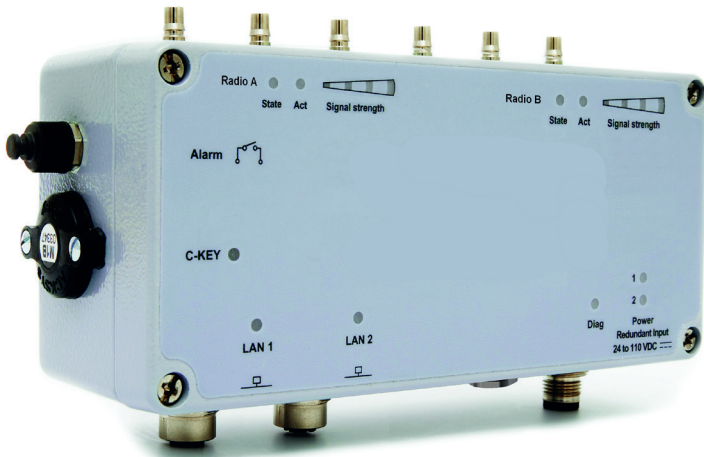


DG-AP1500

Rugged dual 802.11ac WiFi AP, client & repeater for railway applications



- Single or dual radio 802.11a/b/g/n/ac (MIMO 3T3R), up to 1.3 Gbps (radio bit rate), optional LTE mobile broadband router
- MESH, WMM QoS, multiple SSID and centralized RADIUS security supported
- Auto-sensing Gigabit 10/100/1000 Base TX auto MDI/MDIX network interface
- DC isolated power supply input (+24VDC to +110VDC) or PoE+ IEEE 802.3at Type 2 Class 4
- Shock & vibration proof, rugged aluminum enclosure, IP66 ingress protection grade

C-KEY READY



Top «C-KEY» for quick configuration, save & restore



FAST ROAMING



Introduction

DG-AP1500 is a rugged AP designed for railway and light rail applications. It can be mounted in trains, subways, trams or in any equipment that requires robustness and mobility.

DG-AP1500 enables system integrators and rail vehicle manufacturers who are seeking solutions for:

- uninterrupted train-to-trackside communications (CBTC, CCTV, VoIP, preventive maintenance, PIS...)
- carriage coupling (to support any train composition change and provide a redundant & reliable onboard network)
- reliable onboard vehicle network (WiFi onboard, train announcements, infotainment...)

The device bases on multi-stream 3x3 MIMO technology, which contributes to an expanded coverage, higher data throughput and increased radio link reliability.

Furthermore it combines an optional LTE mobile broadband router plus a GPS allowing using the device as a mobile hotspot in transportation applications.

This AP is purpose built for train installations supporting a wide operating temperature: -25°C to +70°C (Extended: -40°C to +70°C), it is shock and vibration proof and protection against dust/water/humidity (IP66).

Technical characteristics overview

Ethernet link	2-port Gigabit Ethernet 10/100/1000 auto-sensing, water and vibration proof rapid connect 8-point M12 X-coded connectors (CAT-6A) plug & play mode & auto MDI/MDIX cross-over, optional Ethernet bypass that redirects the network traffic in case of device or power supply failure (for daisy chain topologies)
WiFi network	1 or 2 radios IEEE 802.11a/b/g/n or IEEE 802.11a/b/g/n/ac, MIMO 3T3R, 2.4 / 5 GHz
Wireless WAN	LTE mobile broadband router, dual SIM
GPS	Optional GPS receiver
WiFi radio data rate	Up to 2 x 1.3 Gbps (3 streams)
Operating frequencies	ISM : 2.4-2.483 GHz (up to 14 channels) UNII : 5.15-5.25 GHz (up 4 channels) UNII-2 : 5.25-5.35 GHz (up to 4 channels) UNII-2 ext : 5.470-5.725 GHz (up to 11 channels) UNII-3 : 5.725-5.825 GHz (up to 4 channels)
Output power	Tx power : up to 24 dBm (19 dBm per chain) or up to 29dBm (24 dBm per chain) for high power card
Radio connectors	3 or 6 QMA connectors (no antenna provided)
Tx rates	802.11a: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps 802.11b/g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps 802.11n: MCS0-7, 3 streams (6.5 to 450 Mbps) 802.11ac: MCS0-9, 3 streams (6.5 Mbps to 1.3 Gbps)
Security	IEEE 802.1x (centralized RADIUS authenticator & supplicant), WPA2-PSK, WPA-PSK, legacy WEP supported
WiFi Modes	Access point, client, repeater, MESH point (IEEE 802.11s), infrastructure, AD-HOC, client router, WMM QoS, multicast, VPN, dynamic routing and firewall modes fully supported, fast roaming (less than 30 ms), redundancy (VRRP), carriage coupling system (SRCC)
Administration	Built-in WEB interface, the setup of the device is achieved using any web browser, SNMP agent, administration software for Windows/Linux (save / restore configuration key (C-Key)
LED Indicators	Radio : quality, activity and status / Ethernet : link 10/100/1000, activity / Power : on/off
Alarms & Inputs	One solid state relay output warning (with configurable action), 1 Form A, 60VDC 0.1A max & one input for external device control 24VDC max (3-pin Waterproof M8 connector)
Power supply	+24VDC to +110VDC EN 50155 nominal, 1500V insulation, dual input (water & vibration proof rapid connect M12 connector 4-pole A-coded) or PoE+ (IEEE 802.3at Type 2 Class 4) power supply with ground lug
Power consumption	16W typical power consumption (dual radio), 20W max
Dimensions & weight	Product : compact shockproof rugged aluminum enclosure, (L: 80 x l: 175 x h: 57 mm), 900g Removable fixing plate : 4-point fixing plate with ground lug (L: 80 x l: 225 x h: 4 mm), 200g
Compliance	Safety : EN45545-2 (HL3), NF F16-101 (I1F1) (Fire and Smoke) / EN60950-1 Radio : EN300-328 1.8.1 (2.4 GHz), EN301-893 1.7.1 (5 GHz, DFS) EMC : EN50155 / EN50121-3.2, EN301-489-1, EN301-489-17 Environmental : EN61373 (shocks and vibration), EN60068 (climatic)
Environmental	IP66 ingress protection Operating temperature: -25°C to +70°C (HR 0-99%) or extended -40°C to +70°C, storage: -40°C to +80°C GORE ® protective vent (dehumidifying membrane)

Ordering references

DG-AP1500

Single or dual WiFi Access Point, Ethernet Bridge, Repeater, MESH point (IEEE 802.11a/b/g/n/ac) or LTE mobile broadband router for railway and mobile applications, +24VDC to +110VDC nominal insulated or PoE+, optional Ethernet bypass, shipped with 2 meters of Ethernet RJ45 cable & 2 meters power cable and a fixing plate (already mounted)

R (radio) coding:

0 = no card

1 = WiFi 802.11n

2 = WiFi 802.11ac

3 = WiFi 802.11ac, high power 29 dBm, extended temperature range -40°C to +70°C

4 = 4G

X (power supply) coding :

A = +24VDC to +110VDC nominal insulated

P = PoE+ power supply (IEEE 802.3at Type 2 Class 4)

[Y]: optional Ethernet bypass that redirects the network traffic in case of device or power supply failure



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