

- Dual-band access point
- Support for 802.11be
- Radio interface with MU-MIMO 2x2 support
- Multi-Link Operation (MLO)
- PoE+ power supply (IEEE 802.3at)
- Seamless roaming
- Up-to-date authentication and encryption means



All-weather access point

WOP-50L is a Wi-Fi 7 all-weather access point designed to provide a reliable wireless network in outdoor environments. The device is designed for year-round operation in demanding conditions: from extreme cold to high temperatures, in high humidity, precipitation, and dusty environments, and operates reliably where standard office equipment cannot be used: at industrial sites, stadiums, in parks, warehouses, and other outdoor areas. Support for Wi-Fi 7 provides high speed, low latency, and a stable connection with a large number of simultaneously connected devices, making WOP-50L a convenient solution for guest access in crowded places, as well as for communications in cottage settlements and remote sites without developed wired infrastructure.

Scalability

WOP-50L integrates easily into an existing network and allows the coverage area to be expanded as the number of users and devices grows without complicating the infrastructure. External antennas with SMA connectors provide flexibility when planning radio coverage: omnidirectional, sector, or panel antennas can be selected for a specific application. Connecting access points to a hardware (WLC) or virtual (vWLC) controller combines them into a managed network with centralized configuration and seamless roaming between devices.

Wireless connection

Due to support for the IEEE 802.11be standard, the WOP-50L access point provides data rates of up to 688 Mbps in the 2.4 GHz band and up to 2882 Mbps in the 5 GHz band. Multi-Link Operation (MLO) technology combines both frequency bands into a single connection. This increases the total data rate, reduces latency, and improves connection reliability. Compared to previous-generation equipment, WOP-50L significantly increases throughput and operates more reliably in high-density client environments. MU-MIMO 2x2 technology and omnidirectional antennas provide uniform coverage and simultaneous service for multiple devices, making WOP-50L a universal solution for public network deployment.

Security

Modern authentication and encryption mechanisms with WPA3 support protect user data and the corporate network as a whole. For enterprise access, 802.1X centralized authentication via RADIUS server is supported; for guest access, an external captive portal can be used. Compatibility with earlier 802.11 standards simplifies integration into existing infrastructure.

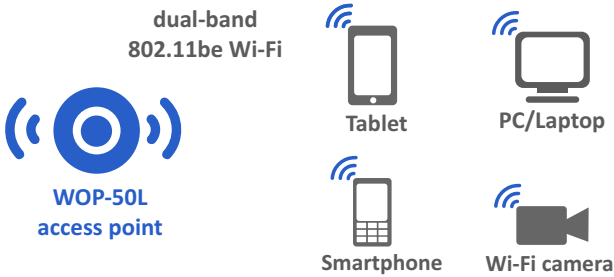
Performance

A high-performance hardware platform and optimized traffic processing algorithms allow WOP-50L to maintain stable data rates under everyday network loads, including video surveillance, guest access, IoT devices, and cloud services in outdoor environments. The 2.5G uplink port eliminates a bottleneck in data transmission and allows the full capabilities of Wi-Fi 7 to be utilized.

Power supply

PoE technology delivers power over the same Ethernet cable used for data transmission, eliminating the need for a separate power line. This allows WOP-50L to be installed at locations optimal for coverage, on masts, walls, and poles, regardless of the location of power outlets, reducing installation costs and time.

Application diagram



Interface configuration

Ethernet	Wi-Fi	SMA connectors to connect antennas
1x2.5G	802.11a/b/g/n/ac/ax/be	4
1xG		

Features and capabilities

Interfaces

- 1 port of 10/100/1000/2500BASE-T (RJ-45) with PoE support
- 1 port of 10/100/1000BASE-T (RJ-45)
- Wi-Fi 2.4 GHz IEEE 802.11b/g/n/ax/be
- Wi-Fi 5 GHz IEEE 802.11a/n/ac/ax/be
- 4 SMA-type (female) connectors for external antennas (Omni, sector, panel, etc.)

WLAN capabilities

- Support for IEEE 802.11a/b/g/n/ac/ax/be
- Support for roaming IEEE 802.11r/k/v
- Data aggregation, including A-MPDU (Tx/Rx) and A-MSDU (Rx)
- WMM-based packet priorities and planning
- Dynamic frequency selection (DFS)
- Support for hidden SSID
- 14 virtual access points
- Third-party access points detection
- Spectrum analyzer
- Auto channel selection
- APSD

Network features

- Automatic speed negotiation, duplex mode negotiation and MDI-MDI-X switch-over
- VLAN
- C-VLAN
- Management VLAN
- DHCP client
- GRE
- Local switching
- ACL
- NTP
- Syslog
- LLDP

QoS functions

- Bandwidth limiting
- Configuring WMM (EDCA) parameters for radio interfaces

Configuration

- Remote management via Telnet, SSH
- CLI
- NETCONF
- Web interface
- SNMP

Security

- Centralized authorization via RADIUS server (802.1X WPA/WPA2/WPA3 Enterprise)
- WPA/WPA2/WPA3/OWE encryption
- Captive Portal
- Authorization via RADIUS server when logging into the device

Wireless interface specifications

- Frequency range 2400–2483.5 MHz, 5150–5350 MHz, 5470–5850 MHz
- BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM modulations
- Support for MU-MIMO 2×2
- Multi-Link Operation (MLO)
- Support for OFDMA
- Bandwidth: 20, 40 MHz for 2.4 GHz
20, 40, 80 and 160 MHz for 5 GHz

Operating channels¹

- 802.11b/g/n/ax/be: 1–13 (2401–2483 MHz)
- 802.11a/n/ac/ax/be: 36–64 (5170–5330 MHz)
100–144 (5490–5730 MHz)
149–165 (5735–5835 MHz)

Data rate²

- 2.4 GHz, 802.11be: 688 Mbps
- 5 GHz, 802.11be: 2882 Mbps

Maximum power of the transmitter¹

- 2.4 GHz: 20 dBm
- 5 GHz: 21 dBm

Receiver sensitivity

- 2.4 GHz: up to -94 dBm
- 5 GHz: up to -94 dBm

Clients

- Maximum number of concurrent connections: 119

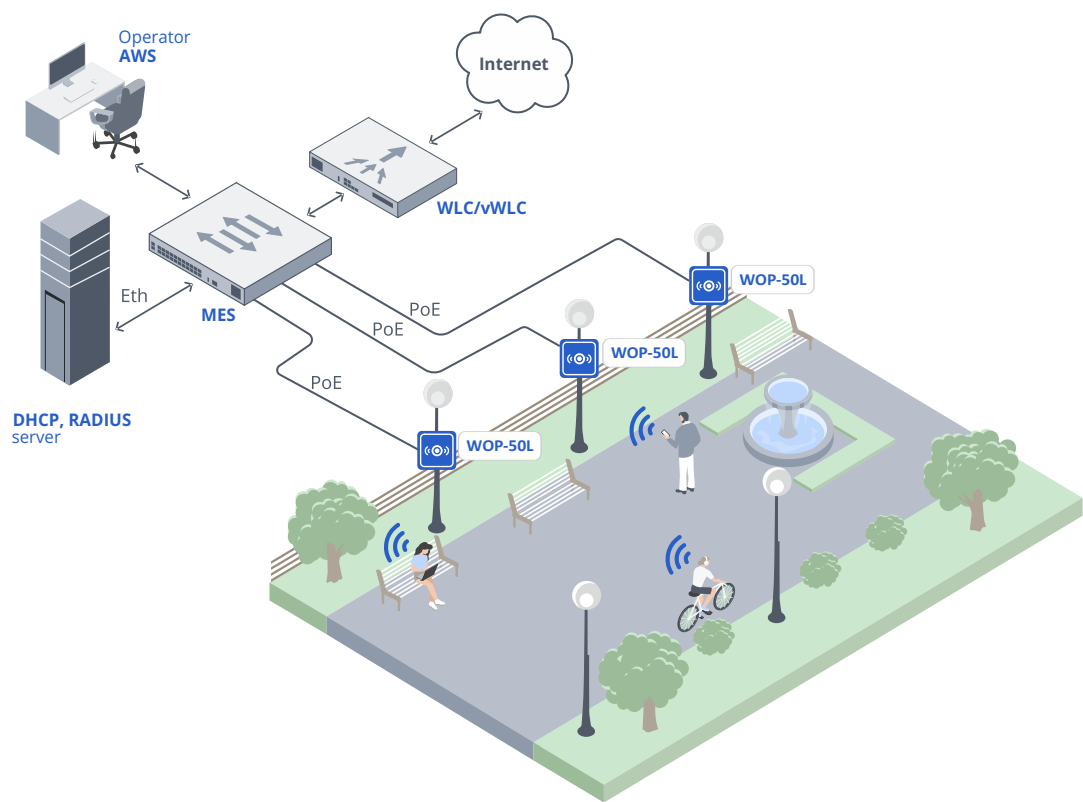
Physical specifications

- Maximum power consumption: no more than 13.5 W
- 128 MB SPI-NAND Flash
- 512 MB DDR3 RAM
- Power supply: PoE+ 48 V/56 V (IEEE 802.3at-2009)
- Operating temperature: from -45 to +65 °C
- Ingress protection: IP55
- Pole/wall mount
- Dimensions (W × H × D): 125 × 236.5 × 50.4 mm
- Weight: 0.8 kg

¹The number of channels and the value of the maximum output power will vary according to the rules of radio frequency regulation in your country.

²The maximum wireless data rate is defined according to IEEE 802.11 standards. The real bandwidth can be different. Conditions of the network, environment, the amount of traffic, building materials and constructions and network service data can decrease the real bandwidth. The environment can influence the network coverage range.

Use case



Ordering information

Name	Description
WOP-50L	WOP-50L wireless access point. Mounting kit.
Related products	
SSM-560-1000A-2.5G	Power injector Passive PoE, SSM-560-1000A-2.5G, 2.5G, 56 V, 1 A.
HSE-AC	Power injector Passive PoE, HSE-S5600500EU, 1G, 56 V, 0.5 A.
ALX19X-221051-00	Omnidirectional antenna ALX19X-221051-00, 2400/5000/360/5, 5 dBi, 1 x SMA.
RFE 2400/5000/60/60	Sector antenna RFE, 2400/5000/60/60, 12 dBi, 4 x SMA, MIMO 2x2
RFE 2400/5000/60/38	Sector antenna RFE, 2400/5000/60/38, 12 dBi, 4 x SMA, MIMO 2x2.
RFE 2400/5000/30/13	Sector antenna RFE, 2400/5000/30/13, 13.5 дБи, 4 x SMA, MIMO 2x2.
D-1	LMR coaxial cable, SMA-SMA, 1 m.
KM-WOP	Wall mounting kit for WOP series access points (2L/20L/30L/50L).
Wi-Fi controllers	
WLC hardware controller	WLC-15, WLC-30, WLC-3200, WLC-3250, WLC-3350.
vWLC virtual controller	vWLC-AP option for connecting one access point to a vWLC controller. vWLC-AP-R option for connecting one access point to a redundant vWLC controller.
SoftWLC software controller	SoftWLC option. Software controller with integrated AAA solution and authorization portal for one Eltex access point. Airtune option for one Eltex access point. WIDS/WIPS-SW option for one Eltex access point. Wireless network intrusion detection and prevention service.

Contact us

About Eltex

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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.