



## Outdoor PoE 2183Mbps Dual Band 3x3 2.4GHz + 4x4 5GHz MU-MIMO Omnidirectional 802.11a/b/g/n/ac Wave 2

Galgus OC750 delivers the most advanced wireless communications features up to **500mW** high power outdoor 802.11ac wave 2 environment.

Thanks to its robust ABS waterproof, dustproof and sunscreen shell cage and its max gain omnidirectional default 5dBi WIFI antennas, makes this product to be the ideal one for outdoor environments. It is an excellent choice for **outdoor high density heavy-duty multi-scenarios**, such as **schools, hospitals, large coffee shops, medium and large size hotels, offices, restaurants, enterprises, stations, airports, stadiums, concerts outdoor large events**,.... to cover typical usage of HD movies, streaming, online gaming, wireless security, device location, positioning and other bandwidth-intensive tasks, up to around 1km WIFI range.

### Main features

<b>Antenna</b>	3x3 2,4 GHz + 4x4 5GHz: MU-MIMO omnidirectional 5dBi antennas. IEEE 802.3az RF power adjustment and frequency analyzer TX::500mW(27dBm). RX: -96dBm.
<b>Interfaces</b>	10/100/1000 Mbps RJ45 WAN Port WAN port supports IEEE 802.3at standard PoE 10/100/1000 Mbps RJ45 LAN Port Reset button
<b>WiFi Standard</b>	802.11 a, b, g, n, ac Wave 2
<b>PHY Capacity</b>	2.4 GHz: 450 Mbps      5 GHz: 1733 Mbps
<b>Power Supply</b>	DC 12V 1.5A Jack Input      IEEE 802.3at PoE+ Optional external power injector with power supply.
<b>Maximum Consumption</b>	<24W
<b>Humidity</b>	Operating: 5% to 95% (non-condensing)
<b>Operating Temperature</b>	-10°C (-23°F) to 55°C (131°F)
<b>Dimensions</b>	310 x 255 x 100 mm    1,8 Kg
<b>Case &amp; Mounting</b>	ABS cage. Pole mounted. IP67. Waterproof connectors.
<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

	captive 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 OFDM = BPSK, QPSK, 16-QAM, 64-QAM and DSSS = DBPSK, DQPSK, CCK modulations SSID broadcasting, Multi SSID up to 16 (4 SSID in 2.4GHz, 12 SSID in 5GHz) Built in watchdog chipset.
<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 PPPoP, 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>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



802.11n/HT and 802.11ac/VHT

MCS, SNR and RSSI

HT MCS	VHT MCS	Modulation	Coding	20MHz				40MHz				80MHz				160MHz			
				Data Rate		Min. SNR	RSSI	Data Rate		Min. SNR	RSSI	Data Rate		Min. SNR	RSSI	Data Rate		Min. SNR	RSSI
				800ns	400ns			800ns	400ns			800ns	400ns			800ns	400ns		
1 Spatial Stream																			
0	0	BPSK	1/2	6.5	7.2	2	-82	13.5	15	5	-79	29.3	32.5	8	-76	58.5	65	11	-73
1	1	QPSK	1/2	13	14.4	5	-79	27	30	8	-76	58.5	65	11	-73	117	130	14	-70
2	2	QPSK	3/4	19.5	21.7	9	-77	40.5	45	12	-74	87.8	97.5	15	-71	175.5	195	18	-68
3	3	16-QAM	1/2	26	28.9	11	-74	54	60	14	-71	117	130	17	-68	234	260	20	-65
4	4	16-QAM	3/4	39	43.3	15	-70	81	90	18	-67	175.5	195	21	-64	351	390	24	-61
5	5	64-QAM	2/3	52	57.8	18	-66	108	120	21	-63	234	260	24	-60	468	520	27	-57
6	6	64-QAM	3/4	58.5	65	20	-65	121.5	135	23	-62	263.3	292.5	26	-59	526.5	585	29	-56
7	7	64-QAM	5/6	65	72.2	25	-64	135	150	28	-61	292.5	325	31	-58	585	650	34	-55
8	8	256-QAM	3/4	78	86.7	29	-59	162	180	32	-56	351	390	35	-53	702	780	38	-50
9	9	256-QAM	5/6			31	-57	180	200	34	-54	390	433.3	37	-51	780	866.7	40	-48
2 Spatial Streams																			
8	0	BPSK	1/2	13	14.4	2	-82	27	30	5	-79	58.5	65	8	-76	117	130	11	-73
9	1	QPSK	1/2	26	28.9	5	-79	54	60	8	-76	117	130	11	-73	234	260	14	-70
10	2	QPSK	3/4	39	43.3	9	-77	81	90	12	-74	175.5	195	15	-71	351	390	18	-68
11	3	16-QAM	1/2	52	57.8	11	-74	108	120	14	-71	234	260	17	-68	468	520	20	-65
12	4	16-QAM	3/4	78	86.7	15	-70	162	180	18	-67	351	390	21	-64	702	780	24	-61
13	5	64-QAM	2/3	104	115.6	18	-66	216	240	21	-63	468	520	24	-60	936	1040	27	-57
14	6	64-QAM	3/4	117	130.3	20	-65	243	270	23	-62	526.5	585	26	-59	1053	1170	29	-56
15	7	64-QAM	5/6	130	144.4	25	-64	270	300	28	-61	585	650	31	-58	1170	1300	34	-55
8	8	256-QAM	3/4	156	173.3	29	-59	324	360	32	-56	702	780	35	-53	1404	1560	38	-50
9	9	256-QAM	5/6			31	-57	360	400	34	-54	780	866.7	37	-51	1560	1733.3	40	-48
3 Spatial Streams																			
16	0	BPSK	1/2	19.5	21.7	2	-82	40.5	45	5	-79	87.8	97.5	8	-76	175.5	195	11	-73
17	1	QPSK	1/2	39	43.3	5	-79	81	90	8	-76	175.5	195	11	-73	351	390	14	-70
18	2	QPSK	3/4	58.5	65	9	-77	121.5	135	12	-74	263.3	292.5	15	-71	526.5	585	18	-68
19	3	16-QAM	1/2	78	86.7	11	-74	162	180	14	-71	351	390	17	-68	702	780	20	-65
20	4	16-QAM	3/4	117	130	15	-70	243	270	18	-67	526.5	585	21	-64	1053	1170	24	-61
21	5	64-QAM	2/3	156	173.3	18	-66	324	360	21	-63	702	780	24	-60	1404	1560	27	-57
22	6	64-QAM	3/4	175.5	195	20	-65	364.5	405	23	-62			26	-59	1579.5	1755	29	-56
23	7	64-QAM	5/6	195	216.7	25	-64	405	450	28	-61	877.5	975	31	-58	1755	1950	34	-55
8	8	256-QAM	3/4	234	260	29	-59	486	540	32	-56	1053	1170	35	-53	2106	2340	38	-50
9	9	256-QAM	5/6	260	288.9	31	-57	540	600	34	-54	1170	1300	37	-51			40	-48

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