

G-SW-M48P4+

L2 Managed Switch 48 RJ45 10/100/1000 Mbps PoE ethernet ports & 4x 1/10 Gbps SFP+ ports



Provides both data and power (PoE) to all kind of PoE devices (WiFi access points, webcams, IP phones...). Ideal for any scenario with a high density of PoE devices such as hotels, universities, schools and companies.

Features L2+ management and supports IPv4 and IPv6 in addition to security mechanisms, complete QoS and access control policies and advanced VLAN configuration functionalities. The device is easy to configure and maintain and supports multiple network redundancy protocols.



A

B C D

- A. 48x RJ45 10/100/1000 Mbps PoE ports. Base-T
- B. 4x 1/10 Gbps SFP+ ports. Base-X (2 combo ports)
- C. Console port. RS232 (115200,N,8,1).
- D. Reset button.
- E. Power input: AC 100V– 240V, 50/60 Hz (back)

PoE	IEEE 802.3af/at Supports PoE management (programable PoE, power limit, priority...)
Power consumption	Up to 30W per port IEEE 802.3af/at Stand by <35W. Operating: up to 600 W
Feeding voltage	AC: 100 V-240 V, 50 Hz - 60 Hz (6.6 A)
Size	440 x 290 x 44.5 mm
Weigh	4.8 kg
Protection	IP30 / Lightning protection: 4KV 8/20 µs
Temperature	Operation: -20°C a +55°C (-4°F a 131°F) Storage: -40°C a +75°C (-40°F a 167°F)
Humidity	Operation: 5% a 90% (Non-condensing) Storage: 5% a 95% (Non-condensing)

Switching specifications

Ethernet ports	10/100/1000 Base-T(X) auto-sensing, Full Duplex / Half Duplex MDI/MDI-X Self configuration of speed and connection mode. Manual configuration of speed (per port)
Switching capacity	598 Gbps (non-blocking)
Forwarding rate	131 Mpps 64 bytes
Memory	Buffer: 32 MB
Jumbo frame	9600 bytes
MAC address	32.000 (automatic updates, two-way learning)
Network management	L2+
Network protocols	IEEE 802.3, IEEE802.3i 10Base-T IEEE 802.3u 100Base-TX IEEE 802.3ab, 1000Base-T IEEE 802.3z, 1000Base-X IEEE 802.3x
Port aggregation	LACP, Static aggregation 26 aggregation groups and 8 ports/ group

Network management features

L2 features	Spanning tree	STP (IEEE 802.1d) RSTP (IEEE 802.1w) MSTP (IEEE 802.1s) BPDU filtering, BPDU guard.
	Multicast	MLD Snooping v1/v2, Multicast VLAN IGMP Snooping v1/v2, fast log out Max 1024 multicast groups
	VLAN	4.000 port-based VLAN IEEE 802.1q—VLAN tagging MAC-based VLAN Voice VLAN, Q-in-Q configuration Access/trunk/hybrid ports
	Port Mirroring	Port-based bidirectional Data mirroring
L3 features	L2+ network management IPv4/IPv6 management L3 soft forwarding Static route, default routing at 128pcs, APR protocol 1024 entries	
ACL	MAC-based ACL, destination MAC, ACL based on source/destination IP, Protocol type based ACL, TCP/UDP ports VLAN-based ACL. L2 to L4 packet filtering.	

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Advanced network features

Quality of Service (QoS)	- Port/VLAN/MAC/IP/Protocol based ACL - L2 to L4 packet filtering. - Supports 802.1p - DSCP. - QoS Differentiated services; priority mapping - Each port supports 8 output queues - Queue scheduling mechanisms (SP, WRR, SP+WRR) - Size-based packet filtering - Packet forwarding - Stream based redirection - Flow based speed limit
Management	- Static routes and default routes. - DHCP client/server; DHCP relay; DHCP snooping - Console / telnet management - SSHv2 CLI configuration - Web management (HTTPS) - Galgus Cloud Manager - API REST - SNMP v1/v2/v3 - FTP and SFTP, TFTP client - NTP Client - Syslog client - Uses FTP for file download management - LLDP (802.1ab) / LLDP-MED
Security	- DHCP snooping. - IP/MAC/VLAN port Binding - Dynamic ARP inspection; Speed limit for ARP messaging. - DoS attack prevention. - AAA TACACs + - Radius - IEEE 802.1X and MAC authentication - MAC limit per port. MAC address learning restrictions. MAC black holes - Source IP address protection - Broadcast storm control - Backup for host data - SSH 2.0 - SSL - Password protected users

Certifications

Standards	CCC; CE Mark (Commercial); CE/LVD EN60950 FCC Part 15 Class B
Environmental	ROSH

CONTENT INFORMATION

G-SW-M48P4+	CONTENT	QUANTITY
	Managed switch with 48 10/100/1000 Mbps ethernet ports and 4x 1/10 Mbps SFP+ ports	1
	AC power cable	1
	RJ45—DB9 console line	1
	Mounting kit (Hanging ear)	1
	User guide	1

Note: No SFP modules are included with the switch. The use of a particular module depends of the singularities of the network. Galgus provides a wide range of optical modules which can adapt to any scenario.

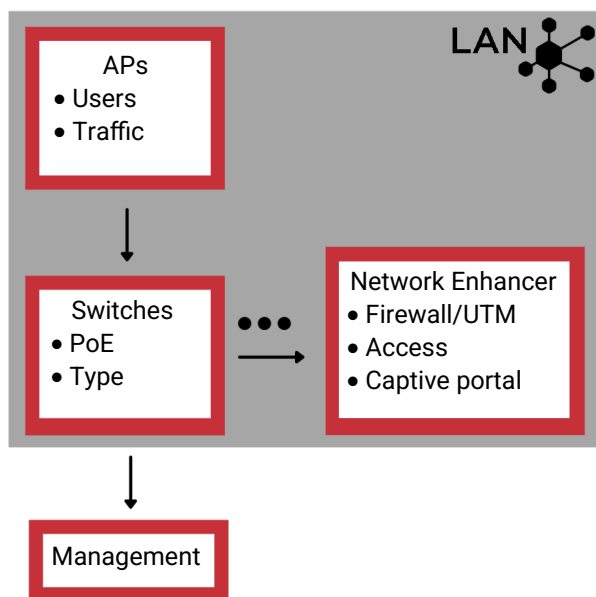
	SFP 1.25 Gbps	SFP+ 10 Gbps	QSFP+ 40 Gbps	QSFP+28 100 Gbps
100...550 mm (Multi mode)	G-OM-MMDFLC	G-OM-MMDFLC+ G-OM-MMSFLC+	G-OM-MMDFMPOQ+100m G-OM-MMDFLCQ+100m	G-OM-MMDFMPOQ+28- 100m
10 km...20 km (Single Mode)	G-OM-SMDFLC-20Km G-OM-SMSFLC-20km G-OM-SMSFSC-20Km G-OM-SMDFSC-20Km	G-OM-SMDFLC+20Km G-OM-SMSFLC+20Km	G-OM-SMDFLCQ+10km	G-OM-SMDFLCQ+28-10km
40 km...80 km (Single mode)	G-OM-SMDFLC-40Km G-OM-SMSFLC-40km G-OM-SMSFSC-40Km G-OM-SMDFSC-40Km	G-OM-SMDFLC+40Km	G-OM-SMDFLCQ+40km	
>= 80 km (Single mode)	G-OM-SMDFLC-80Km G-OM-SMSFLC-80km G-OM-SMSFSC-80Km G-OM-SMDFSC-80Km	G-OM-SMDFLC+80Km		

MANAGEMENT AND LICENCES

Galgus switches can be managed locally via the console port however, when we require to configure them remotely, the Galgus network management tool is required. This is specially useful when there are several devices. Additionally, Galgus' network management tool allows to monitor, configure and manage other GALGUS network elements, such as access points, Network enhancers, etc; making network management easier as all elements are controlled from the same tool.

Galgus' network manager, requires an annual license and offers all the advantages provided by Cloud services (Scalability, continuous updates, pay-as-you-grow investment, immediate availability, high availability...)

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.

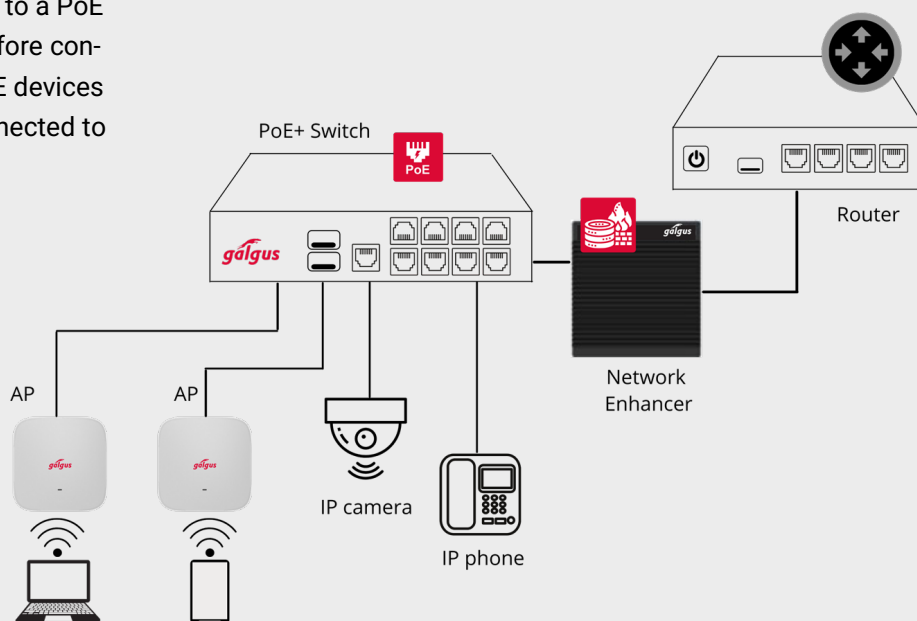
Network switches: Manageable or not, with or without PoE. Can be chosen from a wide range to adjust to the needs of the network.

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: The APs are connected to a PoE switch, including a firewall (Galgus NE) before connecting to the router. In addition, more PoE devices such as IP phones or cameras can be connected to the switch.



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.