

CATALOG'20



Russian designer and manufacturer
of communication equipment



- **28 years of experience** in designing and manufacturing telecommunication equipment
- More than **750 employees**
- **14 software development laboratories**
- **2 industrial complexes** in Novosibirsk (Russia) and Almaty (Kazakhstan)
- **More than 100 partner companies** in Russia, CIS, Europe, Asia and the Middle East
- **More than 1500 client companies**

1

Development

- Hardware
- Software

2

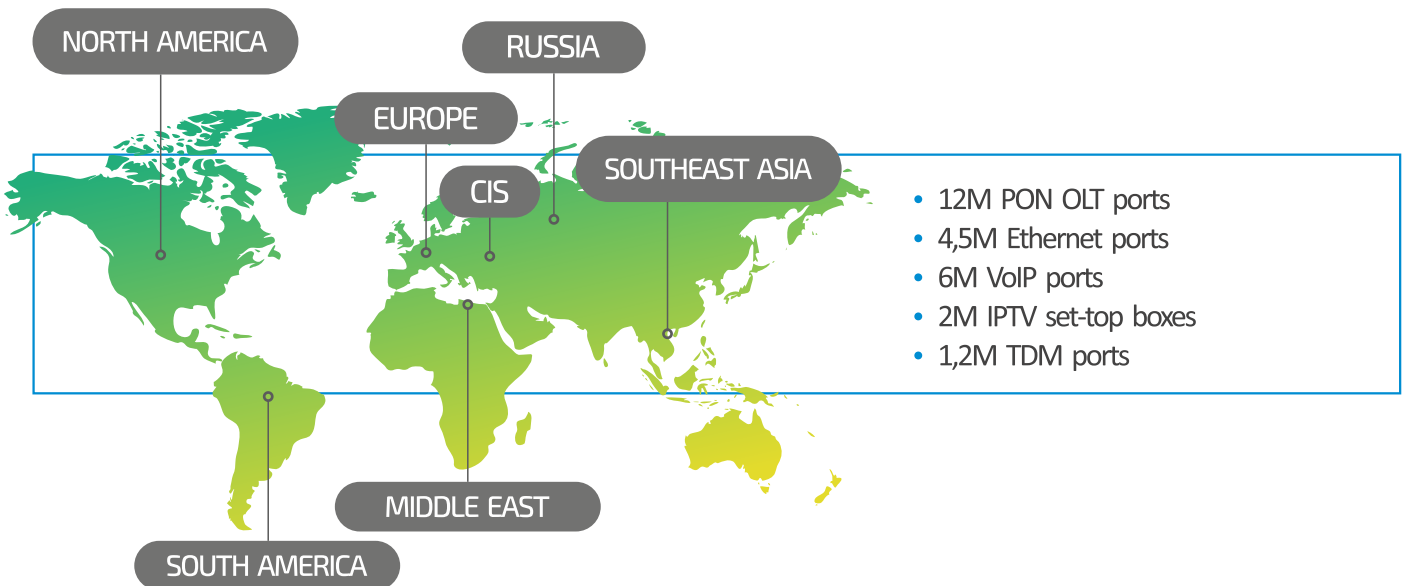
Manufacture

- Surface-mount technology
- Through-hole technology
- Assembling
- Software installation
- Testing of serial production equipment

3

Maintenance

- Technical support
- Service center
- Software updating
- Repair









Wi-Fi

Name	Under development		Indoor				
	WEP-32ax	WEP-3ax	WEP-12ac	WEP-2ac	WEP-2ac Smart	WEP-2L	WEP-1L
Device image							
Wi-Fi chip	Broadcom 43694	Broadcom BCM47622, BCM43570	Broadcom BCM43460	Broadcom BCM47452, BCM43217		Realtek RTL8197FS, RTL8812FR	
Roaming	Seamless roaming (802.11k/v/r)						
Bandwidth	Simultaneous operation at 2.4 and 5 GHz						
Wi-Fi standard	802.11ax (Wi-Fi 6/Wi-Fi 6E)	802.11ax (Wi-Fi 6/Wi-Fi 6E)	802.11n (Wi-Fi 4) 802.11ac (Wi-Fi 5)	802.11n (Wi-Fi 4) 802.11ac (Wi-Fi 5)	802.11n (Wi-Fi 4) 802.11ac (Wi-Fi 5)	802.11n (Wi-Fi 4) 802.11ac (Wi-Fi 5)	802.11n (Wi-Fi 4) 802.11ac (Wi-Fi 5)
MIMO technology	4x4:4	2x2:2	3x3:3	2x2:2	2x2:2	2x2:2	2x2:2
Type and number of antennas	Built-in 4 pcs. - 2.4 GHz 4 pcs. - 5 GHz	Built-in 2 pcs. - 2.4 GHz and 5 GHz 2 pcs. - 5 GHz	Built-in 3 pcs - 2.4GHz 3 pcs - 5 GHz	Built-in 2 pcs. - 2.4 GHz 2 pcs. - 5 GHz	Built-in Omni Antenna - 2.4 GHz Built-in Smart Antenna - 5 GHz	Built-in 2 pcs - 2.4GHz and 5 GHz	Built-in 2 pcs - 2.4GHz and 5 GHz
Third radio interface		802.11ac (Wi-Fi 5)					
Operation modes	<ul style="list-style-type: none"> Managed by controller Standalone 		<ul style="list-style-type: none"> Managed by controller In cluster (controller is one of the points) Standalone 			<ul style="list-style-type: none"> Managed by controller Standalone 	
WIDS/WIPS	Under development	Under development	•	•	•		
Airtune	Under development	Under development	•	•	•		
Mesh	Under development	Under development	•	•	•		
OTT	Under development	Under development	•	•	•	Under development	Under development
802.11u support (Wi-Fi offload)	Under development	Under development	•	•	•		
Coverage area	150 m						



Name	Outdoor		
	WOP-12ac	WOP-2ac	WOP-2L
Device image			
Wi-Fi chip	Broadcom BCM43460	Broadcom BCM47452, BCM43217	Realtek RTL8197FS, RTL8812FR
Roaming	Seamless roaming (802.11k/v/r)		
Bandwidth	Simultaneous operation at 2.4 and 5 GHz		
Wi-Fi standard	802.11n (Wi-Fi 4) 802.11ac (Wi-Fi 5)	802.11n (Wi-Fi 4) 802.11ac (Wi-Fi 5)	802.11n (Wi-Fi 4) 802.11ac (Wi-Fi 5)
MIMO technology	3x3:3	2x2:2	2x2:2
Type and number of antennas	External: 3 pcs. - 2.4 GHz 3 pcs. - 5 GHz	External: 2 pcs. - 2.4 GHz 2 pcs. - 5 GHz	External: 2 pcs. - 2.4 and 5 GHz
Operation modes	<ul style="list-style-type: none"> Managed by controller Cluster (one of points is a controller) Standalone 		<ul style="list-style-type: none"> Managed by controller Standalone
WIDS/WIPS	•	•	
Airtune	•	•	
Mesh	•	•	
OTT	•	•	Under development
802.11u support (Wi-Fi offload)	•	•	
Coverage area	200 m		



WIRELESS BROADBAND ACCESS FOR SMALL COMMUNITIES

Name	Base stations		User stations	
	WOP-2ac-LR5	WOP-2ac-LR2	WB-2P-LR5	WB-2P-LR2
Device image				
Wi-Fi chip	Realtek RTL8197FS, RTL8812BRH	Realtek RTL8197FS	Realtek RTL8197FS, RTL8812BRH	Realtek RTL8197FS
Wi-Fi standard	802.11ac (Wi-Fi 5)	802.11n (Wi-Fi 4)	802.11ac (Wi-Fi 5)	802.11n (Wi-Fi 4)
Frequency range	5 180 - 6 150 MHz	2402 —2482 MHz	5 180 - 6 150 MHz	2402 —2482 MHz
MIMO technology	2x2:2	2x2:2	2x2:2	2x2:2
Channel width	5, 10, 20, 40, 80	5, 10, 20, 40, 80	5, 10, 20, 40, 80	5, 10, 20, 40, 80
Centralized management	EMS management system	EMS management system	TR-069	TR-069
Polling support	•	•	•	•
Intersectoral synchronization	Under development	Under development		
Type and number of antennas, pcs	External: 2 pcs — 5-6 GHz	External: 2 pcs — 5-6 GHz	Built-in: 1 pcs — 5-6 GHz	Built-in: 1 pcs — 5-6 GHz
Transmitter power, dBm	28	26	28	26

2G/3G/4G terminal

Name	WB-15-W	WB-15-W2
Device image		
LTE support	2G/3G/4G LTE	2G/3G/4G LTE
Modem	Neoway N720	Neoway N720
Frequency range	4G LTE FDD: B1, B3, B5, B7, B8, B20 4G LTE TDD: B40 3G UMTS: B1, B8 2G GSM/GPRS/EDGE: 850/900/1800/1900 MHz	4G LTE FDD: B1, B3, B5, B7, B8, B20 4G LTE TDD: B40 3G UMTS: B1, B8 2G GSM/GPRS/EDGE: 850/900/1800/1900 MHz
Interfaces	1 Ethernet 10/100 Base-T	1 Ethernet 10/100 Base-T
Number of SIM cards, pcs	2 (redundancy)	2 (redundancy)
Type and number of antennas	External: 2 pcs. - LTE Built-in: 2 pcs. - 2.4 GHz	External: 2 pcs. - LTE Built-in: 2 pcs. - 2.4 GHz
Number of radio interfaces	1	2
Wi-Fi chip	Realtek RTL8197FS	Realtek RTL8197FS, RTL8192FR
Wi-Fi	802.11n (Wi-Fi 4)	802.11n (Wi-Fi 4)
Sniffer/Radar		•
GPS	•	•
Power supply	Passive POE (24V), DC 9-36V	
Management	Under development	