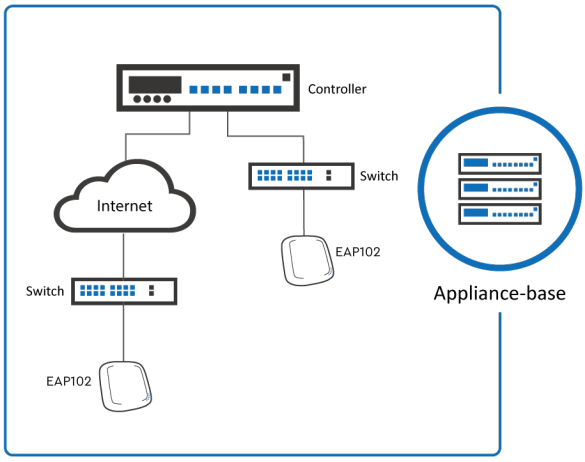
EAP102

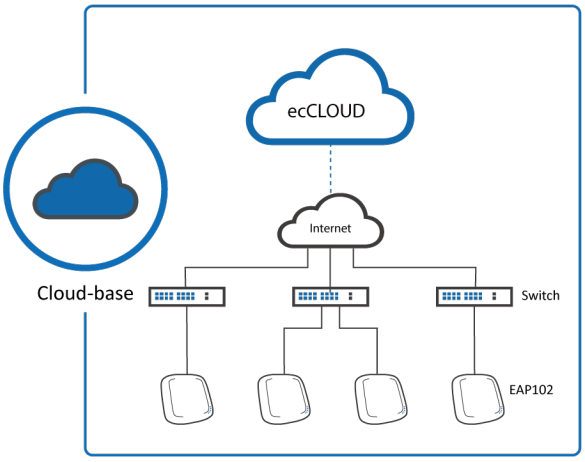
INDOOR WI-FI 6 ACCESS POINT

INTRODUCTION

The EAP102 is an enterprise-grade, concurrent dual-band Wi-Fi 6 indoor access point. The EAP102 supports 5G 4x4:4 uplink and downlink MU-MIMO between the AP and multiple clients, with up to 2.9 Gbps aggregated data rate. The EAP102 is equipped with a Bluetooth Low Energy (BLE) radio, enabling value-added applications such as iBeacon.

The EAP102 can be operated in a standalone mode or managed by Edgecore's ecCLOUD and EWS-Series controllers.





HIGHLIGHTS

- Concurrent Dual-Band 2.4 GHz & 5 GHz
- 802.11ax 4x4:4 UL MU-MIMO supporting up to 2.9 Gbps data rate
- Support up to 32 ESSIDs
- Enterprise-Grade Wireless Security
- Bluetooth Low Energy (BLE)
- 802.3at Power over Ethernet (PoE)

SPECIFICATIONS

PHYSICAL	
Power	• DC Input: 12V / 2.0A (power adapter included) • PoE: 802.3at compliant (PoE injector optional)
Dimensions (L x W x H)	• 19.5 cm x 20.1 cm x 3.98 cm (7.68 x 7.91 x 1.57 in)
Weight	• 0.7 kg (1.54 lb)
Interface	• Uplink: 1 x 10/100/1000/2.5GBase-T Ethernet, Auto MDIX, RJ-45 with 802.3at PoE • LAN: 1 x 10/100/1000/2.5GBase-T Ethernet, Auto MDIX, RJ-45 • Console: 1 x RJ-45 Port • USB: 2 x USB 2.0 Port[1]
LED Indicator	• Uplink / 2.4G-WiFi / 5G-WiFi / Power
Buttons	• Restart/ Reset
Environmental Conditions	• Operating Temperature: 0˚C (32˚F) to 45˚C (113˚F) • Operating Humidity: 5% to 95% non-condensing
Power Consumption	• 25W max[2].
Antenna	• Type: 4 x Built-in antenna (2.4 GHz & 5 GHz) • Gain: 5.5 dBi (2.4 GHz, BLE), 7.6 dBi (5 GHz)
Mounting	• Wall/Ceiling/T-bar mount (mounting kit included)
WI-FI	
Standards	• 802.11ax (Wi-Fi 6) • Concurrent dual-band 2.4 & 5 GHz
Supported Data Rates	• 802.11b: 1, 2, 5.5, 11 Mbps • 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps • 802.11n: 6.5 –300 Mbps (20 / 40 MHz) • 802.11ac: 6.5 –1733 Mbps (20 / 40 / 80 MHz) • 802.11ax: 3.6 –574 Mbps (2.4 GHz, 20 / 40 MHz) • 802.11ax: 3.6 –2400 Mbps (5 GHz, 20 / 40 / 80 MHz)
Radio Chains	• 2.4 GHz: 2 x 2 • 5 GHz: 4 x 4
Spatial Streams	• 2.4 GHz: 2; MU-MIMO support • 5 GHz: 4; MU-MIMO support
Aggregate Conducted Transmit Power[3]	• 2.4 GHz: Up to 23 dBm[4] • 5 GHz: Up to 26 dBm[4]
Channelization	• 2.4 GHz: 20 / 40 MHz • 5 GHz: 20 / 40 / 80Mhz

1: One USB port works at a time
2: 22W when powered by DC
3: RF output power aggregates across MIMO chains and does not contain antenna gain
4: Maximum power is limited by local regulatory requirements

WI-FI	
Frequency Range	• 2.400 – 2.483 GHz • 5.150 – 5.850 GHz
Operating Channels	• 2.4 GHz: 1 –11 (US), 1 –13 (Europe), 1 –13 (Japan) • 5 GHz[5]: 36 –165 (US), 36 –140 (Europe), 36 –144 (Japan)
ESSIDs	• Up to 16 per radio (32 total)
Certifications	• FCC, CE, LVD, NCC, BSMI, VCCI, JATE, TELEC, IC, C-Tick, Philippines, Thailand
PERFORMANCE	
Physical Data Rate	• Up to 574 Mbps (2.4 GHz) • Up to 2400 Mbps (5 GHz)
FEATURES	
Wireless	• 802.11 k/v/r • Orthogonal Frequency Division Multiple Access (OFDMA) • Client Isolation • Open Mesh • BSS Coloring • Band Steering • Wi-Fi Enhanced Open (OWE) • Wireless Site Survey
Network	• Spanning Tree Protocol (STP) • Dynamic Host Configuration Protocol (DHCP) • DHCP Relay • 802.1q • Access Control List (ACL) • Network Address Translation (NAT) • Dynamic VLAN • Link Layer Discovery Protocol (LLDP) • Smart Isolation • IPv6 compatible • Proxy ARP
Security	• WPA-Personal (AES) • WPA-Enterprise (AES) • WPA2-Personal (AES) • WPA2-Enterprise (AES) • WPA3-Personal (AES) • WPA3-Personal Transition (AES) • WPA3-Enterprise (AES) • WPA3-Enterprise Transition (AES) • Multi Pre-Shared Key (MPSK) • Dynamic Pre-Shared Key (DPSK) • MAC Address Authentication • DHCP Snooping • ARP Inspection • L3 Firewall

5: Some channels are restricted by local regulatory requirements and certifications

FEATURES	
Maintenance	• Network Time Protocol (NTP) • Standalone • Management by ecCLOUD • Management by ecCLOUD-VPC • Management by EWS-Series Controller (Complete Tunnel/Split Tunnel) • SSH • QR Code Onboarding • SNMP v1/v2c/v3 • Remote Syslog • Discovery Tool • Zero Touch Provisioning (ZTP)
QoS	• RSSI Threshold (Optimal Client Filtering) • Multicast-to-Unicast Conversion • WME
Mobility	• OpenRoaming (Hotspot 2.0 R1)
Others	• Target Wake Time (TWT) • iBeacon • Hotspot Captive Portal • Dynamic Authorization (DAE)

AI-ENABLED DETECTION[6]	
Internet (WAN)	• Throughput (Up/Down) • Packet Drops • Roundtrip Latency • Usage
Wi-Fi Connection/ Experience	• DHCP Exchanges • EAP Failures • Slow Connectivity • Connection Drops • Poor Signal • Beacon Miss • Steering Efficiency • AP Stability • Wrong Key • Inactivity • Radio Congestion • Wi-Fi Latency • Hogging Airtime
Wi-Fi Roaming	• Poor AP Selection • Poor Overlap • AP Slow Response • Sticky Client • Slow Roaming
Application	• Reachability • Upstream Health • Downstream Health

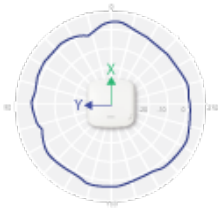
6: When managed by ecCLOUD with the Aprecomm VWE (Virtual Wireless Expert) AI solution enabled.

SIGNAL COVERAGE PATTERN

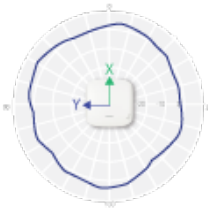
Azimuth

2.4 GHz/ BLE

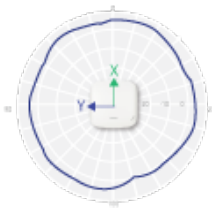
ANT1



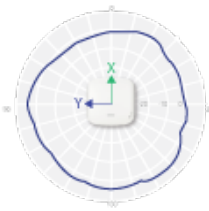
ANT2



ANT3

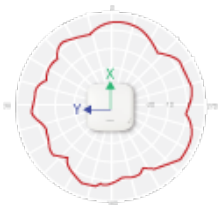


ANT4

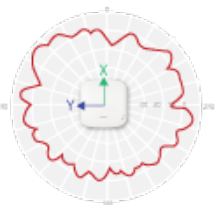


5 GHz

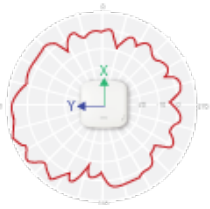
ANT1



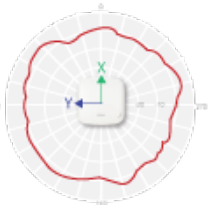
ANT2



ANT3



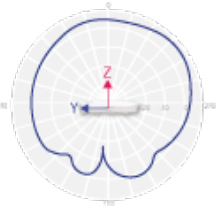
ANT4



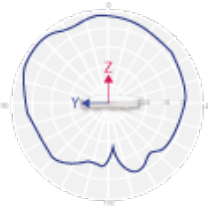
Elevation

2.4 GHz/ BLE

ANT1



ANT2

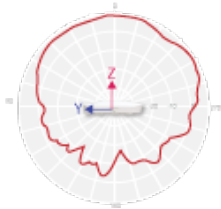


ANT3

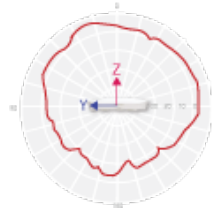
ANT4

5 GHz

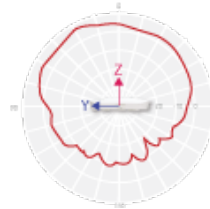
ANT1



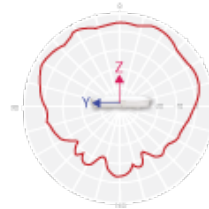
ANT2



ANT3



ANT4



RECEIVE SENSITIVITY

Operating Mode	Data Rate	Receive Sensitivity (dBm)
802.11b	1 Mbps	-96
	11 Mbps	-88
802.11a	6 Mbps	-90
	54 Mbps	-72
802.11g	6 Mbps	-91
	54 Mbps	-75
802.11n (2.4 GHz/HT20)	MCS0	-90
	MCS7	-71
802.11n (2.4 GHz/HT40)	MCS0	-87
	MCS7	-68
802.11n (5 GHz/HT20)	MCS0	-89
	MCS7	-70
802.11n (5 GHz/HT40)	MCS0	-86
	MCS7	-67
802.11ac (VHT20)	MCS0	-90
	MCS8	-69
802.11ac (VHT40)	MCS0	-88
	MCS9	-64
802.11ac (VHT80)	MCS0	-85
	MCS9	-61
802.11ax (2.4 GHz/HE20)	MCS0	-92
	MCS11	-62
802.11ax (2.4 GHz/HE40)	MCS0	-89
	MCS11	-60
802.11ax (5 GHz/HE20)	MCS0	-90
	MCS11	-58
802.11ax (5 GHz/HE40)	MCS0	-87
	MCS11	-55
802.11ax (5 GHz/HE80)	MCS0	-85
	MCS11	-56

TEL: 886-3-5638888 FAX: 886-3-6686111
1, Creation Rd. III, Hsinchu Science Park, Taiwan 30077
sales@edge-core.com
www.edge-core.com