESR-10	10/100/1000 / 1 /
VPN-	ESR-1700 ESR-3100 ESR-1511 ESR-1500 ESR-1200 ESR-1000	500

	ESR-200 ESR-100 ESR-21 ESR-20	250
	ESR-14VF ESR-12V(F) ESR-10	10
	ESR-1700 ESR-3100 ESR-1511 ESR-1500 ESR-1200 ESR-1000 ESR-200 ESR-100 ESR-21 ESR-20	11k
	ESR-14VF ESR-12V(F) ESR-10	1k
	ESR-1700 ESR-3100 ESR-1511 ESR-1500 ESR-1200 ESR-1000	512k
	ESR-200 ESR-100 ESR-21 ESR-20	256k
	ESR-14VF ESR-12V(F) ESR-10	4k
VLAN		4k VLAN 802.1Q
BGPv4/BGPv6	ESR-1700 ESR-3100 ESR-1511 ESR-1500 ESR-1200 ESR-1000	5M

	ESR-200	2,5M
	ESR-100	
	ESR-21	
	ESR-20	
	ESR-14VF	1M
	ESR-12V(F)	
	ESR-10	
OSPFv2/OSPFv3/IS-IS	ESR-1700	500k
	ESR-3100	
	ESR-1511	
	ESR-1500	
	ESR-1200	
	ESR-1000	
	ESR-200	300k
	ESR-100	
	ESR-21	
	ESR-20	
	ESR-14VF	30k
	ESR-12V(F)	
	ESR-10	
RIP/RIPng		10k
MAC-	ESR-1700	128k
	ESR-1511	
	ESR-1500	
	ESR-1200	
	ESR-1000	16k
	ESR-3100	2k
	ESR-200	
	ESR-100	
	ESR-21	
	ESR-20	
	ESR-14VF	
	ESR-12V(F)	
	ESR-10	
FIB	ESR-1700	3,0M
	ESR-3100	1,7M
	ESR-1511	
	ESR-1500	
	ESR-1200	
	ESR-1000	

	ESR-200 ESR-100 ESR-21 ESR-20	1,4M
	ESR-14VF ESR-12V(F) ESR-10	1M
VRF Lite		32
L3-	ESR-1700 ESR-3100 ESR-1500 ESR-1511 ESR-1200 ESR-1000 ESR-200 ESR-100 ESR-21 ESR-20	4000
	ESR-14VF ESR-12V(F) ESR-10	200
		IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-T Fast Ethernet IEEE 802.3ab 1000BASE-T Gigabit Ethernet IEEE 802.3z Fiber Gigabit Ethernet IEEE 802.3ba 40GBASE-SR4, 40GBASE-LR4 ANSI/IEEE 802.3 IEEE 802.3x IEEE 802.3ad LACP IEEE 802.1Q VLAN IEEE 802.1v IEEE 802.3ac IEEE 802.3ae IEEE 802.1D IEEE 802.1w IEEE 802.1s
		CLI
		TELNET, SSH

	ESR-1700	: 176–264 , 50–60 : 36–72 : • ; • , .
	ESR-3100 ESR-1511 ESR-1500 ESR-1200 ESR-1000	: 100–240 , 50–60 : 36–72 : • ; • , .
	ESR-200 ESR-100 ESR-21 ESR-20 ESR-14VF ESR-12V(F)	: 100–264 , 50–60
	ESR-10	220 /12 , 1,5 A
	ESR-1700	250
	ESR-3100	123
	ESR-1511	128
	ESR-1500	125
	ESR-1200	85
	ESR-1000	75
	ESR-200	25
	ESR-100	20
	ESR-21	32
	ESR-20	25
	ESR-14VF ESR-12V(F)	22
	ESR-10	9
	ESR-1700	12
	ESR-3100	5
	ESR-1511 ESR-1500	7
	ESR-1200	5,5
	ESR-1000	3,6
	ESR-200 ESR-100	2,5
	ESR-21	3,15
	ESR-20	2

	ESR-14VF ESR-12V(F) ESR-10	1
(xx)	ESR-1700	440x88x490
	ESR-3100	430x44x425
	ESR-1511	
	ESR-1500	
	ESR-1200	430x44x352
	ESR-1000	
	ESR-200	31044x240
	ESR-100	
	ESR-21	43044x225
	ESR-20	26744x212
	ESR-14VF ESR-12V(F)	267x43,6x160,5
	ESR-10	185x32x118
	ESR-1700	-10 +45 °
	ESR-3100	
	ESR-1511	
	ESR-1500	
	ESR-1200	
	ESR-1000	
	ESR-200	
	ESR-100	
	ESR-21	
	ESR-20	
	ESR-14VF ESR-12V(F) ESR-10	0 +40 °
		-40 +70 °
()		80%
()		10% 95%
		15

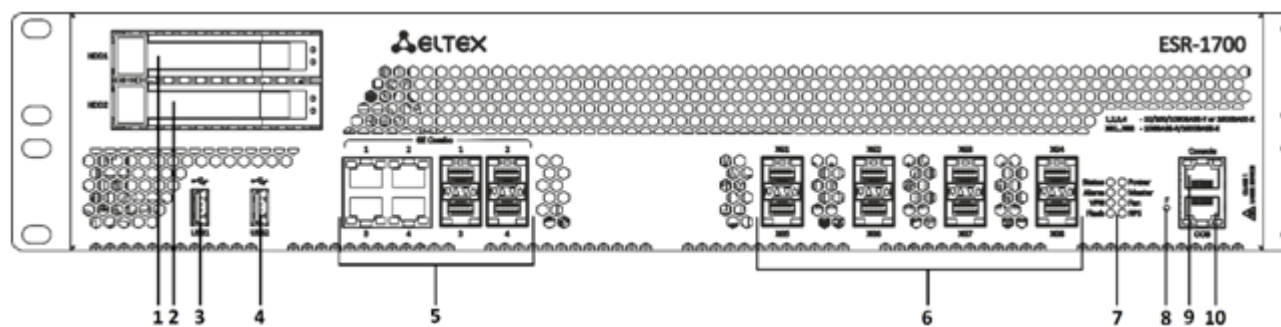
• , • , •

19", 1U.

ESR-1700

ESR-1700

1.



1 – ESR-1700

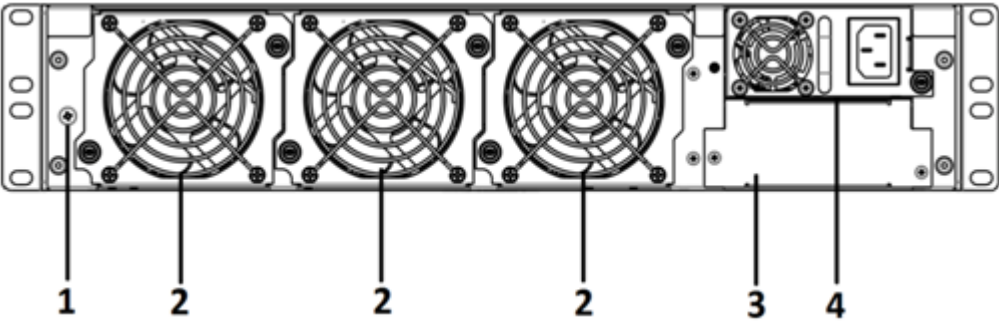
9 , , ESR-1700.

9 – , ESR-1700

1	HDD1	.
2	HDD2	.
3	USB1	USB-.
4	USB2	USB-.
5	Combo Ports [1 .. 4]	4 Gigabit Ethernet 10/100/1000BASE-X (SFP).
6	XG1 – XG8	10G SFP+/1G SFP.
7	Status	.
	Alarm	.
	VPN	VPN- ().
	Flash	– SD- USB Flash.
	Power	.
	Master	failover- ().
	Fan	.
	RPS	.
8	F	: • 10 ; • 10 .
9	Console	RS-232 .
10	OOB	Ethernet- .

ESR-1700

ESR-1700 .



2 – ESR-1700

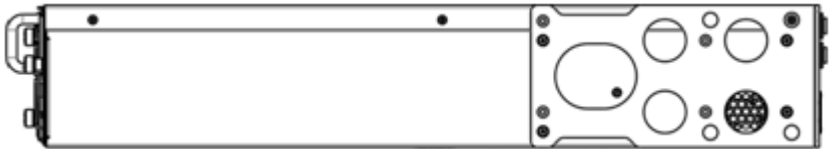
10 , .

10 –

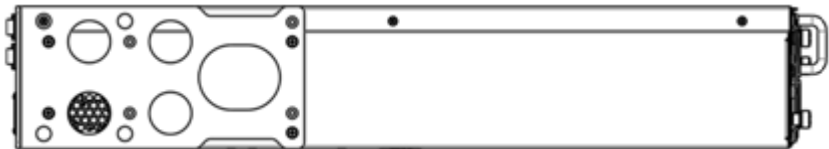
1	.
2	.
3	.
4	.

ESR-1700

ESR-1700 3 4.



3 – ESR-1700



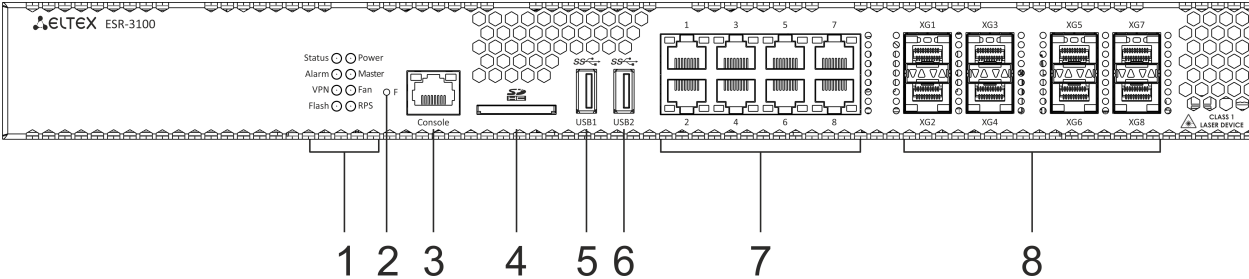
4 – ESR-1700

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ESR-3100

ESR-3100

5.



5 – ESR-3100

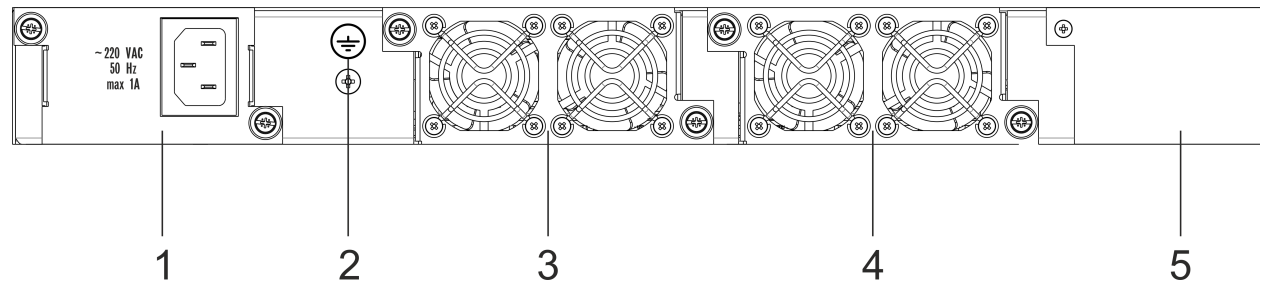
11 , , ESR-3100.

11 – , ESR-3100

1	Status	.
	Alarm	.
	VPN	VPN-.
	Flash	– SD- USB Flash.
	Power	.
	Master	failover- ().
	Fan	.
	RPS	.
2	F	: • 10 ; • 10 .
3	Console	RS-232 .
4	SD	SD- .
5	USB1	USB 3.0 USB-.
6	USB2	USB 3.0 USB-.
7	[1 .. 8]	8 Gigabit Ethernet 10/100/1000BASE-T (RJ-45).
8	XG1 – XG8	10G SFP+/1G SFP.

ESR-3100

ESR-3100 .



6 – ESR-3100

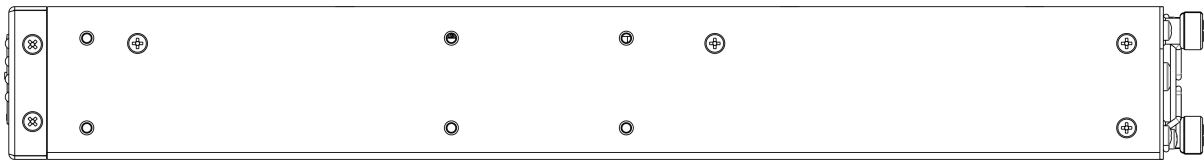
12 , .

12 –

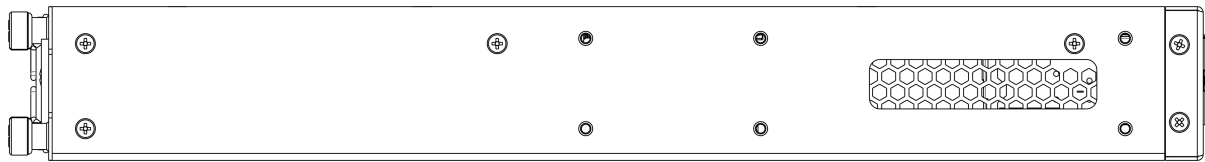
1	.
2	.
3	.
4	.
5	.

ESR-3100

ESR-3100 7 8.



7 – ESR-3100



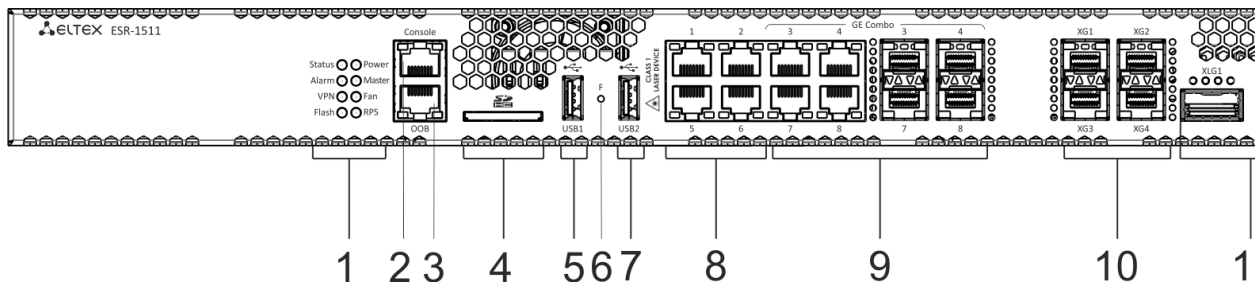
8 – ESR-3100

,

ESR-1511, ESR-1500

ESR-1511

9.



9 – ESR-1511

13 , , ESR-1511.

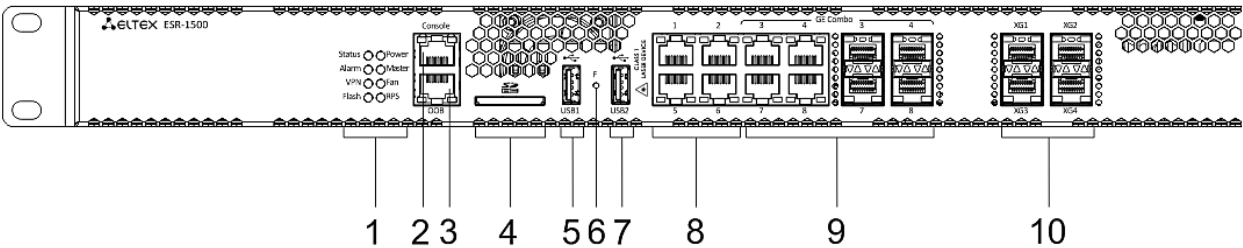
13 – , ESR-1511

1	Status	.
	Alarm	.
	VPN	VPN- ().
	Flash	– SD- USB Flash.
	Power	.
	Master	failover- ().
	Fan	.
	RPS	.
2	Console	RS-232 .
3	OOB	Ethernet- .
4	SD	SD- .
5	USB1	USB-.

6	F	• 10 ; • 10 .
7	USB2	USB-.
8	Ethernet	4 Ethernet 10/100/1000BASE-T.
9	Combo Ports [1 .. 4]	4 Gigabit Ethernet 10/100/1000BASE-X (SFP).
10	XG1 – XG4	10G SFP+/1G SFP.
11	XLG1 – XLG2	40G QSFP+.

ESR-1500

10.



10 – ESR-1500

14 , , ESR-1500.

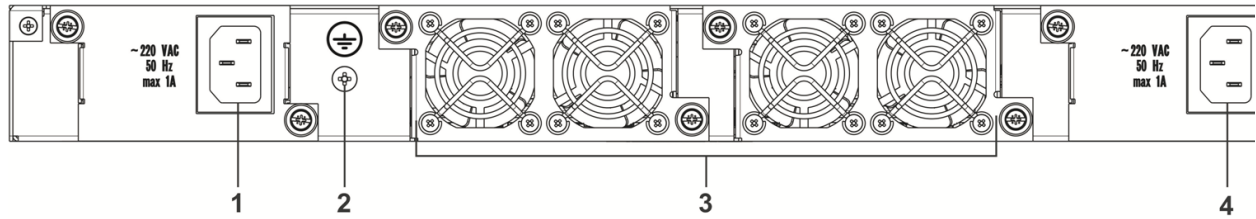
14 – , ESR-1500

1	Status	.
	Alarm	.
	VPN	VPN- ().
	Flash	– SD- USB Flash.
	Power	.
	Master	failover- ().
	Fan	.
	RPS	.
2	Console	RS-232 .
3	OOB	Ethernet- .
4	SD	SD- .
5	USB1	USB-.
6	F	• 10 ; • 10 .
7	USB2	USB-.
8	Ethernet	4 Ethernet 10/100/1000BASE-T.
9	Combo Ports [1 .. 4]	4 Gigabit Ethernet 10/100/1000BASE-X (SFP).

10	XG1 – XG4	10G SFP+/1G SFP.
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ESR-1511, ESR-1500

ESR-1511, ESR-1500 11.



11 – ESR-1511, ESR-1500

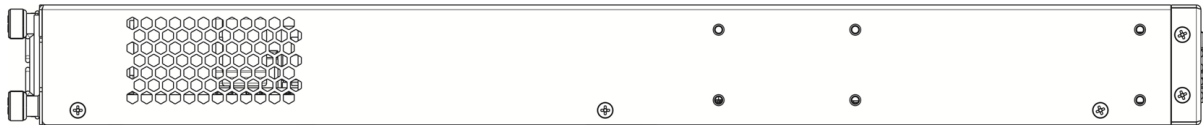
15 , .

15 –

1	.
2	.
3	.
4	.

ESR-1511, ESR-1500

ESR-1511, ESR-1500 12 13.



12 – ESR-1511, ESR-1500



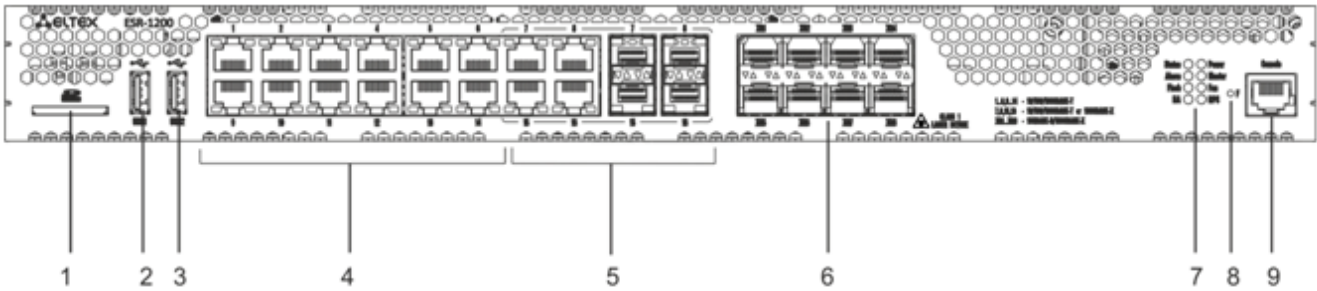
13 – ESR-1511, ESR-1500

,

ESR-1200, ESR-1000

ESR-1200

14.



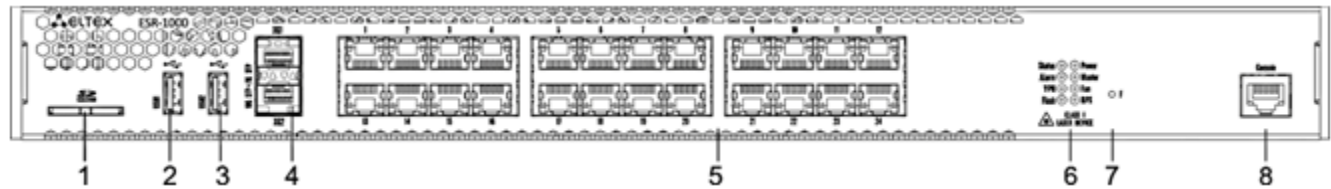
16 , , ESR-1200.

16 – , ESR-1200

1	SD	SD- .
2	USB1	USB-.
3	USB2	USB-.
4	[1 .. 12]	12 Gigabit Ethernet 10/100/1000BASE-T (RJ-45).
5	Combo Ports	4 Gigabit Ethernet 10/100/1000BASE-X (SFP).
6	XG1 – XG8	10G SFP+/ 1G SFP.
7	Status	.
	Alarm	.
	HA	.
	Flash	– SD- USB Flash.
	Power	.
	Master	failover-.
	Fan	.
	RPS	.
8	F	:
		• 10 ; • 10 .
9	Console	RS-232 .

ESR-1000

15.



17 , , ESR-1000.

17 – , ESR-1000

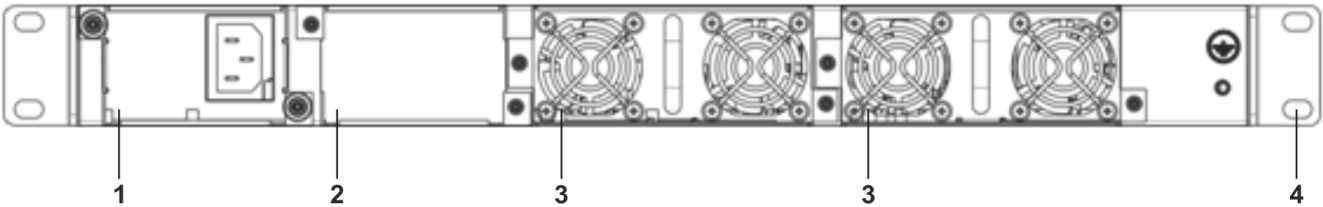
1	SD	SD- .
2	USB1	USB-.
3	USB2	USB-.
4	XG1, XG2	10G SFP+/1G SFP.
5	[1 .. 24]	24 Gigabit Ethernet 10/100/1000BASE-T (RJ-45).
6	Status	.
		.

	Alarm	.
	VPN	VPN-.
	Flash	– SD- USB Flash.
	Power	.
	Master	failover-.
	Fan	.
	RPS	.
7	F	: • 10 ; • 10 .
8	Console	RS-232 .

ESR-1200, 1000

ESR-1000 .





16 – ESR-1000

18 , .

18 –

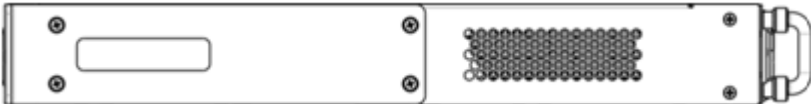
1	.
2	.
3	.
4	.

ESR-1200, ESR-1000

ESR-1200, ESR-1000 17 18.



17 – ESR-1200, 1000

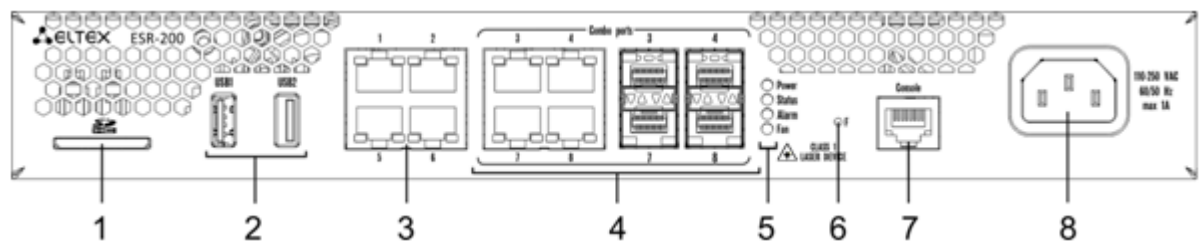


18 – ESR-1200, 1000

ESR-200, ESR-100

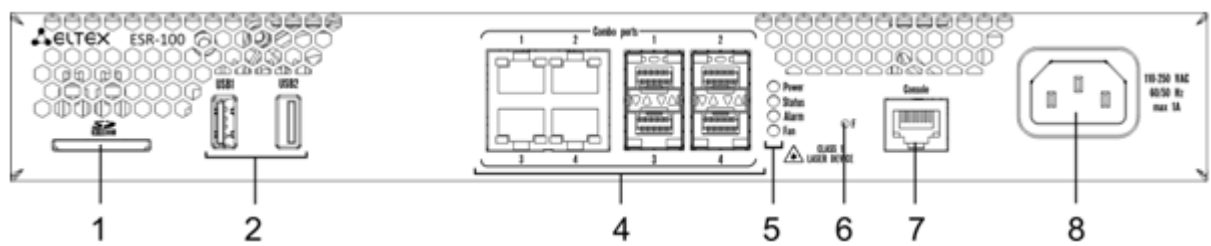
ESR-200, ESR-100

ESR-200 19.



19 – ESR-200

ESR-100 20.



20 – ESR-100

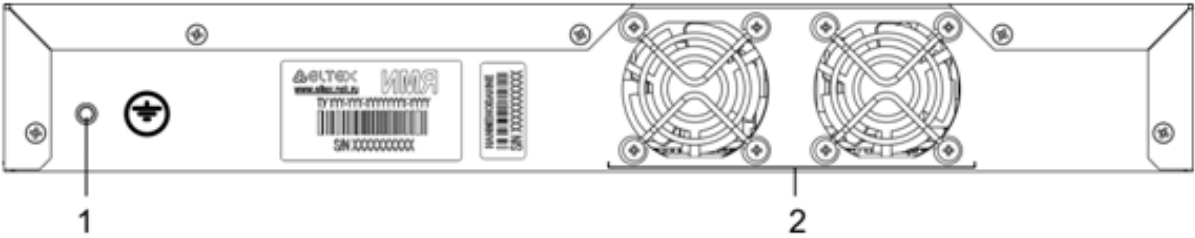
19 , , ESR-200, ESR-100.

19 – , ESR-200, ESR-100

1	SD	SD- .
2	USB1, USB2	2 USB-.
3	[1 .. 4]	4 Gigabit Ethernet 10/100/1000BASE-T (RJ-45).
4	Combo Ports	4 Gigabit Ethernet 10/100/1000BASE-X (SFP).
5	Power	.
	Status	.
	Alarm	.
	Fan	.
6	F	:
		• 10 ; • 10 .
7	Console	RS-232 .
8	110-250 VAC 60/50 Hz max 1A	.

ESR-200, ESR-100

ESR-200, ESR-100 21.



21 – ESR-200, ESR-100

20 , .

20 –

1	.
2	.

ESR-200, ESR-100

ESR-200, ESR-100 22 23.



22 – ESR-200, ESR-100



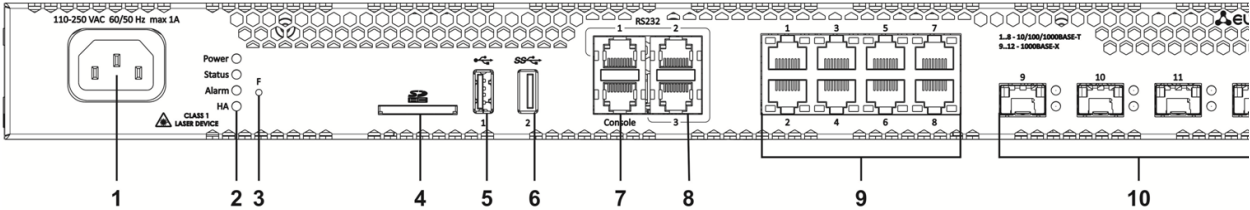
23 – ESR-200, ESR-100

ESR-21

19", 1U.

ESR-21

ESR-21 24.



24 – ESR-21

21 , , ESR-21.

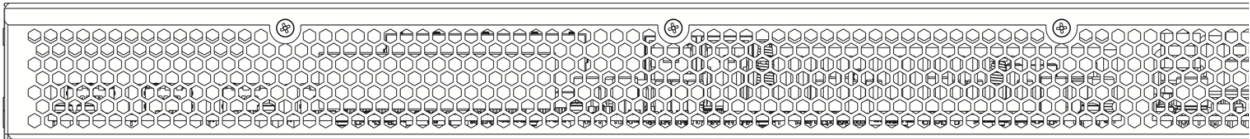
21 – , ESR-21

1	220V C	
2	Power	

	Status	
	Alarm	
	HA	HA ()
3	F	: 10 ; 10 .
4	SD	SD-
5	USB1	USB 2.0 USB-
6	USB2	USB 3.0 USB-
7	Console	
8	RS-232	3
9	[1 .. 8]	8 Gigabit Ethernet 10/100/1000BASE-T (RJ-45)
10	Optical Port	4 Gigabit Ethernet 10/100/1000BASE-X (SFP)

ESR-21

ESR-21 25.



25 – ESR-21

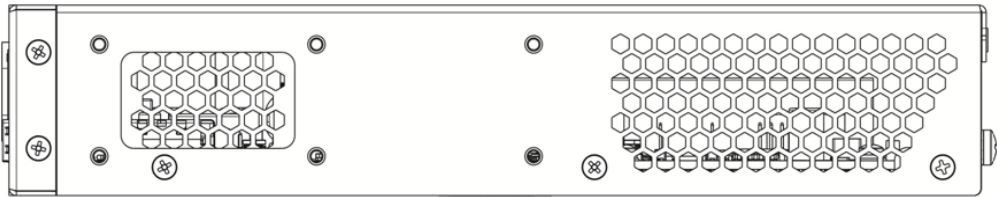
22 , .

22 –

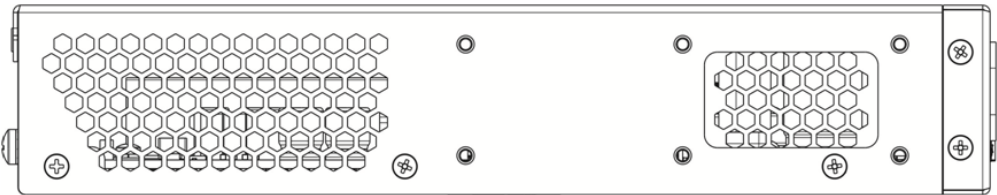
1	.

ESR-21

ESR-21 26 27.



26 – ESR-21



27 – ESR-21

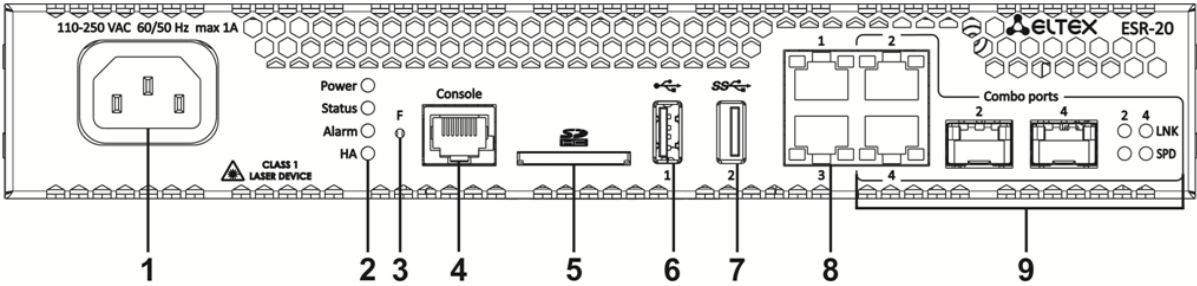
,

ESR-20

19", 1U.

ESR-20

28.



28 – ESR-20

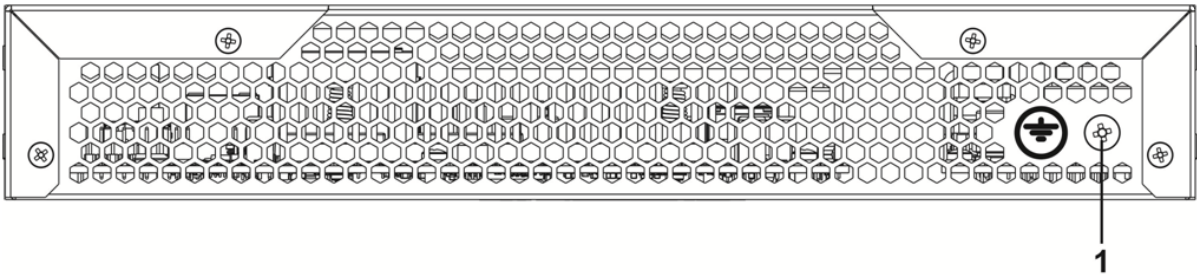
23 , , ESR-20.

23 – , ESR-20

1	110-250 VC	.
2	Power	.
	Status	.
	Alarm	.
	HA	HA ().
3	F	: 10 ; 10 .
4	Console	.
5	SD	SD- .
6	USB1	USB 2.0 USB-.
7	USB2	USB 3.0 USB-.
8	1, 2	2 Gigabit Ethernet 10/100/1000BASE-T (RJ-45).
9	[1 .. 4]	2 Combo- Ethernet 10/100/1000BASE-X/10/100/1000BASE-T.

ESR-20

ESR-20 29.



29 – ESR-20

24 , .

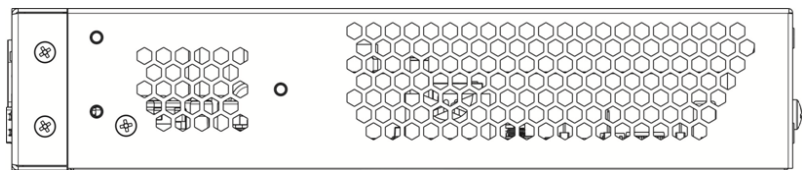
24 –

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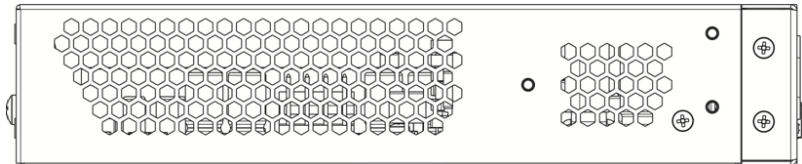
1	.
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ESR-20

ESR-20 30 31.



30 – ESR-20



31 – ESR-20

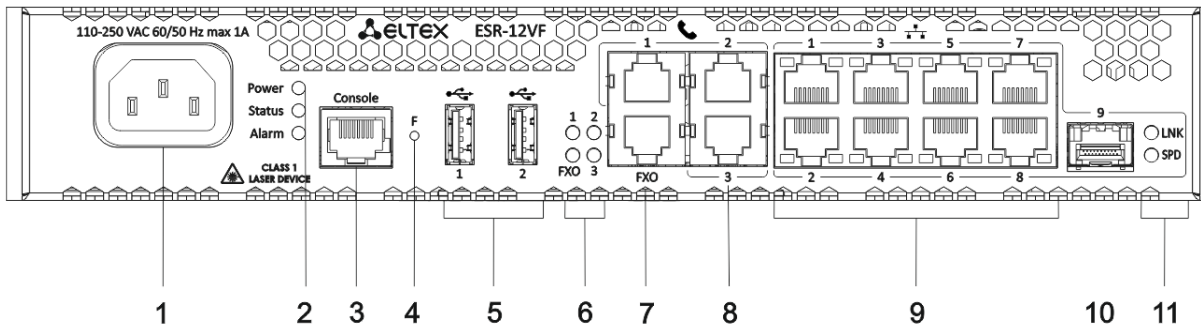
,

ESR-14VF, ESR-12VF

19" , 1U.

ESR-14VF, ESR-12VF

32.



32 – ESR-14VF, ESR-12VF

25 , , ESR-14VF, ESR-12VF.

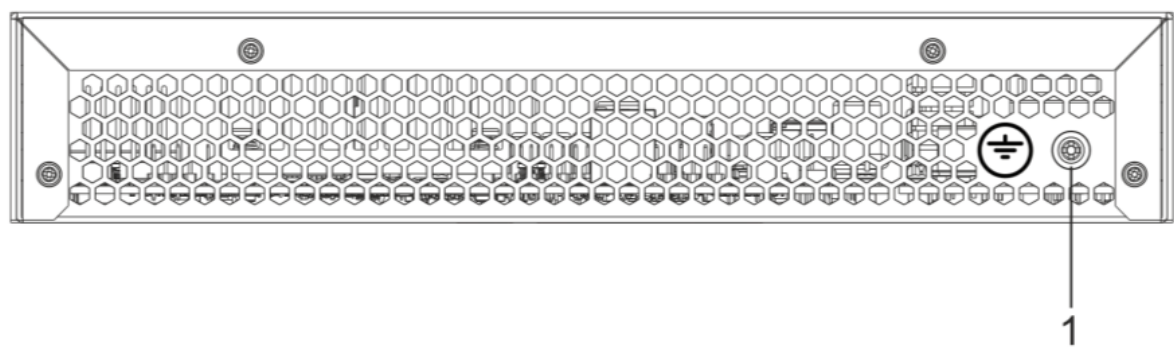
25 – , ESR-14VF, ESR-12VF

1	220V C	.
2	Power	.
3	Console	RS-232 .
4	F	: 10 ; 10 .
5	USB1, USB2	2 USB USB-.
6	FXO	.
	1, 2, 3	.
7	FXO	1 FXO (ESR-12VF).

8	FXS 1, FXS 2, FXS 3	3 (ESR-12VF).
	FXS 1, FXS 2, FXS 3	4 (ESR-14VF).
9	[1 .. 8]	8 Gigabit Ethernet 10/100/1000BASE-T (RJ-45).
10	Optical Port	1 Gigabit Ethernet-100/1000BASE-X (SFP)
11	1, 2	

ESR-14VF, ESR-12VF

ESR-14VF, ESR-12VF 33.



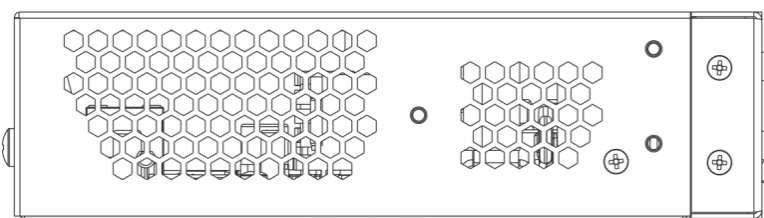
33 – ESR-14VF, ESR-12VF

26 , .
26 –

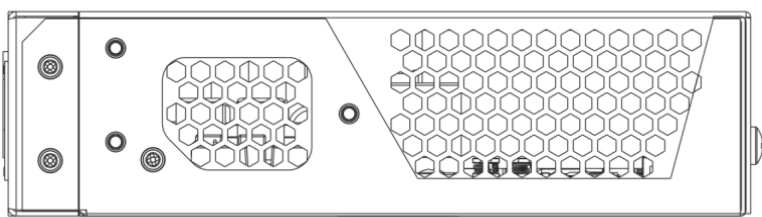
1	.

ESR-14VF, ESR-12VF

ESR-14VF, ESR-12VF 34 35.



34 – ESR-14VF, ESR-12VF

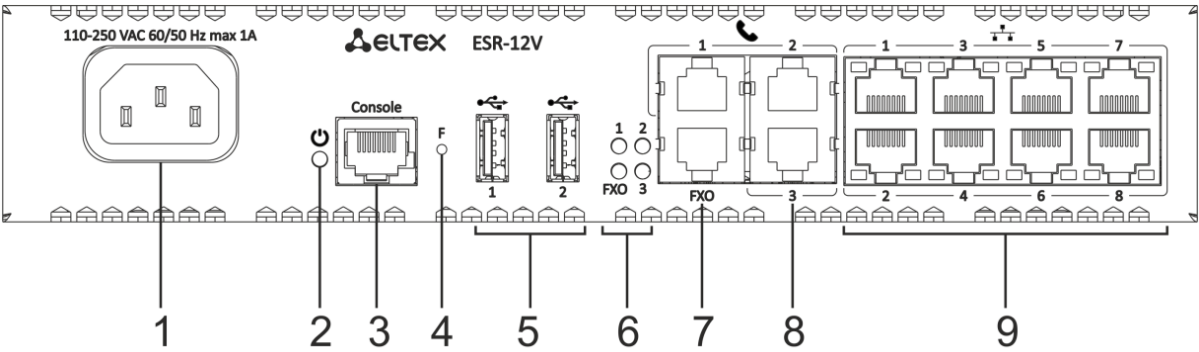


ESR-12V

19", 1U.

ESR-12V

36.



36 – ESR-12V

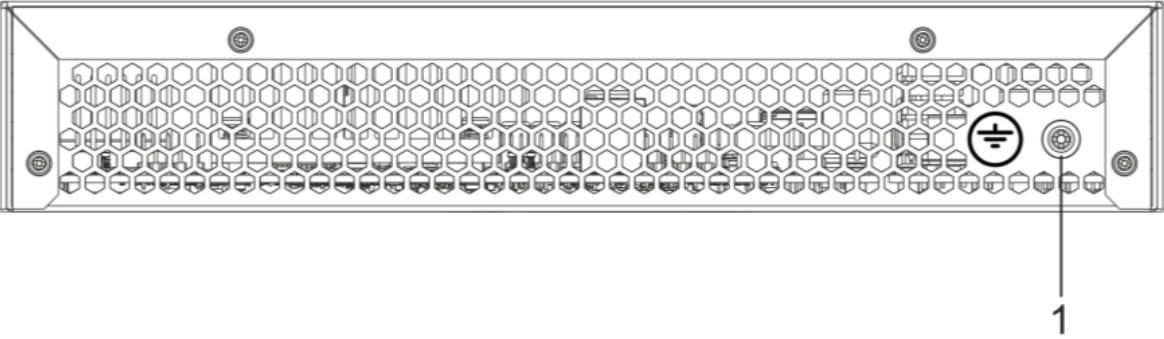
27 , , ESR-12V.

27 – , ESR-12V

1	220V C	.
2	Power	.
3	Console	RS-232 .
4	F	: 10 ; 10 .
5	USB1, USB2	2 USB USB-.
6	FXO	.
	1,2,3	.
7	FXO	1 FXO .
8	FXS 1, FXS 2, FXS 3	3 .
9	[1 .. 8]	8 Gigabit Ethernet 10/100/1000BASE-T (RJ-45).

ESR-12V

ESR-12V 37.



37 – ESR-12V

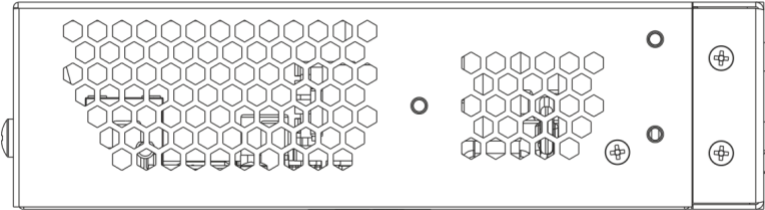
28 , .

28 –

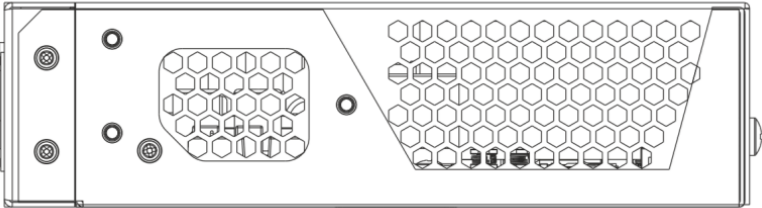
1	.

ESR-12V

ESR-12V 38 39.



38 – ESR-12V



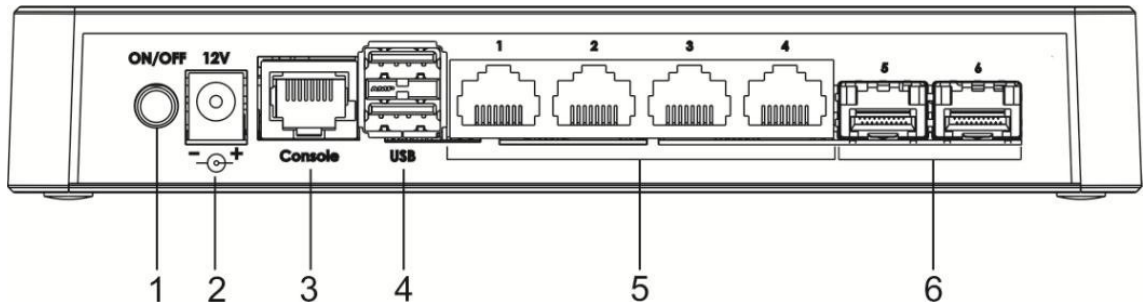
39 – ESR-12V

,

ESR-10

ESR-10

40.



40 – ESR-10

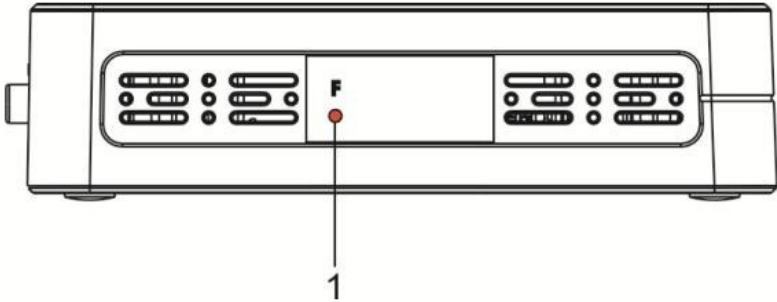
29 , , ESR-10.

29 – , ESR-10

1	ON/OFF	/
2	12V DC	
3	Console	RS-232
4	USB1, USB2	2 USB-
5	[1 .. 4]	4 Gigabit Ethernet – 10/100/1000BASE-T (RJ-45)
6	Optical Ports	2 Gigabit Ethernet-100/1000BASE-X (SFP)

ESR-10

ESR-10 41.



41 – ESR-10

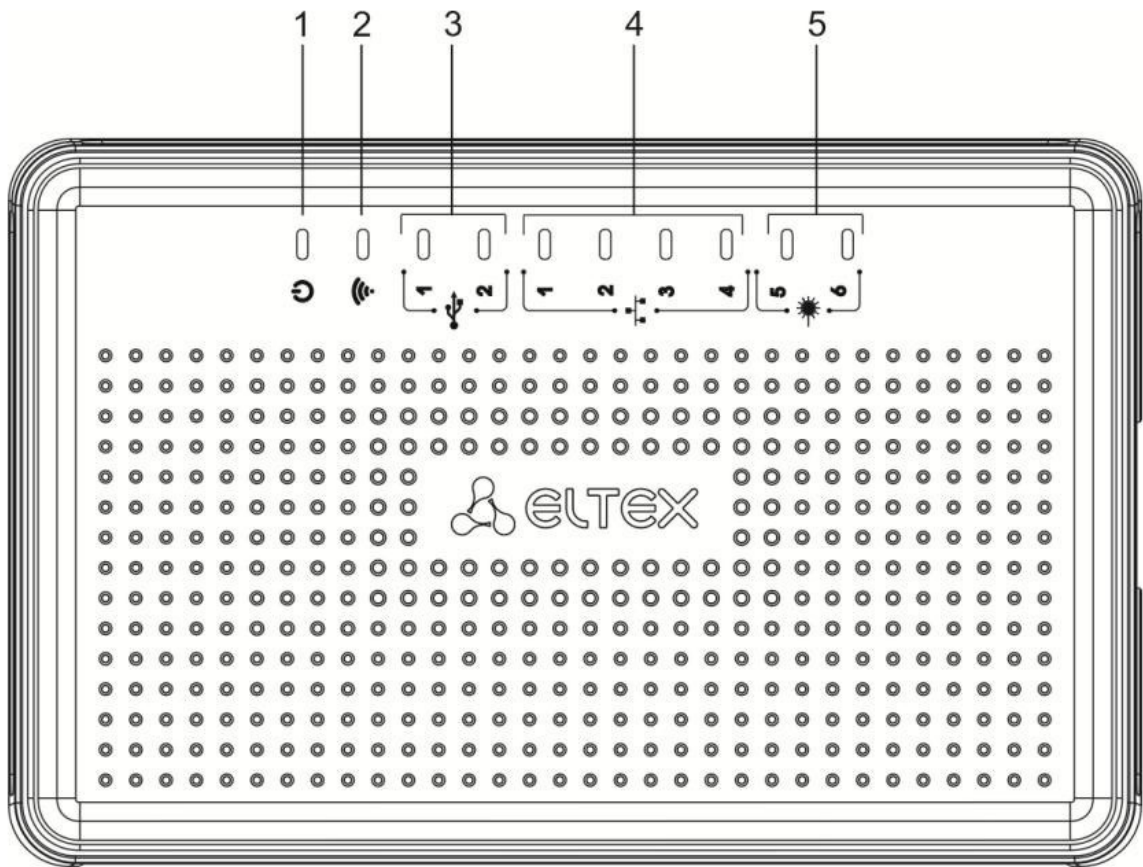
30 , .

30 –

1	F	: • 10 ; • 10 .

ESR-10

ESR-10 42.



42 – ESR-10

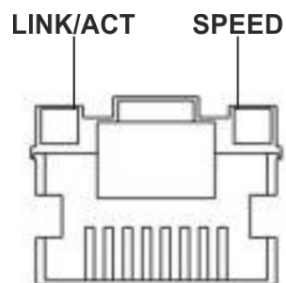
31 , ESR-10.

31 –

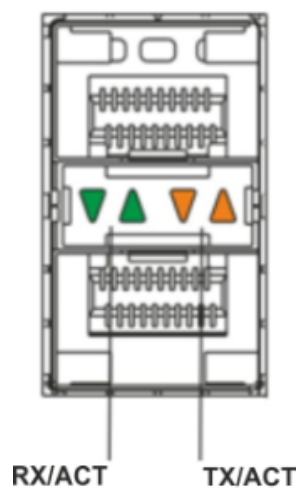
1	Power	
2	-	
3	USB1, USB2	USB-
4	[1 .. 4]	Ethernet-
5	[5 .. 6]	

ESR-1700, ESR-3100, ESR-1511, ESR-1500, ESR-1200, ESR-1000

Gigabit Ethernet – *LINK/ACT* *SPEED* . 43. SFP- *RX/ACT* *TX/ACT* 44. 32 33, .



43 – RJ-45



44 –

32 –

SPEED	LINK/ACT	Ethernet
		.
		10 100 /.
		1000 /.
X		.

33 – SFP/SFP+/QSFP+-

RX/ACT	TX/ACT	Ethernet
		.
		.
	X	.
X		.

34 –

Status	.	.	.
Alarm	.	-	-
VPN	VPN-.	-	-
Flash	: SD- USB Flash.	/	«copy».
Power	.	.	.
Master	failover-.	-	-
Fan	.	.	.
RPS	.	.	.

--	--	--	--

ESR-200/ESR-100

Gigabit Ethernet SFP- – LINK/ACT SPEED . 43. SFP- 45. 35.



45 –

35 – SFP-

SPEED	LINK/ACT	Ethernet
		.
		10 100 /.
		1000 /.
X		.

36 –

Status	.		.
Alarm	1.	-	-
Power	.		
			. .
			.
Fan	.		.
			. - .

1

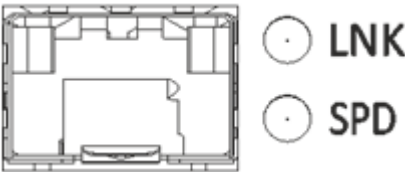
ESR-21/ESR-20

Gigabit Ethernet – LINK/ACT SPEED .

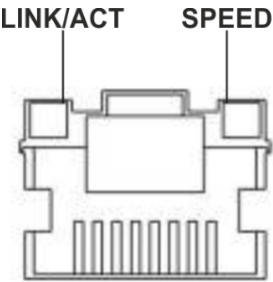
37 – SFP-

SPEED	LINK/ACT	Ethernet
		.
		10 100 /.
		1000 /.

X		.
---	--	---



46 – SFP



47 – RJ-45

38 –

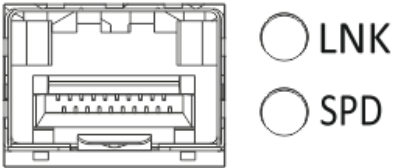
Power	.		. . .
			.
Status	.		.
			.
Alarm	.	-	-
HA	HA ()	-	-

ESR-12V(F)

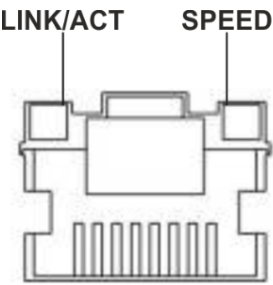
Gigabit Ethernet – LINK/ACT SPEED .

39 – SFP-

SPEED	LINK/ACT	Ethernet
		10 100 /
		1000 /
X		



48 – SFP (ESR-12VF, ESR-14VF)



49 – RJ-45

40 .

40 –

Power	.		. . .
			.

ESR-10

Gigabit Ethernet SPEED .

41 –

SPEED	Ethernet
	1000 /

ESR-10 :

- ESR-10;
- 220 /12 , 1,5 ;
- ;
- ();
- .

ESR-12V :

- ESR-12V;
- ;
- ;
- 19";
- ;
- ();
- .

ESR-12VF :

- ESR-12VF;
- ;
- ;
- 19";
- ;
- ();
- .

ESR-14VF :

- ESR-14VF;
- ;
- 19";

- ;
- ();
- .

ESR-20 :

- ESR-20;
- ;
- ;
- ;
- 19";
- ;
- ();
- .

ESR-21 :

- ESR-21;
- ;
- ;
- ;
- 19";
- ;
- ();
- .

ESR-100 :

- ESR-100;
- ;
- ;
- ;
- 19";
- ;
- ();
- .

ESR-200 :

- ESR-200;
- ;
- ;
- ;
- 19";
- ;
- ();
- .

ESR-1000 :

- ESR-1000;
- ;
- 19";
- ;
- ();
- .

ESR-1200 :

- ESR-1200;
- ;
- 19";
- ;
- ();
- .

ESR-1500 :

- ESR-1500;
- ;
- 19";
- ;
- ();
- .

ESR-1511 :

- ESR-1511;
- ;
- 19";
- ;
- ();
- .

ESR-3100 :

- ESR-3100;
- ;
- 19";
- ;
- ();
- .

ESR-1700 :

- ESR-1700;
- ;
- 19";
- ;
- ();
- .



ESR-1000, ESR-1200 (PM160-220/12 PM100-48/12).

ESR-1500, ESR-1511, ESR-3100 (PM160-220/12).

ESR-1700 (PM350-220/12 PM350-48/12).



SFP/SFP+..