

**intelbras**

# **Intelbras Wi-Fi Router AP 3620X**



## Intelbras AP 3620X Wi-Fi 6 (802.11ax) Outdoor Wireless Access Point

### Overview

Intelbras AP 3620X is a Wi-Fi 6 (802.11ax) outdoor access point (AP) individually developed by Intelbras S.A.

The AP adopts a dual-band and four-stream design with a maximum access rate of 1.775 Gbps. For 5 GHz radio 2 spatial streams, the maximum negotiation rate is 1.2Gbps. For 2.4 GHz radio 2 spatial streams, the maximum negotiation rate is 0.575 Gbps.

Professional and beautiful design and wide-temperature-range resistance make it convenient for outdoor installation and debugging. The AP features flexible installation methods, including wall mounting, and pole mounting. It's widely deployed for professional smart coverage in outdoor scenarios such as wireless city, big stadium and scenic spot.



AP 3620X Wi-Fi 6 (802.11ax) outdoor wireless access point

## Product features

### Operating mode

#### Fit AP mode

The AP 3620X supports the Fit AP mode and can be managed by the wireless controller equipped with the Comware system. In this networking mode, the user can locally manage the APs in batches.

#### Cloud AP mode

AP 3620X supports Intelbras Cloud solution that enables wireless networking without hardware WC and authentication server. It can perform authentications via PPSK, PSK. Customized development is implemented for multi-branch scenarios such as hotel chains and supermarkets, enabling features such as easy deployment, hierarchical and decentralized management, smart large screen at headquarters, and customized configuration templates.

### Security protection of wired and wireless networks

#### Terminal device access and admission security

With the wireless controller, wireless switches, and authentication system self-developed by Intelbras, AP 3620X can support authentication and encryption via 802.1x, PSK, MAC address, PPPoE. This ensures network security.

#### Wireless intrusion prevention system (WIPS)

AP 3620X supports WIPS. In combination with the wireless controller/wireless switch, it supports WIPS features such as detection, intrusion detection, as well as blacklist and whitelist of rogue devices at the same time. The WIPS features enable the device to detect, identify, take countermeasures against, and effectively intercept rogue devices.

#### Radio resource management (RRM)

RRM monitors in real time the environmental conditions such as the utilization rate of radio channels, channel interference, and signal conflict through systematic intelligent radio management. Moreover, it adjusts in real

time the radio parameters such as the working channel, bandwidth, and power to maintain optimal radio resource status. In this way, it enables auto network planning and auto network repair.

## **Roaming optimization**

The wireless AP supports the fast BSS transition feature defined in the 802.11r standard that helps to facilitate the roaming of wireless users, reduce the possibility of network interruptions, and enhance roaming quality.

Through the 802.11k mechanism, the AP and the wireless client perform interactive detection and perceive multi-dimensional network topologies. The WC identifies and comprehensively calculates the roaming timing and access location of the wireless client from a full perspective and negotiates switching with the client via the 802.11v and 802.11r mechanisms. During the switching period, the WC will ensure the traffic of the downlink service, to achieve seamless switching and improve user experience.

## **Only 11ax access**

AP 3620X supports the only 11ax access feature. The Wi-Fi 6 (802.11ax) is backward-compatible with 802.11a/b/g/n/ac standard, so the users of the 802.11a/b/g/n/ac standard can access a Wi-Fi 6 (802.11ax) wireless access device. However, its compatibility causes a decline in the actual performance of devices with high access capabilities such as Wi-Fi 6 (802.11ax) to some extent. The Intelbras devices enable the user to set the access mode of a certain radio frequency to only 11ax (only users using Wi-Fi 6 (802.11ax) can access). This ensures bandwidth transmission and device performance.

## **Orthogonal frequency division multiple access (OFDMA)**

AP 3620X supports OFDMA technology. An AP can divide wireless bandwidth and transmit data to multiple terminals simultaneously via different subcarriers. This reduces transmission latency caused by multi-user radio resource contention and backoffs and improves the user experience of low-latency applications such as speech output and video in multi-user scenarios.

## **Spatial reuse (SR)**

AP 3620X supports spatial reuse technology and basic service set (BSS) coloring technology. With these technologies, it identifies the color of the packets at the link layer to control the terminal device and adjusts transmit power to improve the reuse rate of channels in high-density deployment and avoid co-channel interference in case of simultaneous multi-user operation. This greatly improves the utilization rate of spectrum resources.

## Orthogonal frequency division multiple access (TWT)

AP 3620X supports the target wake times (TWT) technology. It allows the AP to uniformly schedule the wake-up and sleep time of the terminal, reducing contention and improving power efficiency by decreasing unnecessary wake-up times of the terminal.

## Flexible forwarding

When the AP 3620X AP is connected via a wide area network (WAN), the wireless access points (AP) are deployed in branch offices, while wireless access controllers (AC) are deployed in headquarters. In the traditional forwarding mode, all packets are sent from APs to ACs, and centrally forwarded by the AC. However, for AP 3620X, the packets can be converted to wired packets on the wireless access device directly avoiding data packets sent through WC but forwarded locally, which significantly saves wired network bandwidth. Besides, AP 3620X supports flexible policy-based forwarding and allows terminal devices of the same wireless service to implement centralized forwarding and local forwarding, so as to release export bandwidth and save costs of network bandwidth.

## IPv4 and IPv6 dual stack (Native IPv6)

AP 3620X is fully compliant with IPv6 and implements dual IPv4/IPv6 protocol stacks. It can automatically register on the wireless controller and provide wireless services no matter in an IPv4 or IPv6 network via broadcast, multicast, DHCP option 43, or DNS, so that it never runs as an information silo.

# Specifications

## Hardware specifications

Name	AP 3620X
Dimensions (excluding antenna connectors and mounting accessories)	250 × 101 × 110 mm
Fixed port	1 x IEEE 802.3 10/100/1000BaseT Ethernet, with RJ-45 connector, auto-sensing, auto MDI/MDX, PoE input 1 x IEEE 802.3 10/100/1000BaseT Ethernet, auto-sensing, auto MDI/MDX, with RJ-45 connector

Name	AP 3620X
Power supply	PoE Injector 54V DC Adapter 2.5GE: 802.3at/af
Built-in antenna	2 Internal Omni-directional dual-band antenna system, which: 2x2 2.4GHz with 3dBi gain 2x2 5GHz with 5dBi gain
Working frequencies	802.11ax/ac/n/a: 5.150 - 5.35GHz, 5.470 - 5.725GHz; 5.725GHz - 5.850GHz 802.11ax/b/g/n: 2.4GHz - 2.483GHz
Compatible bandwidth	2.4GHz: 20/40MHz 5GHz: 20/40/80MHz
Nominal Throughput	2.4GHz: 574Mbps 5GHz: 1201Mbps Combined: 1775Mbps
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
Transmit power (combined)	23 dBm
Adjustable power granularity	1 dBm
Power consumption	≤16.32W
Reset/restoration to factory default	Supported
State LED	Alternating flashing mode, orange/green/blue for different working states, breathing mode
Operating temperature/storage temperature	-30°C to +55°C/-40°C to +70°C
Operating humidity/storage humidity	0% - 100% (non-condensing)
Protection degree	IP67
MTBF	2266650H

## Software specifications

Name		AP 3620X
Operating mode	Fit mode	Controlled by WC

	Name	AP 3620X
	Cloud mode (Fat mode)	via Cloud or operates independently
	Mode switching	via command lines, ACs, Cloud, or reset button
	Router (IPv4/IPv6)	via command lines 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
	Intelligent operation and maintenance	Fit/ Cloud mode support
11ax supported	TWT	Supported
	BSS Color	Supported
	MU-MIMO	Supported
	OFDMA	Supported
	Only 11ax	Supported
WLAN basics	Maximum client's connections	256 (128 per frequency rate)
	A-MPDU	Supported
	A-MSDU	Supported
	Maximum likelihood demodulation (MLD)	Supported
	Maximal ratio combining (MRC)	Supported
	Spatial-Time block coding (STBC)	Supported

	Name	AP 3620X
	Low-density parity check (LDPC)	Supported
	Recommended number of clients	256
	Maximum number of SSID	8
WLAN extended	STA related	STA offline anomaly check, STA aging, statistics and status query
	User number limit	Supported
	Link integrity check	Supported
	Broadcast probe acknowledgment control	Supported
	Prohibition of client access with weak signals	Supported
	Hidden SSID	Supported
	WLAN RRM	Supported
	Wireless bridging	Supported
	Repeater mode	Supported
	Mesh	Supported
	11k	Supported
	11v	Available in Fit mode
	11r	Available in Fit mode
Security control policies	Encryption	TKIP, CCMP, WPA3, and WAPI
		Multiple encryption key triggered dynamic unicast/multicast key update
	802.11i	Supported
	Authentication	802.1X authentication, MAC address authentication, PSK authentication; Open system/shared key authentication; Enhanced open system authentication Mixed access of WPA, WPA2, WPA3, and Pre-RSNA users
	User isolation	Layer 2 user isolation SSID-based user isolation



	Name	AP 3620X
	Forwarding security	Packet filtering, MAC address filtering, and broadcast storm suppression
	Wireless endpoint access	Wireless EAD supported
	SSID and VLAN binding	Supported
	Wireless Intelligent Application Aware (wIAA)	Supported
	WIDS/WIPS	Supported
	MFP (802.11w)	Supported
	802.1X Client	Supported
AAA	Radius Client	Supported
	Multiple-domain authentication server	Supported
	Backup authentication server	Supported
Layer 2 and layer 3 features	IP address configuration	Static IP or DHCP assigned IP (option 60)
	Native IPv6	Supported
	IPv6 Portal	Supported
	IPv6 SAVI	Supported
	ACL	IPv4/IPv6
	NAT	Supported
	PPPoE Client	Supported
	Local forwarding	Local forwarding based on SSID+VLAN supported in Fit mode
QoS	802.11e	WMM
	Priority	Ethernet port based 802.1p identification and marking priority
		Priority mapping for wired and wireless connection
	Strategic QoS mapping	Distinctive QoS policies based on individual SSID/VLAN
	Layer 2 to Layer 4 packet filtering and traffic classification	Supported

Name		AP 3620X
	CAR	Supported
	User bandwidth management	Bandwidth allocation per STA All STAs sharing bandwidth with a common SSID Dynamical adjusting of the available bandwidth of the STAs in terms of service needs
	Load balancing	Traffic-based load balancing User-based load balancing Radio-based load balancing for dual-5G devices
	Spectrum guide	Supported
	Multicast enhancement	Multicast to unicast (IPv4/IPv6)
	CAC (Call Admission Control)	Session-based and channel usage-based CAC
	Application recognition	Supports audio and video optimization (eMDI/SQA/UCC) in Fit mode
	Airtime fairness (ATF)	Supported
Green features	Green AP mode	Supported
	Dynamic MIMO power saving	Supported
	Enhanced automatic power save delivery (E-APSD)	Supported
	SM Power Save	Supported
Certification	Wi-Fi Alliance	WFA130308