

intelbras

Intelbras AP 7636

New Generation

Access Point

802.11ax Indoor Series Access Point



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Overview

Intelbras AP 7636 is the latest generation wireless access point developed based on 802.11ax standard. They are designed with creative triple-radio 802.11ax technology standard respectively, and provide a transmission speed at least 2 times faster than 802.11ac products. This makes the series suitable for high-density access scenarios, such as hotel, retail stores and smart enterprise campus. It is compact in appearance and support both wall mounting and ceiling mounting.



AP 7636 Internal Antennas 10 Streams Triple Radio 802.11ax/ac wave2/ac/n AP

Features and benefits

New-generation Wi-Fi standard 802.11ax (Wi-Fi 6)

AP 7636 triple-radio AP adopts 802.11ax technology can provide up to 7.15Gbps access rate, which is suitable for all high-density access scenarios and provides better access experience.

DL/UL MU-MIMO

Intelbras AP 7636 series AP supports DL/UL MU-MIMO technology, which is the most important feature of 802.11ax. DL/UL MU-MIMO technology allows AP to send data to multiple stations simultaneously, breaking through the traditional wireless serial communication mechanism, increasing the utilization rate of wireless

spectrum resources, improving the number of effective access users and access experience under high-density deployment.

Smart cloud access and optimal WLAN TCO

The AP 7636 series complies with the 802.11ax standard. It works on triple radio and provides high-speed transmission that is at least 2 times faster than 802.11ac products under the same conditions. The AP 7636 series is available for easy maintenance and management from the Intelbras Oasis platform. Through smart RF optimization technologies, the series provides mobile cloud access in coverage scope, access density, and operation stability.

Orthogonal frequency division multiple access (OFDMA)

802.11ax uses OFDMA to allow multiple users to transmit data simultaneously. OFDMA splits a channel into sub-channels, known as resource units (RUs), with specific subcarriers, and assigns RUs to different users for simultaneous transmission. OFDMA enables simultaneous multi-user transmission and reduces latency caused by channel contention.

Spatial multiplexing

802.11ax assigns a different color per BSS to help AP 7636 identify co-channel interference and stop transmission in time. If a radio detects 802.11ax signals from a BSS that has the same color as the radio's BSS, it determines that co-channel interference exists and stops data transmission. This optimizes frequency reuse and improves network capacity.

Target Wake Time (TWT)

TWT improves power efficiency and reduces contention by increasing client sleep time and allowing negotiation of the times that clients can access the medium.

Green design

AP 7636 employs a green design that supports dynamic MIMO power saving (DMPS), enhanced automatic power save delivery (E-APSD), and smart identification of terminal network requirements. It can dynamically adjust the MIMO working mode and efficiently put terminals to sleep.

AP 7636 supports green AP mode that enables single radio standby and allows for more precise power control.

AP 7636 supports the innovative per-packet power control (PPC) technology, which reduces standby power consumption and improves mobile device standby time.

Local forwarding

AP 7636 supports both centralized forwarding and local forwarding. With centralized forwarding, APs tunnel incoming data frames to the WC and the WC forwards the data frames. With local forwarding, APs directly forward data frames. The local forwarding mode significantly saves wired bandwidth.

IPv4 and IPv6 dual stack (Native IPv6)

AP 7636 is fully compliant with IPv6, and implements dual IPv4/IPv6 protocol stacks. It can automatically associate with an WC to provide wireless services no matter in an IPv4 or IPv6 network, so that it never runs as an information silo.

Anchor WC mode

Anchor WC mode is designed for networks of all sizes, including SMB. In Anchor WC mode, AP will serve as a virtual controller for the entire network.

Cloud-based Management

Intelbras cloud-managed APs were developed based on the Cloud platform, on which network administrators can manage the cloud-managed APs directly, for example, view cloud-managed AP status in real time and deploy configurations from the cloud to cloud-managed APs. This greatly improves network efficiency and enhances security and stability.

Remote probing and analysis

AP 7636 can act as a remote probing and analysis sensor to monitor a WLAN, collect channel information, and report the information to the local device for further analysis. This can satisfy wireless network monitoring and maintenance requirements.

RF Optimizing Engine (ROE)

ROE, through feature- and protocol-based RF optimization, provides greater speed and QoS in middle- to high-density access and streaming media transmission scenarios. It provides features such as multi-user fairness, mixed access fairness, interference filtering, speed optimization, band navigation which can support 5G radio

priority to assign 5G radio-supported clients to 5G radio, prior to 2.4G, multicast optimization (IPv4/IPv6), per-packet power control, and intelligent bandwidth guarantee. RF Management automatically assigns channel and power settings, provides airtime fairness, and ensures AP stay clear of all source of RF interference to deliver reliable, high-performance WLANs.

Intelligent load balancing

AP 7636 supports session- and traffic-based load balancing. When the load of the AP reaches the upper limit, the WC rejects the association requests of new clients and directs the clients to another AP with smaller load. What sets Intelbras intelligent load balancing apart from existing load balancing solutions is that it starts load balancing only for clients that are in the overlapping AP coverage. This maximizes wireless network capacity.

Specifications

Hardware specifications

Name	AP 7636
Installation	wall and ceiling mounting
Weight (excluding mounting accessories)	1.05Kg
Dimensions (H×W×D excluding mounting and accessories)	225mm X 225mm X 46mm
Ethernet ports	1 x 100/1000M/2.5G/5G/10G Rj45 1 x 10/100/1000M Rj45 supports power out 1 x 10/100/1000M Rj45 support LACP (support between both network ports for redundancy and increased capacity) 1 x USB interface
PoE	10GE: IEEE 802.3bt/at GE1: IEEE 802.3at/af *Both ethernet ports support PoE and they can work simultaneously GE2: IEEE 802.3af, PSE
Local Power supply	54V DC
Console port	1x (RJ-45)
Antenna	8 built-in omni-directional antennas, which: .4x4 2.4GHz with 3dBi gain

Name	AP 7636
	.2x2 5GHz with 3dBi gain .4x4 5GHz with 3dBi gain
Working frequencies	802.11ax/ac/n/a: 5.15 GHz - 5.35 GHz; 5.47 GHz - 5.725 GHz; 5.725 GHz - 5.850 GHz; 802.11ax/b/g/n: 2.4GHz-2.483GHz
Compatible bandwidth	2.4GHz: 20/40MHz 5GHz: 20/40/80/160MHz
Nominal throughput	2.4GHz: 1148Mbps 5GHz: 6005Mbps Combined: 7153Mbps
Modulation techniques	11b - DSS: CCK@5.5/11Mbps, DQPSK@2Mbps, DBPSK@1Mbps 11a/g - OFDM: 64QAM@48/54Mbps, 16QAM@24Mbps, QPSK@12/18Mbps, BPSK@6/9Mbps 11n - MIMO-OFDM (MCS 0 -31): BPSK, QPSK, 16QAM, 64QAM 11ac/ac wave2 - MIMO-OFDM (0 - 9): BPSK, QPSK, 16QAM, 64QAM, 256QAM 11ax - MIMO-OFDM (0 - 11): BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Maximum transmit power (combined)	20 dBm
Adjustable power granularity	1dBm
Reset/restoration to factory default	Supported
State LED	Alternating flashing mode, orange/green/blue for different working states, breathing mode
Working Temperature/ Storage Temperature	-10°C ~ 55°C(32°F to 113°F)/-40°C ~ 70°C(-40°F to +158°F)
Working Humidity/ Storage Humidity	5%~95%(non-condensing)
Protection class	IP42
Overall power consumption	≤22.5W
MTBF	>250000H

Software specifications

Item		AP 7636
Operating mode	Fit mode	Controlled by AC
	Cloud mode (Fat mode)	Controlled via Cloud or operates independently
	Mode switching	Mode switching via command lines, WCs, Cloud, or reset button
	Router (IPv4/IPv6)	via command line or web interface
Management and maintenance	Cloud Centralized management	Support by INC Cloud
	Local centralized management	Support by INC
	WC centralized management	Fit mode: support Cloud mode: support version upgrade, switch mode
	Local web	Cloud mode support
	Telnet	Cloud mode support
	SSH	Cloud mode support
	SNMP	Cloud mode support
	Debug serial port	support
	Intelligent operation and maintenance	Fit/ Cloud mode support
	802.11ax	A-MPDU
A-MSDU		Supported
Maximum likelihood decoding (MLD)		Supported
Maximum-ratio combining (MRC)		Supported
Space-time block coding (STBC)		Supported
Low-density parity-check (LDPC)		Supported
Cyclic Delay Diversity (CDD)/Cyclic Shift Diversity (CSD)		Supported

Item	AP 7636	
	DFS (dynamic frequency selection)	Supported
	Transmit Beamforming	Supported
WLAN basics	Maximum client's connections	1536 (512 per radio)
	Maximum number of SSIDs for each radio	16
	Virtual APs	48 *As a best practice, configure a maximum of 5 virtual APs for each radio
	Open system/shared key authentication	Supported
	Broadcast probe request acknowledge control	Supported
	Concurrent login of WPA, WPA2, WPA3 and Pre-RSNA users	Supported
	RTS/CTS	Supported
	CTS-to-self	Supported
	802.11k and 802.11v smart roaming	Supported
	802.11r fast transition roaming	Supported
	Hide SSID	Supported
	Advanced Traffic Management	Supported
	Restrict low rate/sticky terminals access	Supported
	Channel reuse	Supported
	Receiver sensitivity adjustment	Supported
	Automatic channel/power/bandwidth adjustment	Supported
	WLAN extension	Station related
Client number limit		Supported
Link integrity check		Supported
Repeater mode		Supported

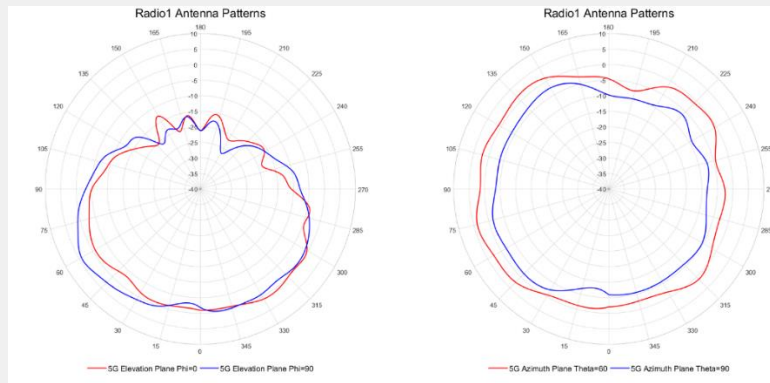
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Security policy	Encryption	WEP-64/128/152bit, dynamic WEP, TKIP, CCMP, AES,EAP,WPA3 Multiple triggering conditions for unicast and broadcast key update
	802.11i	Supported
	Authentication	802.1X authentication, MAC authentication, PSK authentication, PPSK *Intelbras WX series access controllers might be required for authentication.
	User isolation	Layer 2 user isolation SSID-based user isolation
	Forwarding security	Packet filtering MAC address filtering Broadcast storm suppression
	Wireless terminal access	Wireless EAD
	SSID and VLAN binding	Supported
	WIDS/WIPS	Supported
	Rogue device detection and countermeasure	Supported
	Dynamic ARP Inspection (DAI)	Supported
	IP Source Guard (IPSG)	Supported
	Management frame protection (802.11w)	Supported
	Layer 2 and Layer 3 features	IP address configuration
Native IPv6		Supported
IPv6 Portal		Supported
IPv6 SAVI		Supported
ACL		IPv4/IPv6
Local forwarding		Local forwarding based on SSID and VLAN
Link Layer Discovery Protocol (LLDP)		Supported
SSID-based VLAN assignment		Supported
EoGRE Tunnel		Supported

Item	AP 7636	
	Multicast	IGMP Snooping/MLD Snooping
QoS	802.11e	Wi-Fi Multimedia (WMM)
	Priority	802.1p priority and marking on Ethernet ports
		Priority mapping for wired and wireless packets
	QoS policy mapping	SSID/VLAN and QoS policy mapping
	Layer 2 to Layer 4 packet filtering and traffic classification	Supported
	CAR	Supported
	Client bandwidth management	Station-based bandwidth allocation
		SSID-based bandwidth allocation
	Load balancing	Traffic-based load balancing
		Session-based load balancing
		Frequency-based load balancing (supports dual-band)
	Band navigation (5G priority)	Supported
	Airtime optimization	Supported
	Airtime fairness	Supported
	Layer 4-7 application identification	Coupled with Intelbras WLAN WCs, the APs can identify variety of applications and policy control can be implemented including priority adjustment, scheduling, blocking, and rate limiting on users
	Multicast optimization (IPv4/IPv6)	Supported
Call Admission Control (CAC)	Session-based CAC	
	Channel usage-based CAC	
SVP Phone	Supported	
Power saving	PPC	Supported
	Green AP mode	Supported
	Dynamic MIMO power saving	Supported
	E-APSD	Supported
	WMM Power Save	Supported
Mesh	Mesh Link connection	Supported

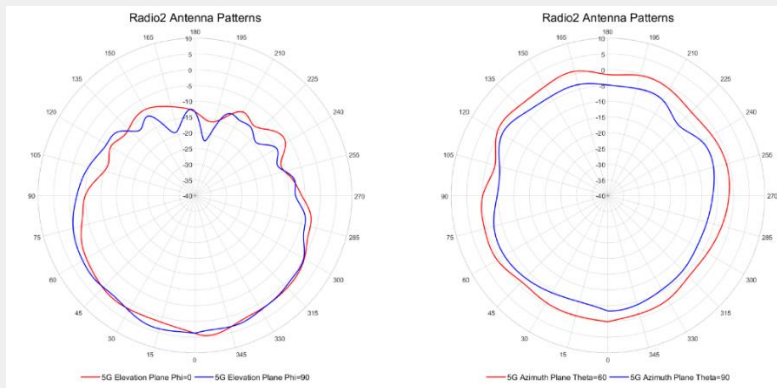
Item	AP 7636
Multi-hop Mesh	Supported

Antenna Patterns

Radio1: 5GHz (AP front facing down)



Radio2: 5GHz (AP front facing down)



Radio3: 2.4GHz (AP front facing down)

