



## Indoor PoE 3657 Mbps Dual Band 200mW 4x4 + 4x4 Mu-MIMO. 802.11b/g/n/ac/ax Wave 2



Galgus IX850 delivers the most advanced wireless communications features up to **200mW** high power indoor **802.11ax** wave 2 environments.

Thanks to its robust ABS cage and its max gain **3dBi** WIFI antenna, makes this product to be the ideal one for indoor environment. It is an excellent choice for **indoor very high density heavy-duty multi-scenarios**, such as **very large schools, hospitals, coffee shops, hotels, offices and enterprises, indoor events, stadiums, concerts, large meeting/conference halls, Clubs, Shopping malls, Bus/train stations, airports,....** to cover typical usage of **UHD movies, streaming, online gaming,...** with **wireless security, device location, positioning and other heavy bandwidth-intensive tasks.**

### Main features

<b>Antenna</b>	3dBi gain omnidirectional antennas. Up to 23dBm (200mW) RF power. 2,4/5 GHz: 4x4 + 4x4 Mu-MIMO
<b>Interfaces</b>	1x2.5Gbps Mbps RJ45 WAN Port + 1x2.5Gbps RJ45 LAN Port WAN port supports IEEE 802.3at standard PoE Reset button USB3.0. LED: Sys/WAN/LAN Reset button
<b>RF Standard</b>	Wifi 802.11 b, g, n, ac, ax wave 2
<b>PHY Capacity</b>	<b>2.4 GHz:</b> 1182 Mbps <b>5 GHz:</b> 2475 Mbps
<b>QoS capabilities</b>	Profile based packet priorities and planning. Bandwidth restriction for each SSID. VMM parameters modification Calling QoS classification and prioritization for wireless and wired interfaces Traffic congestion management: limitation of per user bandwidth
<b>Power Supply</b>	IEEE 802.3at PoE+. 12Vdc / 2A power input
<b>Typical Consumption</b>	<24W
<b>Humidity</b>	Operating: 5% to 95% (non-condensing)
<b>Operating Temperature</b>	-20°C (-4°F) to 55°C (131°F)
<b>Dimensions Weight</b>	198 x 198 x 41.02 mm 750 gr
<b>Security</b>	WIDS & WIPS CHT, ACL support, IEEE 802.11w RFC 6101 Secure Layer Socket, RFC 5246 Transport Layer Security, RFC 4253 Secure Shell Advanced Firewall with SYN-Flood protection MSS clamping, NAT, Port forwarding, Traffic Rules Support 64/128-bit WEP, 128bit WPA (TKIP/AES), WPA & WPA2 Personal and Enterprise with IEEE 802.1x and VLAN tagging, WPA3 PSK, Local authorization via RADIUS Server, IPsec and L2TP passthrough, Key Management, PSK/TKIP Encryption, AES Encryption, Denial of Service Attack Protection, MAC Filtering (Dynamic Blacklist), Isolate wireless clients, Hide SSID

<b>WIFI features</b>	IEEE 802.11h (DFS), WMM, Power Save, Tx Beamforming, LDPC, STBC, , IEEE 802.11r/k/v, IEEE 802.11u Hotspot and Hotspot 2.0. LLDP,ACL and aptive Portal supports, Online signup and policy provisioning, Tag VLAN based on SSID WISPr, Multiple SSIDs, Data aggregation, Packet priorities and planning, Statistics reporting, SW updates and configuration through DHCP auto-provisioning DL/UL OFDMA , BPSK,QPSK, 16-QAM, 64-QAM, 128-QAM, 256-QAM and 1024QAM and DSSS = DBPSK, DQPSK, CCK modulations SSID broadcasting, Multi SSID up to 55 (18 SSID in 2.4GHz, 37 SSID in 5GHz). >200 users
<b>Management &amp; Diagnostics</b>	Galgus Cloud Manager, Web GUI, RFC 1157 & 2271 – SNMP, RFC 3414 – SNMP v3 HTTP/HTTPS Web Server, Zero Touch Provisioning, Telnet SSH, Network Controller Enhancer. Ping, Traceroute and Ns lookup tools. Syslog and Local Log support, Save and restore settings via Web Interface. Wireless RF status and throughput, TCP/UDP Connections statistics and details. Traffic metrics per interface, Load . Can manage the AP through VLAN ID, Map VLAN IDs to multiple SSID, IEEE 802.1q, Dynamic VLAN with 802.1x, Up to 16 VLAN
<b>IP &amp; Network</b>	IPv4, IPv6, IEEE 802.1d & 802.1s– STP, IEEE 802.1q – VLANs, RFC 2131 & RFC 2132 – DHCP Client/Server, RFC 1661 PPP, RFC 2516 PPPoE, RFC 2637 PPPTp, RFC 2661 L2TP, Static Leases, Domain whitelist, Firewall, IP filter, URL filter and MAC filter, Can work as: Gateway (PPPOE, static IP, dynamic IP) , Wireless AP, Repeater, WISP, WDS, Ad-Hoc and Pseudo Ad-Hoc, Mesh 802.11s, Monitor, Bridge. DDNS, VPN pass through, Port forwarding and DMZ host. UDP, TCP, DNS, NTP, STP,
<b>IPv6</b>	RFC 6333 Dual Stack, RFC 4213 IPv6-in-IPv6, RFC 4291/3315: Dynamic Host. DHCPv6
<b>Case &amp; Mounting</b>	ABS cage. PCB board support Common mode ±6KV Different mode and ±2KV lightning protection



## RF Performance Table

2.4G RF Power	802.11n HT40	MCS0	23±2dBm
	802.11n HT40	MCS7	22±2dBm
	802.11ac HT40	MCS9	21±2dBm
	802.11ax HT40	MCS11	18±2dBm
5.8G RF Power	802.11n HT40	MCS0	23±2dBm
	802.11n HT40	MCS7	22±2dBm
	802.11ac HT80	MCS9	21±2dBm
	802.11ac HT80	MCS11	18±2dBm
2.4G EVM	802.11n HT40	MCS0	-86dBm
	802.11n HT40	MCS7	-68dBm
	802.11ac HT40	MCS9	-55dBm
	802.11ax HT40	MCS11	-35dBm
5.8G EVM	802.11n HT40	MCS0	-86dBm
	802.11n HT40	MCS7	-68dBm
	802.11ac HT80	MCS9	-55dBm
	802.11ac HT80	MCS11	-35dBm

## COMMON FEATURES CHT

Its patented and **embedded Cognitive Hotspot Technology (CHT)** ensures users of your WiFi network will enjoy supreme performance even in the most adverse conditions. Thanks to its **automatic resource optimization and control** based on artificial intelligence, Galgus' APs appropriately suit many different scenarios. In addition, the site administrator will find it easier to operate the network, with a **powerful and intuitive optional cloud management system**: You can handle your network from a single location and extract more valuable information from your infrastructure.

A network with Galgus' APs:

- **Avoids typical problems** from those solutions with centralized controllers or cloud controllers such as lack of adaptability and robustness, single points of potential failure, delays in decision making, bottlenecks, traffic efficiency drop...
  - **Drastically reduces operating costs and increase performance**, as CHT is responsible for

optimizing the network in real-time automatically without human intervention: allocation of radio resources, channels, bandwidth, load balancing and prebalancing, airtime fairness, smart and predictive roaming, traffic congestion management, automatic power control, multicast, multicast to unicast conversion, device location and tracking, etc.

- **Adds an enormous value** to the existing infrastructure (location and tracking of connected users even if they falsify their MAC address, detecting, mitigating and even locating hacker attacks, generating heat maps in real-time, as well as discovering and exploiting the amendments that support the devices), allowing the owner of the network to use the data obtained without violating the user' privacy.
- **Simplifies** administrators' life, thanks to its Zero-Touch Provisioning philosophy for immediate deployment and advanced enterprise-grade management features (cloud management, REST API, captive portal and integration with social login, dynamic VLANs, WPA enterprise with Radius support, and modular licenses with auto-download system).



		Features	Standard	Premium	WIFI4EU
1	E A S Y  M A N A G E M E N T	Cloud Manager	Y	Y	Y
2		REST API	Y	Y	Y
3		Integration with third party dashboards	Y	Y	Y
4		Mesh with dynamic re-routing	Y	Y	Y
5		Mesh advanced configuration from the Cloud	Y	Y	Y
6		Events and alerts (including DFS and high density)	Y	Y	Y
7		Self configuration	Y	Y	Y
8		Remote SSH access to the APs	Y	Y	Y
9		Zero Touch provisioning (ZTP)	Y	Y	Y
10		Local web interface (Advanced configuration)	Y	Y	Y
11		Intuitive CLI	Y	Y	Y
12		Modular licenses and auto-download	Y	Y	Y
13	O P T I M I Z A T I O N	No central controller (No bottlenecks/Point of failure)	Y	Y	Y
14		Distributed intelligence without central controller	Y	Y	Y
15		Smart Roaming (Seamless handoff)	Y	Y	Y
16		Automatic Channel assignment	Y	Y	Y
17		Proactive Load Balancing (real-time resource allocation)	Y	Y	Y
18		Prebalancing (Association control)	Y	Y	Y
19		Traffic control (Bandwidth limits for users)	Y	Y	Y
20		Automatic Power Control (interference mitigation)	Y	Y	Y
21		Smart Multicast (Multicast to unicast conversion)	Y	Y	Y
22		Airtime Fairness	Y	Y	Y
23		Dynamic probe management for ultra high density	Y	Y	Y
24		Smart and robust reaction to DFS Events	Y	Y	Y
25		Predictive roaming	Y	Y	Y
26	M A N A G E M E N T	Location of associated and unassociated devices	N	Y	N
27		Heatmap of associated and unassociated devices	N	Y	N
28		Location of devices (preventing random MAC issues)	N	Y	N
29		Heatmap of devices (preventing random MAC issues)	N	Y	N
30		Counting of associated and unassociated devices	N	Y	N
31		Counting of devices (preventing random MAC issues)	N	Y	N
32		Real Time signal strength heatmap	Y	Y	N
33		Real Time modulation and coding (MCS) heatmap	Y	Y	N
34		Real-time device capabilities heatmap	Y	Y	N
35		Coverage estimation (In both bands)	Y	Y	Y
36		Spectral analysis (In both bands)	Y	Y	Y
37		Device fingerprinting against random MACs	N	Y	N
37	I N - D E P T H  A N A L Y T I C S	Historic record and visualization of data	N	Y	Y
38		Cloud Location Analytics	N	Y	N
39		Secured communication between Aps (Elliptic curve)	Y	Y	Y
40		Wireless Intrusion Prevention	N	Y	N
41		Wireless Intrusion Detection	N	Y	N
42		Wireless intrusion Location	N	Y	N
43		Location and tracking of the hacker	N	Y	N
44		WPA/WPA2 personal and Enterprise	Y	Y	N
45		WPA3 personal and Enterprise	Y	Y	N
46		Fast Roaming (802.11r)	Y	Y	Y
47		Client Isolation	Y	Y	Y
48		Shields against DDoS attack	Y	Y	N
49		Internal captive portal	Y	Y	N
50		External captive portal	Y	Y	Y
51		Integration with social login	Y	Y	Y
52		Firewall & Deep Packet Inspection (DPI)	Y	Y	N
53		Dynamic VLANs (credentials-based split of network)	Y	Y	N
54		Radius support	Y	Y	N
55		GDPR compliant	Y	Y	Y
56		Hotspot 2.0 /Passpoint R.3	N	Y	Y