Intelbras Wi-Fi Router AP 7739

Intelbras AP 7739 New Generation 802.11be Indoor Series Access Point

Overview

Intelbras AP 7739 is a new generation Wi-Fi 7 product that complies with the 802.11be standard. Compared to Wi-Fi 6/6E products, it can provide higher rates, larger capacity, and lower latency. The access point has tri-radio 12 streams and with built-in antenna, including 4x4 6-GHz, 4x4 5-GHz, and 4x4 2.4-GHz, achieving speeds up to 18.67 Gbps. The access point has a 10 Gbps optical port and a 10 Gbps electrical port, providing redundant uplink ports. Redundant power supplies provide fault-free performance during failover. This access point supports both wall-mounted and ceiling-mounted installation, and is designed for highend enterprise offices, high-density wireless access, multi-party video conferencing, online teaching, exhibition centers, and other scenarios that require high-bandwidth and high-quality network experience.

Features and benefits

New-generation Wi-Fi standard 802.11be (Wi-Fi 7)

Wi-Fi 7(802.11be) is the next generation Wi-Fi standard, with improvements in the following features compared to Wi-Fi 6/6E: Supporting 320MHz bandwidth is an important physical layer technology in Wi-Fi 7. Compared to the 160MHz bandwidth of Wi-Fi 6/6E, the peak theoretical rate is directly doubled. Wi-Fi 7 has more bandwidth combinations, which can bring higher speed, wider coverage, and better multi user processing capabilities.

4096-QAM is also an important new technology in Wi-Fi 7. Compared to the 1024-QAM technology in WiFi 6/6E, 4096-QAM technology can increase transmission speed by 20%, resulting in higher bandwidth utilization, more stable transmission rate, and better user experience. MLO, Multi-Link Operation. By establishing multiple links, it can effectively improve the network performance, providing higher throughput, lower latency, and better connection quality. MRU, Multiple Resource Unit. In Wi-Fi 6, a single STA can only use a single RU resource, which lacks flexibility. Wi-Fi 7 breaks this limitation by allowing a single STA to occupy multiple RUs simultaneously, and RUs of the same sizes can be combined together. Preamble Puncturing. Utilizing discontinuous spectrum for data transmission to improve spectrum utilization efficiency. There are only a few available modes in Wi-Fi 6. On the one hand, Wi Fi 7 expands its bandwidth to 240MHz/320MHz; On the other hand, the spectrum drilling mechanism is more flexible for data transmission.

Specifications

Hardware specifications

Name	AP 7739
Installation	wall and ceiling mounting
Weight (excluding mounting accessories)	1.4Kg
Dimensions (H×W×D excluding mounting and accessories)	225mm X 225mm X 47.2mm
Ethernet ports	1 x 100/1000M/2.5G/5G/10G Multigigabit Ethernet, RJ-45, PoE input 1 x /1000M/10G optical port, SFP+, PoE input 1 x 100/1000M Multigigabit Ethernet, RJ-45, PoE output
PoE	Input: 1 x 100/1000M/2.5G/5G/10G Multigigabit Ethernet, 802.3bt/at 1 x 1000M/10G optical port, 802.3bt/at Output: 1 x 100/1000M Multigigabit Ethernet, 802.3af
Local Power supply	54V DC
Console port	1x RJ-45
Kensington Lock	support
Built-in smart antenna	8 omnidirectional tri-band antennas, which: .4x4 dual-band (2.4GHz and 6GHz) with 6 and 6.4dBi gain respectively .4x4 5GHz with 5.2dBi gain
Working frequencies	**802.11be/ax/ac/n/a:** 5.170MHz-5.330MHz; 5.490MHz-5.730MHz; 5.735MHz-5.835MHz; 5.925MHz – 7.115MHz; **802.11be/ax/b/g/n:** 2.4GHz-2.483GHz
Compatible bandwidth	2.4GHz: 20/40MHz 5GHz: 20/40/80/160MHz 6GHz: 20/40/80/160/320MHz
Nominal throughput	2.4GHz: 1.38Gbps 5GHz: 5.76Gbps 6GHz: 11.53Gbps Combined: 18.67Gbps

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Modulation techniques	11b - DSSS: 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 (0-31): BPSK, QPSK, 16QAM, 64QAM 11ac/ac wave2 - MIMO-OFDM (0 – 9): BPSK, QPSK, 16QAM, 64QAM, 256QAM 11ax - MIMO-OFDM (0-9): BPSK, QPSK, 16QAM, 64QAM, 256QAM 11ax: MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM 11be - MIMO-OFDM (0-13): BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM
Maximum transmit power	24 dBm
Reset/restoration to factory default	Supported
State LED	Alternating flashing mode, orange/green/blue for different working states, breathing mode
Working Temperature/ Storage Temperature	-10ºC ~ 55ºC(32°F to 113°F)/-40ºC ~ 70ºC(–40°F to +158°F)
Working Humidity/ Storage Humidity	5%~95%(non-condensing)
Protection class	IP42
Overall power consumption	≤49.2W
MTBF	>250000H

Software specifications

Item		**AP 7636**
Operating mode	Fit mode	Controlled by WC
	Cloud mode (Fat mode)	Controlled via Cloud or operates independently
	Mode switching	Mode switching via command lines, WC s, 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

Item		AP 7636
	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
802.11be	MLO	Supported
	Preamble puncturing	Supported
	Multi-RU	Supported
802.11ax	A-MPDU	Supported
	A-MSDU	Supported
	MU-MIMO	Support DL MU-MIMO/ UL MU-MIMO
	OFDMA	Support DL OFDMA/ UL OFDMA
	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
	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

Item		AP 7636
	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	Abnormal offline check, station aging, statistics and status query
	Client number limit	Supported
	Link integrity check	Supported
	Repeater mode	Supported
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.

Item		AP 7636
	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	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 and VLAN
	Link Layer Discovery Protocol (LLDP)	Supported
	SSID-based VLAN assignment	Supported
	EoGRE Tunnel	Supported
	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

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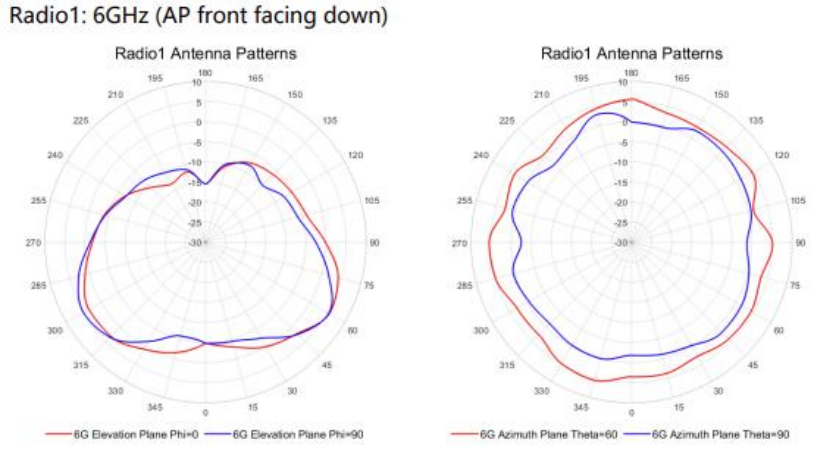
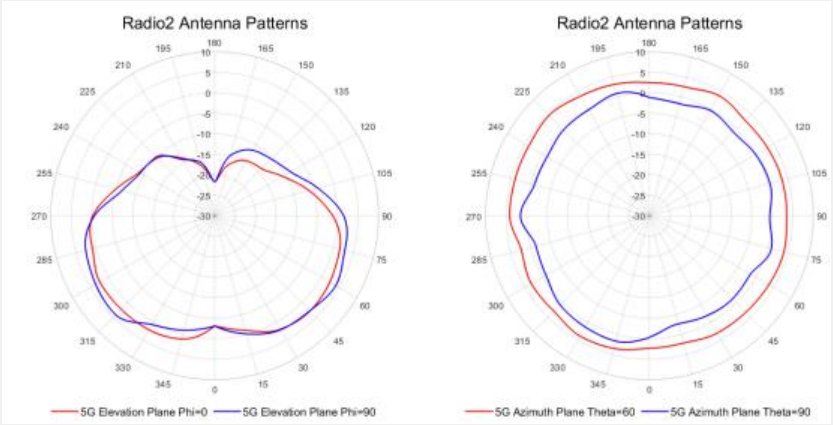
	QoS policy mapping	SSID/VLAN and QoS policy mapping
	Layer 2 to Layer 4 packet filtering and traffic classification	Supported
	CAR	Supported
	Client bandwidth management	Station-based bandwidth allocation SSID-based bandwidth allocation
	Load balancing	Traffic-based load balancing Session-based load 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
	Multi-hop Mesh	Supported
Certification	Wi-Fi Alliance	WFA129454

Antenna Patterns

Radio1: 6GHz (AP front facing down)



Radio2: 5GHz (AP front facing down)



Radio3: 2.4GHz (AP front facing down)