Intelbras AP 5620XDE New Generation Access Point

802.11ax Outdoor Series Access Point

Intelbras AP 5620XDE Dual-radio Outdoor Access Point

Overview

Intelbras AP 5620XDE is a new generation smart outdoor 802.11ax Access Point (AP) with dual-band, 4 streams and high RF radiated power. It provides up to 1.7Gbps throughput which are suitable for high-density outdoor scenarios and make wireless multimedia application reality.

AP 5620XDE 802.11ax Outdoor AP

Based on 802.11ax technology, Intelbras AP 5620XDE is integrated with smart RF optimizing technology. It can address outdoor WLAN coverage problems and enhance accuracy and stability. Professional and beautiful design and wide-temperature-range resistance make it convenient for outdoor installation and debugging. It’s widely deployed for professional smart coverage in outdoor scenarios such as wireless city, big stadium and scenic spot.

Features

Gigabit SFP optical port

Sometimes, 100-meter-long cable is not enough to connect a remote outdoor AP. AP 5620XDE series supports Gigabit SFP optical port and prevents from faulty of devices like optical modem.

Support OFDMA

AP 5620XDE supports OFDMA technology, AP can further divide the wireless bandwidth, use different subcarriers to transmit data to multiple terminals at the same time, reduce the delay caused by multi-user air interface resource conflict and back off in traditional protocols, improving the user experience of low-latency applications such as voice and video in multi-user scenarios.

Spatial Reuse

The AP 5620XDE supports spatial reuse technology. The AP can simultaneously control and adjust the transmission power by identifying non-associated messages, which can co-channel interference problems during multi-user use, and also greatly improve the utilization of spectrum resources.

TWT (Target Wake up Time)

AP 5620XDE supports TWT technology, allowing APs to make unified scheduling of terminal wake-up and sleep, which not only reduces the conflict between terminals, but also reduces the number of unnecessary wake-ups of the terminal, achieving the purpose of energy saving.

DL/UL MU-MIMO (Wi-Fi 6)

Intelbras AP 5620XDE 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 STAs simultaneously, which can highly improve transmission efficiency and access experience.

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 are 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.

Local forwarding

When AP 5620XDE runs in Fit mode and forwards packets through a wide area network (WAN), they are usually deployed as data access devices in branch offices, while wireless Access Controllers (ACs) are deployed in headquarter. All user data is sent from APs to AC, and centrally forwarded by the AC. AP 5620XDE AP can convert wireless packets to wired packets avoiding data packets sent through WC but forwarded locally, which significantly saves the WAN link bandwidth.

Dual IPv4/IPv6 protocol stacks (Native IPv6)

AP 5620XDE is fully compliant with IPv6 and implements a dual IPv4/IPv6 protocol stacks. Existing IPv4 and IPv6 wired networks can run in parallel and work seamlessly to register WLAN with Intelbras WX series or Cloud, so that it never runs as an information silo.

RF Optimizing Engine (ROE)

AP 5620XDE AP supports RF Optimizing Engine (ROE), which effectively increases the number of concurrent sessions in middle to high-density access, accomplishes streaming media application acceleration and QoS through character and protocol-based RF optimization. Features include multi-user fairness, mixed access fairness, interference filtering, speed optimization, band navigation, IPv4/IPv6 multicast signal boost, per-packet power control and intelligent bandwidth guarantee.

Real Time Spectrum Guard (RTSG)

Real Time Spectrum Guard (RTSG) is the innovative Intelbras professional state-monitoring program for the wireless spectrum. Intelbras 802.11ax series AP supports the internal RF data acquisition module to achieve deeply integrated monitoring and real time spectrum protection.

The RTSG Console is integrated into the On-premise centralized software, and performs data acquisition through the CAPWAP tunnel management and Sensor AP. It can achieve 24x7 wireless signal quality monitoring, trend assessment and unauthorized interference alert. Through active probe and 2.4GHz/5GHz RF interference source

(WiFi or non-WiFi) in every band, it provides a graphic representation of real-time FFT plot of the spectral density plot, spectrum diagram, the duty cycle map, event spectrum diagram, channel gain and interference gain. It can also automatically identify the source of interference, to determine the location of rogue wireless equipment, to ensure the wireless network is always in great shape. Combined with Intelbras On-premise centralized software module, it can maintain a complete history of RF quality in the coverage area, including its trace and playback, automatically generate customized trend, compliance and audit reports.

To cater for the different supervision demands in user's wireless environment, the RTSG solution can be deployed in either Local mode or Monitor mode. In Local Mode, you can maintain normal user access and data packet forwarding without compromising effective spectrum protection.

Intelligent AP load balancing

AP 5620XDE AP comes with intelligent load balancing, which spreads the workload according to the number of concurrent users and traffic. If a new incoming user breaks the preset loading limit, AP will check the location of the wireless client in real-time, determine if nearby APs with smaller workload can provide access, and deny the user access only when such AP exists. What sets Intelbras intelligent load balancing apart from existing load balancing schemes is that it kicks in only if the user is located in an area with overlapping AP coverage, and prevents loss of access when the workload limit is reached but no backup AP exists. This maximizes wireless network capacity while preventing any erratic behavior in load balancing.

Specifications

Hardware specifications

Features	AP 5620XDE
Installation	Outdoor pole
Weight (excluding mounting accessories)	1.8kg
Dimensions (H×W×D, excluding mounting accessories)	250mm x 250mm x 79.5mm
Fixed port	2×100M/1000M Ethernet port, one support IoT extension & PSE ,802.3af Network ports support link aggregation (LACP) for redundancy and increased capacity 1xSFP 1×Console port (RJ45)
Antenna	4 Internal directional antennas, which: .2x2 5GHz with 11dBi gain, 65 degrees of azimuth and 30 degrees of elevation .2x2 dual-band (5GHz + 2.4GHz) with 11dBi gain, 65 degrees of azimuth and 30 degrees of elevation. *Support extended external antenna

Features	AP 5620XDE
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: 20/40/80MHz
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
Maximum radio power	2.4GHz: 27dBm 5GHz: 24dBm (Transmit power is multi-chain combined power, no antenna gain is included)
Adjustable power	1dBm
Power Source	PoE Injector+55V DC Adapter (Optional) Adapted to 47~57V DC
Power consumption	≤25W (Not included PSE)
Operating temperature/storage temperature	Operating Tem: -30ºC ~ 55ºC (Recommended); -40 ºC ~ 65ºC; Storage Tem: -40ºC ~ 85ºC
Operating humidity/storage humidity	0% to 100% (non-condensing)
Protection degree	IP68
MTBF	>500000 hours

Software specifications

Features		AP 5620XDE
Operating mode	Fit mode	Controlled by WC
	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

Features		AP 5620XDE
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
11ax Supported	A-MPDU	Supported
	A-MSDU	Supported
	Maximum likelihood demodulation (MLD)	Supported
	Maximum-ratio combining (MRC)	Supported
	Spatial-Time block coding (STBC)	Supported
	Low-density parity check (LDPC)	Supported
	Cyclic Delay Diversity (CDD)/Cyclic Shift Diversity (CSD)	Supported
	DFS (dynamic frequency selection)	Supported
	Transmit Beamforming	Supported
WLAN Basics	Maximum client's connections	1024 (512 per frequency rate)
	Maximum number of SSIDs for each radio	16
	Virtual APs	32 (As a best practice, configure a maximum of five virtual APs for each radio)
	open system/shared key authentication	Supported
	Broadcast Probe acknowledge control	Supported

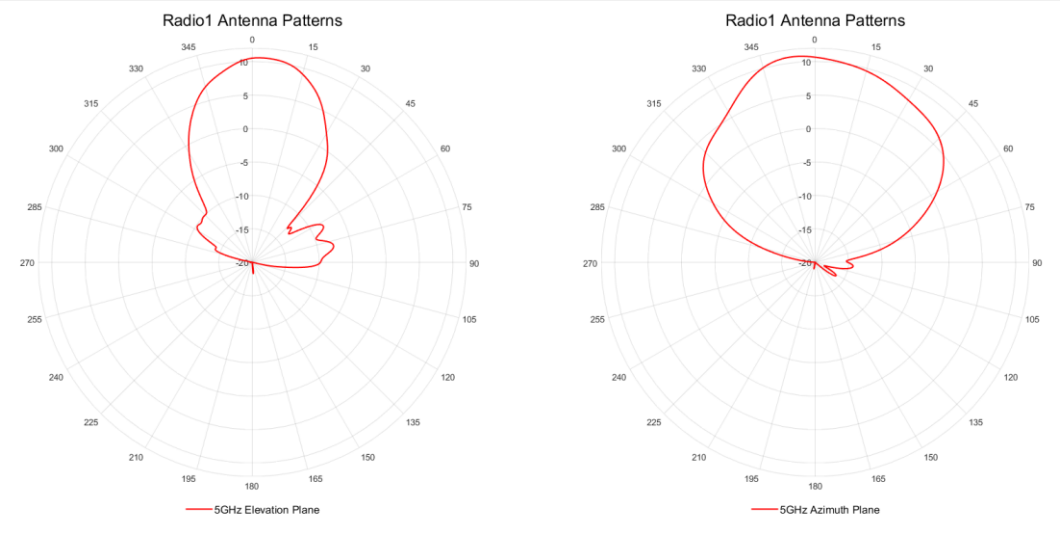
Features		AP 5620XDE
	Mixed connection for WPA, WPA2, WPA3 and Pre-RSNA users	Supported
	RTS/CTS	Supported
	CTS-to-self	Supported
	Concealed SSID	Supported
	802.11k and 802.11v smart roaming	Supported
	802.11r fast transition roaming	Supported
	Advanced Traffic Management	Supported
	Restrict low rate/sticky terminals access	Supported
	Channel reuse	Supported
	Receiver sensitivity adjustment	Supported
	Automatic channel/power/bandwidth adjustment	Supported
WLAN extended	Limit user number	Supported
	Station related	Abnormal offline check, station aging, statistics and status query
	Link integrity check	Supported
	Repeater mode	Supported
Security	Encryption	WEP-64/128/152bit, dynamic WEP, TKIP, AES, EAP, CCMP, WPA3, OWE
		Multiple encryption key triggered dynamic unicast/multicast key update
	802.11i	Supported
	Authentication	802.1X, MAC address authentication, PSK authentication, PPSK (Need to work with Intelbras Access Controller depending on application)
	User Isolation	Supported: Layer 2 user isolation SSID-based user isolation
	Forwarding security	Packet filtering, MAC address filtering, Broadcast storm suppression
	SSID and VLAN binding	Supported
	Rogue device detection and countermeasure	Supported

Features		AP 5620XDE
	Dynamic ARP Inspection (DAI)	Supported
	IP Source Guard (IPSG)	Supported
	WIPS/WIDS	Supported
	802.11w	Supported
Layer 2 and layer 3 features	IP address configuration	Static IP (available only in fat AP mode) DHCP assigned IP (option 60)
	Native IPv6	Supported
	IPv6 Portal	Supported
	IPv6 SAVI	Supported
	ACL	IPv4/IPv6
	Local forwarding	Local forwarding based on SSID+VLAN
	Link Layer Discovery Protocol (LLDP)	Supported
	SSID-based VLAN assignment	Supported
	EoGRE Tunnel	Supported
	Multicast enhancement	IGMP Snooping/MLD Snooping
QoS	802.11e	Wi-Fi Multimedia (WMM)
	Priority	Ethernet port based 802.1p identification and marking priority
		Priority mapping for wired and wireless connection
	Strategic QoS mapping	Distinctive QoS strategies based on individual SSID/VLAN
	Layer 2 to Layer 4 packet filtering and traffic classification	Supported
	CAR	Supported
	User bandwidth management	Bandwidth allocation per STA, or all STAs sharing bandwidth with a common SSID
	Load balancing	User/traffic/radio (dual frequencies) based
	Band navigation	Supported
	Multicast enhancement	Multicast to Unicast (IPv4, IPv6)

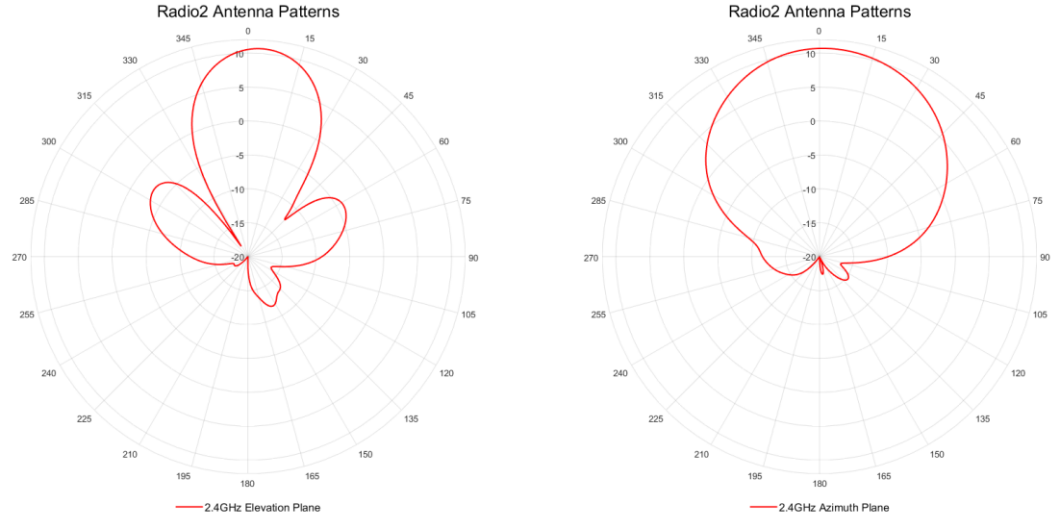
Features		AP 5620XDE
	CAC (Call Admission Control)	Session-based CAC Channel usage-based CAC
	Airtime optimization	Supported
	Airtime fairness	Supported
	Layer 4-7 application identification	Coupled with Intelbras WLAN ACs, the APs can identify variety of applications and policy control can be implemented including priority adjustment, scheduling, blocking, and rate limiting on users
	SVP Phone	Supported
	Per-packet power control (PPC)	Supported
Green features	Green AP mode	Supported
	Dynamic MIMO power saving	Supported
	Enhanced automatic power save delivery (E-APSD)	Supported
	WMM Power Save	Supported

Antenna Patterns

Radio 1



Radio 2 - 2.4GHz



Radio 2 - 5GHz