

GALGUS® Access Point CHT Indoor IC450 (PREVIOUSLY AC1200YCST-LP)

Indoor PoE 1167 Mbps Dual Band 2X2 MU-MIMO 802.11 a/b/g/n/ac Wave 2



Galgus IC450 delivers the most advanced wireless communications features for a high power indoor 802.11ac Wave 2 environment.

Thanks to its robust cage and its max gain **5dBi** WIFI antenna, makes this product to be the ideal one for indoor environment. It is an excellent choice **in low-medium indoor multi-scenario, such as coffee shops, bars, small and medium size hotels, offices, restaurants, enterprises....**

Main Features

Antenna	Build in omnidirectional 5dBi gain 2.4 GHz: 2x2 MIMO; 5 GHz: 2x2 MU-MIMO	
Interfaces	10/100/1000 Mbps RJ45 WAN Port WAN port supports IEEE 802.3at standard PoE 10/100/1000 Mbps RJ45 LAN Port Reset button	
WIFI Standard 802.11	a, b, g, n, ac Wave 2	
PHY Capacity	2.4 GHz: 300 Mbps	5 GHz: 867 Mbps
Power Supply	DC 12V 1.5A Jack Input	(Power Injector no included) PoE: IEEE 802.3af/at
WIFI features	IEEE 802.11h (DFS), WPA & WPA2 Personal, WPA & WPA2 Enterprise with IEEE 802.1x and VLAN tagging, WMM, Power Save, Tx Beamforming, LDPC, STBC, IEEE 802.11r/k/v, IEEE 802.11u Hotspot and Hotspot 2.0, Captive Portal Support, Online signup and policy provisioning, WISPr, Multiple SSIDs Data aggregation, Packet priorities and planning, Statistics reporting, LLDP support, ACL support, SW updates and configuration through DHCP autoprovisioning, OFDM = BPSK, QPSK, 16-QAM, 64-QAM, 128 QAM and 256QAM and DSSS = DBPSK, DQPSK, CCK modulations, SSID broadcasting, Multi SSID up to 8 (4 SSID in 2.4GHz, 4 SSID in 5GHz), Tag VLAN based on SSID	
Management	Galgus Cloud Manager, Web GUI, RFC 1157 & 2271 – SNMP, RFC 3414 – SNMPv3	
IP & Network	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, Firewall, IP filter, URL filter and MAC filter, Gateway (PPPOE, static IP, dynamic IP), Wireless AP, Repeater, WISP operation mode, DDNS, VPN pass through, Port forwarding and DMZ host	
IPv6	RFC 6333 Dual Stack, RFC 4213 IPv6-in-IPv6, RFC 4291/3315: Dynamic Host, Configuration Protocol para IPv6, (DHCPv6)	
Security	WIDS & WIPS CHT, 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, ACL support, Support 64/128-bit WEP security, 128bit WPA (TKIP/AES) security, IEEE 802.11w	
Maximum Consumption	<12W	
Humidity	Operating: 5% to 95% (non-condensing)	
Operating Temperature	-30°C (-22°F) to 55°C (131°F)	
Dimensions (H x W x D) Weight	188 x 188 x 50 mm 380 gr	



RF Performance Table

Frequency	2.4G:802.11b/g/n: 2.4GHz~2484GHz 5GHz:802.11a/n/ac: 5150MHz ~5850MHz				
Country code	FCC、IC、ETSI、MKK、MKK1、MKK2、MKK3、NCC、RUSSIAN、CN				
Modulation	OFDM = BPSK,QPSK, 16-QAM, 64-QAM, 128-QAM, 256-QAM DSSS = DBPSK, DQPSK, CCK				
Throughput	±20ppm				
2.4G RF Tx Power	802.11b	11M	21±2dBm	1M	23±2dBm
	802.11g	54M	20±2dBm	6M	22±2dBm
	802.11n HT20	MSC7	19±2dBm	MCS0	21±2dBm
	802.11n HT40	MSC7	18±2dBm	MCS0	20±2dBm
5G RF Tx Power	802.11a	54M	19±2dBm	6M	21±2dBm
	802.11n HT20	MSC7	18±2dBm	MCS0	20±2dBm
	802.11n HT40	MSC7	17±2dBm	MCS0	19±2dBm
	802.11ac HT80	MSC9	16±2dBm	MCS0	18±2dBm
2.4G RF Rx Sensitivity	802.11b	11M	-85dBm	1M	-94dBm
	802.11g	54M	-72dBm	6M	-90dBm
	802.11n HT20	MSC7	-70dBm	MCS0	-88dBm
	802.11n HT40	MSC7	-68dBm	MCS0	-86dBm
5G RF Rx Sensitivity	802.11a	54M	-72dBm	6M	-90dBm
	802.11n HT20	MSC7	-70dBm	MCS0	-88dBm
	802.11n HT40	MSC7	-68dBm	MCS0	-86dBm
	802.11ac HT80	MSC9	-58dBm	MCS0	-80dBm
EVM	2.4G: 802.11b: ≤-10 dB; 802.11g: ≤-25 dB; 802.11n: ≤-28 dB 5G: 802.11a: ≤-25 dB; 802.11n: ≤-28 dB; 802.11ac: ≤-32 dB				
Power Supply	±20ppm				
Max Users	>128				

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** the 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**, as CHT is responsible for optimizing the network in real-time (allocation of radio resources, power, channels, bandwidth, load balancing, airtime fairness, smart and predictive roaming, traffic congestion management, etc.) automatically, without human intervention.

- **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).

Optimization

- Automatic Channel Assignment
- Load Balancing
- Pre-Balancing
- Airtime Fairness
- Multicast-Unicast Conversion
- Automatic Power Control
- Smart Roaming
- Predictive Roaming
- Traffic Congestion Management
- Ultra-High Density Scenarios: Dynamic Probing Frames Management

Management

- Remote Management (Cloud)
- REST API
- Self-configuration
- Advanced Mesh with Self-Healing, Dynamic Re-Routing, QoS and Power Control
- Zero Touch Provisioning
- Captive Portal and Integration with Social Login
- Dynamic VLANs
- WPA Enterprise with Radius Support
- Modular Licenses and Auto-Download Licensing System

Analytics

- Wireless Intrusion Detection
- Wireless Intrusion Prevention
- Wireless Intrusion Location*
- Location, Positioning and Tracking of devices with real or randomized MAC
- Real-time Signal Strength Heatmap
- Unveiling of Randomized MAC Adresses
- Discovery of IEEE 802.11 Amendments Supported by User Devices

(*) Available in future release.



Types of Licences 2020

Features	Standard	Premium	WIFI4EU
MANAGEMENT			
Cloud Manager	✓	✓	✓
REST API	✓	✓	✓
Integration with third party dashboards	✓	✓	✓
Mesh with self-healing and dynamic re-routing	✓	✓	✓
Self configuration	✓	✓	✓
Remote SSH access to the APs	✓	✓	✓
Zero Touch Provisioning (ZTP)	✓	✓	✓
Local web interface	✓	✓	✓
Intuitive CLI	✓	✓	✓
Modular licenses and auto-download	✓	✓	✓
OPTIMIZATION			
No central controller (No bottlenecks/Point of failure)	✓	✓	✓
Distributed intelligence without central controller	✓	✓	✓
Smart Roaming (Seamless handoff)	✓	✓	✓
Automatic Channel Assignment	✓	✓	✓
Local balancing (Real-Time resource allocation)	✓	✓	✓
Prebalancing (Association control)	✓	✓	✓
Traffic control (Bandwidth limits for users and radios)	✓	✓	✓
Automatic Power Control	✓	✓	✓
Smart Multicast (Multicast to unicast conversion)	✓	✓	✓
Airtime Fairness	✓	✓	✓
Dynamic probe management for ultra high density	✓	✓	✓
Predictive Roaming	✓	✓	✓
ANALYTICS			
Location and tracking of associated devices	✗	✓	✗
Location and tracking of unassociated devices	✗	✓	✗
Location and tracking of devices with random MAC	✗	✓	✗
Real Time signal strength heatmap	✗	✓	✗
Real Time modulation and coding (MCS) heatmap	✗	✓	✗
Real-time device capabilities heatmap	✗	✓	✗
Coverage estimation	✓	✓	✓
Unveiling of fake MAC address for associated devices	✓	✓	✓
Discovery of IEEE amendments supported by devices	✓	✓	✓
Device fingerprinting	✓	✓	✓
Spectral analysis	✓	✓	✓
SECURITY			
Secured communication between APs (Elliptic curve)	✓	✓	✓
Wireless Intrusion Prevention	✗	✓	✗
Wireless Intrusion Detection	✗	✓	✗
Wireless intrusion Location	✗	✓	✗
WPA/WPA2 personal and Enterprise	✓	✓	✓
WPA3 personal and Enterprise	✓	✓	✓
Alerts and events	✓	✓	✓
Internal captive portal	✓	✓	✓
External captive portal	✓	✓	✓
Integration with social login	✓	✓	✓
Firewall	✓	✓	✓
Dynamic VLANs	✓	✓	✓
Radius support	✓	✓	✓
GDPR-compliant	✓	✓	✓
Hotspot 2.0	✗	✓	✓