ROC420

WIFI a/b/g/n/ac Radiolink (M/S) PoE 1200Mbps Dual Band 2×2 MIMO 15km

Galgus ROC420 radiolink is the right choice to link outdoor wireless communications type of 802.11ac, up to 15Km distance. It is based in 2 units, one working as Master and the other as slave. It can be used with more units OC410 for PTMP directional scenarios, or with OC400, as master, for omnidirectional scenarios.

Thanks to its robust ABS waterproof, dustproof and sunscreen shell cage and its max gain 15/18dBi WIFI antenna and its 1000mW RF power, makes this product to be the ideal one for radiolinks up to 15Km distance in PtP and PtMP multiscenarios with 60º Horizontal angle coverage. It is an excellent choice for linking outdoor medium-high density multi-scenarios to cover typical usage of HD movies, streaming, online gaming, wireless security, device location, positioning and other bandwidth-intensive tasks, up to 15Km WIFI range.

General Overview

System Information	
Antenna and RF power	• 2x2 2,4 GHz + 2x2i 5.8GHz:MIMO.15/18dBi directional antennas included. • IEEE 802.3az RF power adjustment and frequency analyzer • TX: 1000mW(33dBm). RX: -96dBm. • 2.4G SE2576L, 5.8G SE5003L1-R. Built in watchdog chipset.
Interfaces	• 10/100/1000 Mbps RJ45 WAN Port • IEEE 802.3af/at standard PoE WAN Port • 10/100/1000 Mbps RJ45 LAN Port • IEEE 802.3i (10Base-T) , IEEE 802.3u (Fast Ethernet), IEEE 802.3ab (1000Base-T) IEEE 802.3x (Flow Control), IEEE 802.3z GbE, IEEE 802.3ac, Automatic Speed negotiation, • Duplex mode negotiation • MDI/MDI-X switch-over • Reset button
WIFI Standard 802.11	• **5 GHz**: 802.11 a/n/ac Wave 2 • **2.4 GHz**: 802.11 b/g/n • Modulation up to 256 QAM
PHY Capacity	• **2.4 GHz**: 300 Mbps • **5 GHz**: 700 Mbps
QoS capabilities	• Profile based packet priorities and planning • Bandwidth restriction for each SSID • VMM parameters modification • Calling
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 and DSSS = DBPSK, DQPSK, CCK • 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, Repeater • 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-Food protection • MSS clamping • NAT • Port forwarding, Traffic Rules • ACL support • Support 64/128-bit WEP security, 128bit WPA (TKIP/AES) security • IEEE 802.11w
Power Supply	• DC 12V 1.5A Jack Input • IEEE 802.3at PoE+ • Optional external power injector with power supply.
Maximum Consumption	<30W
Humidity	Operating: 10% to 95% (non-condensing)
Operating Temperature	-40°C (-40°F) to 55°C (131°F)
Dimensions (H x W x D) Weight	410 x 20.5 x 105 mm 3Kgr
Case & Mounting	ABS cage. Pole mounted. IP67. Waterproof connectors.

RF Performance Table

Frequency	Mode	Data Rate	Standard	Result(dBm) CH1	CH6	CH11	RF Power (±1.0dBm)
2.4GHz		1Mbps	≤-83	-99	-99	-99	
	11b	11Mbps	≤-76	-92	-92	-92	29dBm
		6Mbps	≤-85	-95	-95	-95	29dBm
	11g	54Mbps	≤-68	-82	-82	-82	27dBm
		MCS0/8	≤-85	-95	-95	-95	28dBm
	11n HT20	MCS7/15	≤-67	-79	-77	-78	26dBm
		MSC0/8	≤-82	-93	-93	-93	28dBm
	11n HT40	MCS7/15	≤-64	-75	-75	-75	26dBm
5GHz				CH36	CH100	CH149	
		6Mbps	≤-85dBm	-92	-92	-92	26dBm
	11a	54Mbps	≤ -68dBm	-75	-75	-75	23dBm
		MCS0/8	≤ -85dBm	-91	-91	-91	26dBm
	11n HT20	MCS7/15	≤ -64dBm	-72	-72	-72	23dBm
				CH38	CH110	CH151	
		MCS0/8	≤ -82dBm	-88	-88	-88	26dBm
	11n HT40	MCS7/15	≤ -61dBm	-70	-70	-70	23dBm
				CH36	CH100	CH149	
	11ac	MCS0	≤-82	-92	-92	-92	26dBm
	HT20	MCS8	≤-60	-70	-70	-69	23dBm
				CH38	CH110	CH151	
		MCS0	≤-79	-90	-89	-89	25dBm
	11ac HT40	MCS9	≤-60	-66	-65	-65	22dBm
				CH42	CH106	CH155	
	11ac	MCS0	≤-79	-87	-87	-87	24dBm
	HT80	MCS9	≤-54	-62	-61	-61	21dBm

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).