neratec
wireless & embedded | for more

WLAN Access Point, AP-5312F

Neratec AP-5312F is a wireless communication solution for backbone in harsh environment applications like public transportation or industrial data/video communication. It supports the IEEE 802.11 networking standards, thus ensuring high data rates and reliable communications.

The AP-5312F provides the infrastructure side for a high-speed wireless communication link. It includes a dedicated monitoring interface for interference and radar detection functions for variety of applications including f wireless data transfer, voice communication and wireless video. Once the initial configuration is done, it can be remotely managed using a standard Web browser or SNMP management tools.

Technology

- Based on IEEE 802.11n technology, adapted for special requirements in infrastructure side installations
- In-house developed software and hardware optimized for special requirements in transportation and industrial applications enabling unique Long Term Support, Availability and Obsolescence management
- 2.4 GHz and 5 GHz operation
- Advanced RF front end enables optimized operation nearby other WLAN/3G/4G networks
- Excellent performance and flexible installations in harsh industrial and mobile environments

Key Features

- Integrated worldwide power supply and Optical Ethernet
- Enhanced monitoring features for optimized link budget
- Supports 5GHz radar bands with advanced radar detection functions
- High-Speed communications, Data rates up to 450Mbit/s
- Better link span based on optimized transmitter and receiver performance
- Supports remote updates for device settings and firmware downloads
- Outdoor-proof solution
- Certified for railways and trackside installations

ALSTOM Transport / TOMA – V. Baillais ©

High-speed backbone
solution for public transport

WLAN Access Point, AP-5312F

Functionality	High-speed backbone solution for public transport, outdoor and industrial applications
Operating Modes	Access Point, Client
Operating temp. range	-40...+70 °C
Power Feed	100...240VAC, 0.2A, 50...60Hz, Connector Type: Binder 693 male socket 3+PE
Size and weight	App. 80 x 110 x 210 mm (H x W x L) and approx. 1,5 kg, without antennas
Environmental Protection	IP 66
Wireless Standards Supported	IEEE 802.11b, 802.11g, 802.11a and 802.11n
Frequency Range	2.400...2.4835 GHz 5.150...5.350 GHz, 5.470...5.725 GHz, 5.725...5.850 GHz
Occupied Channel Bandwith	According to the IEEE 802.11
Data Rates Supported	802.11b: 1Mbit/s, 2, 5.5 & 11Mbit/s 802.11g & 802.11a: 6Mbit/s, 9, 12, 18, 24, 36, 48 & 54 Mbit/s 802.11n 20MHz BW, Long GI/Short GI: from MCS0 6.5/7.2 Mbps to MCS23 195/216.7 Mbps 802.11n 40MHz BW, Long GI/Short GI: from MCS0 13.5/15 Mbps to MCS23 405/450 Mbps
RF transmit power 2400MHz - 2483.5MHz*	Max. conducted transmit power, 802.11b/g/n: 1 port: +22dBm for all data rates 2 ports: +25dBm for all data rates 3 ports: +27dBm for all data rates
RF transmit power 5150MHz – 5350MHz*	Max. conducted transmit power, 802.11a/n: 1 port: BPSK...16QAM: +22dBm, 64QAM: 20dBm 2 ports: BPSK...16QAM: +25dBm, 64QAM: 23dBm 3 ports: BPSK...16QAM: +27dBm, 64QAM: 25dBm
RF transmit power 5470MHz – 5850MHz*	Max. conducted transmit power, 802.11a/n: 1 port: +22dBm for all data rates 2 ports: +25dBm for all data rates 3 ports: +27dBm for all data rates
RF Antenna interfaces	3 x QMA compatible connectors for communication,1 x QMA compatible connector for monitoring
Receiver Sensitivity (typical)	802.11g: -95 dBm (6 Mbit/s), -85 (36Mbit/), -80 dBm (54 Mbit/s) 802.11a: -95 dBm (6 Mbit/s), -85 (36Mbit/), -80 dBm (54 Mbit/s) 802.11ng HT20: -95 dBm (MCS0), -76 dBm (MCS7), -73 dBm (MCS15), -70 (MCS23) 802.11na HT20: -95 dBm (MCS0), -76 dBm (MCS7), -73 dBm (MCS15), -70 (MCS23) 802.11ng HT40: -92 dBm (MCS0), -73 dBm (MCS7), -70 dBm (MCS15), -67 (MCS23) 802.11na HT40: -92 dBm (MCS0), -73 dBm (MCS7), -70 dBm (MCS15), -67 (MCS23)
MIMO features supported	Space Time Block Coding (STBC), RX Low Density Parity Check (LDPC), Maximum Likelihood Demodulation (MLD), Maximum Ratio Combining (MRC)
Security	IEEE 802.11i WPA2 (AES/TKIP), 802.1X, 802.11w
Ethernet Interface	1 x 10/100/1000Base-T with M12 connector, 1 x 1000Base-LX with ODC connector
Ethernet Routing / Networking	Fixed fallback IP, IP aliases, MAC address control lists, Port forwarding, Routing, Multicast Routing, DHCP Server/Client, NAT, VLAN support, Multi BSSID, NTP client, SNMP v2c and v3 with USM authentication and encryption support, SNMP Traps, RSTP
Monitoring Features	Build in monitoring sensors and diagnostics, Advanced interference and radar monitoring features with dedicated monitoring interface, Neratec Wireless Manager (NWM) feature
Device Management	SNMP, HTTP/HTTPS with user authentication, CLI (SSH and Telnet)
Standards supported	CE, FCC 47 CFR Part 15, EN301 893, EN300 328, EN301 489-1/-17, EN60950, EN50121-3-2, EN50121-4, EN50125-3, EN45545, NFPA130

* Note: Depending on the regulatory limitations and selected antennas

08/2016