G-AP-IX450

Indoor 802.11a/b/g/n/ac/ax WiFi AP with PoE+ 1800 Mbps Dual Band 2X2 MU-MIMO

The optimal choice for most scenarios with a medium-high density of users and traffic such as hotels, offices, restaurants, schools, hospitals...

Antenna	Internal omni, 3dBi gain
Interfaces (see image)	A. DC port. B. Sys/WAN/LAN LED indicators. C. RJ45 10/100/1000 Mbps WAN port D. RJ45 10/100/1000 Mbps LAN port E. Reset button. **Optional**: Bluetooth, USB 3.0 and 4G/5G connectivity
Feeding source	DC: 12V 2A Jack connector (not included) PoE: 48V IEEE 802.3af/at
Average power consumption	48V PoE ≈ 24 W (peaks up to 30W) DC: 12V 2A Supports IEEE 802.3az
Size	198 x 198 x 41 mm
Weight	750 g.
Temperature	Operation: -20°C - 45°C (-4°F - 113F) Storage: -20°C -70°C (-4°F - 158°F)
Humidity	Operation: 5% - 95% (non-condensing) Storage: 5% - 95% (non-condensing)

Distributed intelligence, no need for a central controller.

Single management platform for all network elements.

High network scalability. Not limited by size or AP number.

Automatic network optimisation.

Precise and robust Location Analytics using only WiFi.

Galgus® complete solution

WiFi Network + Intelligence + Management

Galgus' proprietary technology, CHT® (Cognitive Hotspot Technology), provides WIFI networks with a distributed intelligence with no need for a central controller. This avoids bottlenecks and single points of failure, improves performance, save costs, and enables advanced functionalities.

WiFi Features

Standards	IEEE 802.11a/b/g/n/ac/ax
Frequency bands	2.4 GHz (802.11 b/g/n/ax): 2.4 GHz ~ 2.484 GHz.
	5 GHz (802.1a/n/ac/ax): 5.150 GHz ~ 5.850 GHz
MIMO	2x2 MU-MIMO (2.4 GHz) 2x2 MU-MIMO (5 GHz)
Spatial streams	2 per band
Chanel width	20, 40, 80, 160 MHz
Modulation	DL/UL-OFDMA = BPSK,QPSK, 16-QAM, 64-QAM, 128QAM, 256QAM y 1024QAM, y DSSS = DBPSK, DQPSK, CCK
WiFi features	IEEE 802.11h (DFS) Tx Beamforming LDPC, STBC MSS clamping IEEE 802.11r/k/v Power save WISPr IP/URL/MAC filtering

Performance and capacity

PHY rates	Peak: 1800 Mbps 2.4 GHz: 600 Mbps 5 GHZ: 1200 Mbps
Multi SSID	Up to 24 (12 at 2.4 GHz and 12
Clients/AP	Up to 256

Networking

IP	IPv4 & IPv6 DHCP Client/server Static IP Dynamic IP
Network	IEEE 802.1s IEEE 802.1d VLAN tagging (802.1Q) Supports LACP, LLDP
VLAN	Dynamic VLANs Port forwarding Segmentation based on VLANs Tag VLAN based on SSID
Mesh	802.11s. Up to 2 mesh extenders Dynamic re-routing Robust reaction to DFS events

Advanced features (CHT®)

Security

- WPA/WPA2/WPA3 personal & Enterprise
- RADIUS support with dynamic VLANs
- Captive portal with social login
- IEEE 802.1X
- Supports ACL
- LDAP integration
- Isolated SSIDs
- URL filtering
- Firewall
- SSL / TLS / SSH
- Secured communication between APs
- WIDS & WIPS
- Location and tracking of hackers (Rogue AP or Evil twin)
- Protects against DDoS attacks

Network optimisation

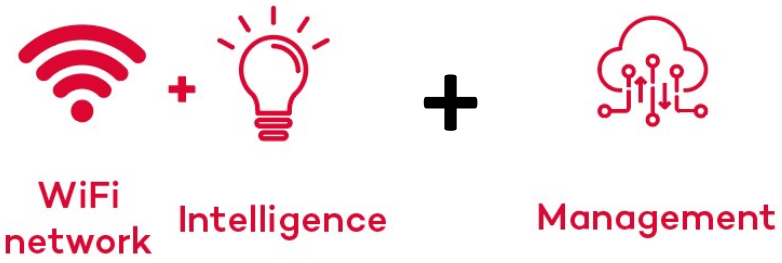
- Distributed intelligence with no need for a central controller
- Smart Roaming 802.11r (seamless handoff)
- Automatic channel and bandwidth assignment
- Proactive load balancing (real time resource allocation)
- Pre-balancing
- Traffic control
- Automatic power control
- Smart multicast
- Airtime fairness
- Smart and robust Mesh
- Dynamic probe management for very high density scenarios

Certifications and regulatory compliance

WiFi Alliance	**Connectivity**	2.4 GHz & 5 GHz Spectrum capabilities WiFi certified 802.11a/b/g/n/ac/ax
	Access	Passpoint® R2 (Hotspot 2.0)
	Optimization	WMM®
	Security	WPA/WPA2/WPA3 personal & enterprise Protected Management Frames
Standards	CE Mark (EN 60950-1; EN 62479; EN300328; EN 300440; EN 301489) RED directive 2014/53/EU FCC	
Environmental	ROHS	

CONFIGURATION, MANAGEMENT AND LICENSES

Galgus' WiFi networks can range form a single access point to thousands of them. Many of the advantages provided by the embedded technology CHT® are only relevant for networks with more than one AP, as the distributed intelligence an the communication between the APs are enabled. This allows them to take collective decisions that optimise the performance of the entire network.



Each access point can be configured locally though the console port; however, when there are several network elements and we want to configure more advanced functionalities, Galgus' management tool is required. Additionally, this management tool can be used to configure other GALGUS network elements, such as switches, Network Enhancers, etc; resulting in a simplified and easy to use unified management tool.

Galgus' network manager requires an annual license and offers all the advantages of a Cloud solution (scalability, continuous updates, pay as you grow, reduced operation costs, improved security, immediate availability, increased service availability...).

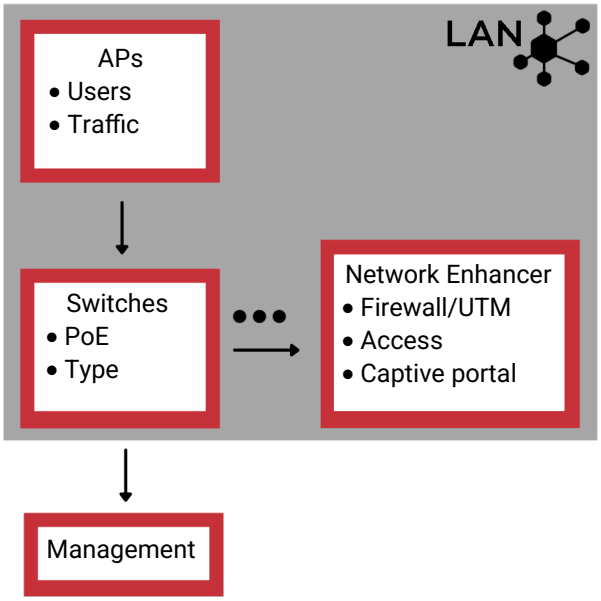
This tool allows one to supervise, control, update, troubleshoot and get alerts from the network, in addition to providing all kinds of advanced analytics:

Features		No manager	Cloud manager
Management	Local web interface	✓	✓
	Type of license	Lifetime	Annual license
	Software maintenance	Optional (CHT)	Included
	Type of Software maintenance	Manual optional	Automatic
	Modular licenses	✓	✓
	Zero-Touch Provisioning (ZTP)		✓
	Unified management platform		✓
	Platform updates		✓
	Customisable alerts		✓
	CLI with remote access (SSH)		✓
	Open API (REST)		✓
Network analytics	Real time location of associated devices		✓
	Location-enabled real time network KPIs		✓
	Coverage estimation		✓
	WLAN design		✓
	Client distribution		✓
	Client details		✓
	Historic record and visualization of network KPIs.		✓
	Historic data exportation of network KPIs.		✓

G-AP-IX450

Indoor 802.11a/b/g/n/ac/ax WiFi AP with PoE+
1800 Mbps Dual Band 2X2 MU-MIMO

REGULAR GALGUS NETWORK



Depending on the Network's needs in terms of size and use, a complete Galgus solution incorporates different elements:

Access Points (APs): The choice of one or another depends on the expected density of users and traffic. All Galgus APs incorporate CHT®, our distributed intelligence software, which eliminates the need for a central controller.

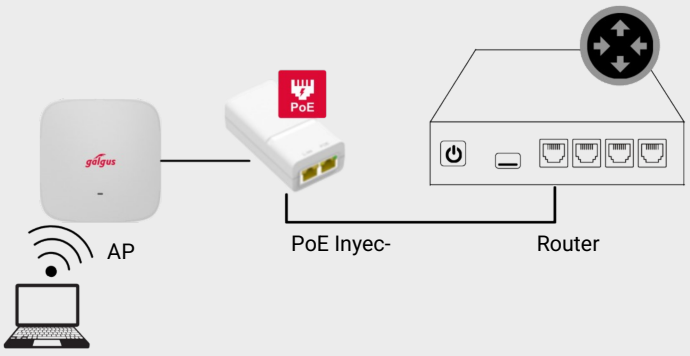
Network switches: Manageable or not, with or without PoE. Can be chosen from a wide range to adjust to the needs of the network.

Network Enhancer (NE): Used to provide advanced associated services and to offload the AP from certain network functionalities such as Firewall, access control, etc, all managed via web interface.

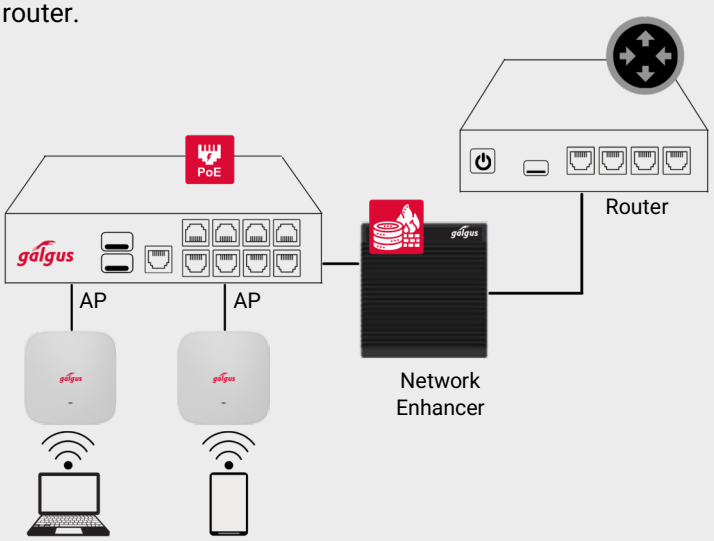
All these elements can be managed through **Galgus' management tools.**

ALL Galgus' access points and networks can incorporate Galgus' business intelligence tool: **GALGUS LOCATION ANALYTICS**.

Network example 1: The AP is connected to the router directly (very small sites).



Network example 2: The APs are connected to a PoE switch, including a firewall (Galgus NE) before connecting to the router.



OPTIONAL SUPPORT SERVICES FOR GALGUS NETWORKS:

3D simulation and network design: Always recommended as the best way to guarantee the most accurate solution from a technical point of view, ensuring the highest performance and client satisfaction while reducing investment costs.

Remote configuration: Galgus remotely configures and ensures the correct performance of the network.

Remote network management: GALGUS, as manufacturer and technology owner, offers a network management service, to ensure it is always available and offering the highest performance and quality of service.

L2 technical support: GALGUS will always provide technical help regarding the acquired products and services.

Warranty extension: Possibility to extend the warranty of most GALGUS devices up to 5 years.

Turnkey projects.