

AIRTRACK-S4

WiFi access point, client & repeater for underground mining applications



- WiFi IEEE 802.11 a/b/g
- High EMC field protection : up to 140V/m
- 4-port auto-sensing 10/100 Base TX network interface
- Wide +24 to 110 VDC insulated power supply allowing the use of long DC cables
- Web based configuration, SNMP administration, alarm contact
- Shock & vibration proof, IP66 aluminum enclosure



Introduction

AIRTRACK-S4 is a rugged equipment designed for underground mines for: tele-operation of heavy machinery from a remote control station, collision avoidance, localization of people and goods and other services as evacuation signaling systems, Voice over Internet Protocol (VoIP) wireless phones, mobile data download (smartphones, tablets...), mobile & fixed IP video...

It fulfills the most severe requirements in terms of operating environment: extended temperature range -40°C to +80°C, shock and vibration proof, IP66 seal rating for protection against dust and water projections.

AIRTRACK-S4 works with any kind of industrial protocols carried by Ethernet TCP/IP such as PROFINET, PROFIsafe...

Technical characteristics overview

Ethernet link	4-port Ethernet 10/100 auto-sensing, waterproof M12 connectors [D-coding], plug & play mode & auto MDI/MDIX cross-over
WiFi network	Compliant to the IEEE 802.11a/b/g 2.4 / 5 GHz standards, transmission Power Control (TPC)
Data rate	Up to 108 Mbps (Super AG mode)
Channels	2.4 GHz [802.11b/g]: 14 channels / 5 GHz [801.11a/h]: 19 channels
Output power	Transmitter +20 dBm (TPC), +26 dBm with the [Hx] option
Sensitivity	Receiver -92 dBm for IEEE 802.11 a/g and -95 dBm for IEEE 802.11b
Antennas	Two 2dBi 2.4 / 5 GHz antenna, N-type connectors
Modulation	OFDM: BPSK, QPSK, 16QAM, 64QAM and DSSS: DBPSK, DQPSK, CCK
Security	64/128 bits WEP, WPA-PSK, WPA2-PSK, IEEE 802.1x (RADIUS authenticator & supplicant), MAC addresses filtering, SSID broadcast control
Modes	Access point to build a WiFi network infrastructure, client to connect any Ethernet equipment to this network, repeater, infrastructure, AD-HOC and client router modes are supported, fast roaming (less than 50 ms)
Administration	Thanks to its built-in WEB interface, the setup of the device is achieved using any web browser installed on your computer (Internet Explorer, Netscape, Mozilla ...), SNMP agent, ACKSYS NDM, C-Key (save / restore configuration key)
Operating systems	Windows, Linux, UNIX as well as any operating system supporting TCP/IP
Signaling	LEDs signaling for LAN, WLAN network activity, 10/100 mode, MAIN & AUX power supply
Alarms	Relay output warning: power failure, WLAN connection failure, Watchdog or user defined (SNMP) 1 FORM B solid state relay, 60V 0.15A (M8 dedicated connector)
Power supply	Insulated +24 to +110 VDC, dual input (M12 connector)
Consumption	8W typical power consumption
Dimensions & weight	Shockproof rugged aluminum enclosure, (L: 80 x l: 175 x h: 57 mm), 920 g
Standards	EN 301489-17 & EN 61000-6-2 (CEM), IP66 seal rating, ISO 11452 sections 1, 2, 5, 7 (electrical disturbances), EN61373 (shocks & vibrations)
Environment	Operating temperature : -25°C to +70°C, extended -40°C to +80°C with [Hx] option (HR 0-99%) Storage : -40°C to +100°C

Ordering references

AIRTRACK-S4 [Hx]	WiFi access point, 4-port Ethernet, client & repeater (a/b/g) for underground mining applications, dual DC insulated power input from +24VDC to +110VDC, shipped with 2 dual band 2 dBi omni-directional (2.4 / 5 GHz), one set of 2 meters cables (M12 to RJ45 and M12 to stripped cables) Hx means high power version (400mW) and extended temperature range [-40°C to +80°C]
-------------------------	--

All the brand names mentioned in this document are trademarks. ACKSYS is constantly looking at ways to improve its products. The current specifications may therefore be modified without notice and the characteristics set out herein should not be construed as creating any contractual obligation. All the products featured herein are designed and manufactured in Europe.