



WLAN Node, DT-5302R

Neratec DT-5302R is a 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-5302R supports a wide variety of applications including for example control and maintenance, wireless 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

- Robust and reliable IEEE 802.11n based solution for train-to-ground
- In-house developed software and hardware optimized for special requirements in transportation and industrial applications enabling unique Long Term Support, Availability and Obsolescence management
- Advanced RF front end enables optimized operation nearby other WLAN/3G/4G networks
- 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 or Client
- High output power and fast hand-off support
- 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
- Robust DFS (Radar detection) features
- Outdoor-proof solution
- EN50155 compliant



Robust and reliable 802.11n
solution for train-to-ground

WLAN Node, DT-5302R

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	24 VDC Isolated, 0.6A or IEEE 802.3at type 1 powered device
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 bandwidth	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 antenna connectors, 3x3 MIMO
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	2 x 10/100/1000Base-T, 2 x M12 X-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	Build 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 v1.8.1, EN300 328, EN301 489-1/-17, EN60950, EN50121-3-2, EN50121-4, EN50155, EN45545, NFPA130

* Note: Depending on the regulatory limitations and selected antennas