Dual 11n WiFi access point, client, repeater and Mesh point for above ground mining applications

Fast roaming < 30 ms in multichannel mode (dual RF)

- Dual radio IEEE 802.11 a/b/g/n (MIMO 3T3R), up to 2 x 300 Mbps radio bit rate

- Mesh, WMM QoS, multiple SSID and centralized RADIUS security support

- 2-port auto-sensing Gigabit 10/100/1000 Base TX auto MDI/MDIX network interface

- + 9 to 72 VDC dual DC power supply input, PoE+ or insulated 24 VDC

- Web based configuration, SNMP administration, serial port, C-Key, alarm contact

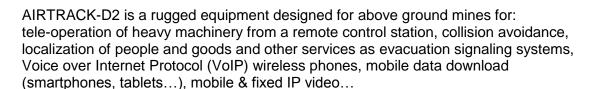- Shock & vibration proof, IP 66 rugged aluminum enclosure

AIRTRACK-D2

AIRTRACK-D2 is a rugged equipment designed for above ground 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…

The two radio design allows the use of two separate networks simultaneously without sacrificing speed; the fast roaming feature allows lossless communication between APs during vehicle motion.
Moreover, the dual radio system allows relying on a redundant network; redundancy is also possible between two devices.

It fulfills the most severe requirements in terms of operating environment: -25°C to +70°C (extended -40°C to +75°C, -55°C with optional PTC heater), shock and vibration proof, IP66 all weather seal rating for protection against dust, water projections and vapor.

AIRTRACK-D2 works with any kind of industrial protocols carried by Ethernet TCP/IP such as PROFINET, PROFIsafe…

Ethernet link	2-port Gigabit Ethernet 10/100/1000 auto-sensing, waterproof Ultra-Lock® 8-point M12 connectors plug & play mode & auto MDI/MDIX cross-over
Serial port	One insulated RS422/485 serial port (waterproof ultra-lock M12 connector) for connection to the target equipment existing network (protocol implementation on demand)
WiFi network	Compliant to the IEEE 802.11 a/b/g/n MIMO 3T3R, 2.4 / 5 GHz standards, dual radio system with redundancy
Data rate	Up to 2 x 300 Mbps
Radio channels	2.4 GHz (802.11b/g/n): 14 channels / 5 GHz (801.11a/h/n): 24 channels
Output power	Transmitter +20 dBm (TPC), +26 dBm with the WLn-RF400MW option
Sensitivity	Receiver -92 dBm for IEEE 802.11 a/g/n and -95 dBm for IEEE 802.11b
Antennas connections	Up to six 2.4 / 5 GHz MIMO antenna (not shipped with the product), N-type connectors, optional lightning surge protection
Modulation	OFDM: BPSK, QPSK, 16QAM, 64QAM / DSSS: DBPSK, DQPSK, CCK
Security	64/128 bits WEP, WPA-PSK, WPA2-PSK, IEEE 802.1x (centralized 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, Mesh point (IEEE 802.11s), infrastructure, AD-HOC, client router, WMM QoS, multicast and IGMP-Snooping modes are fully supported; the 2 radios can be used to create a redundant link, roaming <30 ms even in multichannel mode
Administration	Built-in WEB interface, the setup of the device is achieved using any web browser, SNMP agent, ACKSYS NDM, serial port, Telnet/SSH, CLI, C-Key (save / restore configuration key)
Operating systems	Windows, Linux, UNIX as well as any operating system supporting TCP/IP
Signaling	LEDs signaling for radio quality, activity and status on each radio, Link 10/100/1000 and activity on each LAN port, TXD and RXD for the serial port, MAIN & AUX power supply, product diagnostic
Alarms	Relay output warning: power failure, WLAN connection failure, Watchdog, over heating or user defined (SNMP); 1 FORM A solid state relay, 170VDC 0.1A (ultra-lock waterproof M12 connector)
Inputs	One insulated input for external device control (ultra-lock waterproof M12 connector)
Power supply	From + 9 to 72 VDC dual DC power supply input, PoE+ (IEEE802.3at type 2) or insulated 24 VDC
Consumption	16W typical power consumption (21W maximum with two high power radio cards)
Dimensions & weight	Shock & vibration proof rugged aluminum enclosure, (L: 257 x W: 200 x H: 37mm), 1630g
Standards	EN 301489-17 & EN 61000-6-2 (CEM), IP66 seal rating, EN61373 (shocks & vibrations)
Environment	Operating temperature : -25°C to +70°C or extended -40°C to +75°C, storage : -40°C to +85°C Optional PTC heater for -55°C operation (additional 24VDC 15W power supply required)

References to order

AIRTRACK-D2 [Hx]	WiFi access point, 2-port Ethernet, client, repeater & Mesh point (IEEE 802.11a/b/g/n) for above ground mining applications, dual DC power input from +9VDC to +72VDC, POE IEEE 802.3at, one set of 2 meters cables (Ethernet & power cable), IP66
AIRTRACK-D2/24 [Hx]	Insulated power supply: +9VDC to +36VDC (24VDC nominal), POE not available
WLg-ANT-LSP-N	Lightning Surge Protector 50 Ohms N-Type antenna 5 KA (0-6 GHz)
WLn-PTC	PTC heater for -55°C cold start and operation
PWS-24-UNI-M12	AC power supply 110-240V, DC input (24VDC 25W) with 2 meters M12 to stripped cable for AIRTRACK-D2
	Hx means high power version (400mW) and extended temperature range (-40°C to +75°C)