neratec
wireless & embedded **for more**

WLAN Node, DT-5202R

Neratec DT-5202R is a 100Mbps wireless communication solution for onboard and mobile installations 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 DT-5202R supports wide variety of applications including for example lower cost 100Mbps inter-carriage link bridging between trains. It is also configurable as a standard access point or client unit for onboard data communication needs.

Technology

- Robust and reliable IEEE 802.11n based solution for onboard
- In-house developed software and hardware optimized for special requirements in transportation and industrial applications enabling unique Long Term Support, Availability and Obsolescence management
- Guaranteed performance over the operating temperature range
- Excellent performance and flexible installations in harsh industrial and mobile environments
- 2.4 GHz and 5 GHz operation

Key Features

- Configurable as Access Point, Client or Bridge
- 100Mbps inter-carriage train bridge solution with wireless data rates up to 300Mbit/s
- Supports remote updates for device settings and firmware downloads
- DFS (Radar detection) features
- -40...+70°C and IP66
- EN50155 and EN45545-2 compliant

ALSTOM Transport / TOMA – V. Baillais ©

100Mbps 802.11n solution for trains and vehicles

WLAN Node, DT-5202R

Functionality	802.11n solution for Public Transportation, Outdoor and Industrial applications
Operating modes	Access Point, Client, Bridge, Inter-carriage Link
Operating temp. range	-40...+70 °C
Power feed	Available with two powering options: DT-5202R: 24 VDC (EN50155 nominal) and IEEE 802.3at type 1 PD DT-5202R-HV: 72 - 110 VDC (EN50155 nominal)
Size and weight	App. 52 x 110 x 193 mm (H x W x L) and approx. 1,2 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 Note: Additional licensed bands can be also supported
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 MCS15 130/144.44Mbps 802.11n 40MHz BW, Long GI/Short GI: from MCS0 13.5/15 Mbps to MCS15 270/300 Mbps
RF transmit power 2400MHz - 2483.5MHz*	Max. conducted transmit power, 802.11b/g/n: 1 port: +12dBm for all data rates 2 ports: +15dBm for all data rates
RF transmit power 5150MHz – 5350MHz*	Max. conducted transmit power, 802.11a/n: 1 port: +15dBm for all data rates 2 ports: +18dBm for all data rates
RF transmit power 5470MHz – 5850MHz*	Max. conducted transmit power, 802.11a/n: 1 port: +15dBm for all data rates 2 ports: +18dBm for all data rates
RF antenna interfaces	2 x QMA compatible antenna connectors, 2x2 MIMO
Receiver sensitivity (typical, 2 RX)	802.11ng HT20: -93 dBm (MCS0), -74 dBm (MCS7), -71 dBm (MCS15) 802.11na HT20: -93 dBm (MCS0), -74 dBm (MCS7), -71 dBm (MCS15) 802.11ng HT40: -90 dBm (MCS0), -71 dBm (MCS7), -68 dBm (MCS15) 802.11na HT40: -90 dBm (MCS0), -71 dBm (MCS7), -68 dBm (MCS15)
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	2 x 100Base-T, 2 x M12 D-coded connectors
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	Built-in monitoring sensors and diagnostics
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, EN50155, EN45545

* Note: Depending on the regulatory limitations and selected antennas