EN 50155 WLAN Access Point

RT-310

- Compact WLAN access point
  - 3x3 MIMO
  - 2.4 GHz and 5 GHz
  - Flexible and easy set-up
- Designed and built for extreme operational environments
  - Extended operating temperature range with guaranteed performance across the range
  - High-level isolation enables direct mains connectivity
  - EN 50155 approved for usage onboard trains and locomotives
- High-end radio design for mission-critical capability
  - High input sensitivity and fast hand-over
  - Robust DFS (radar detection) features
  - Disturbance free operation close to other radio devices

CE EN 45545-2 Fire Protection | EN 50121-4 Railway Trackside | EN 50155 On Board Rail | NFPA 130 Fire Protection

The Westermo RT-310 is a Wireless LAN Access Point for on-board and stationary applications. It ensures reliable, high-speed data and can be used as a passenger hotspot or as an access point for connecting wireless industrial clients.

The RT-310 is designed to withstand the tough environment on-board trains, exposing the access point to constant vibration, extreme temperatures, humidity and a demanding electromagnetic environment.

The high-end RF circuitry is designed and calibrated to ensure fast hand-off, high RF sensitivity even at high data rates/modulations, stable RF links, optimized DFS handling, etc.

A GORE-TEX® membrane prevents internal condensation. High-level isolation between all interfaces enables direct connectivity to vehicle auxiliary power and protects against overvoltage and spikes/surge (powering over PoE is also available). IP66 protection prevents ingress of water and dust even at the quick connect QMA connectors.

An overall optimised design results in a compact form factor in combination with very high MTBF for easy integration and low lifecycle cost.

Thorough type testing at independent labs certifies the compliance to a wide range of standards, not least EN 50155, FCC and EN 300 440 (the latter opening the possibility to use the 5.8 GHz band in the EU region).

Meeting the requirements of the railcar market, the RT-310 is very well suited for deployment in any other application with severe operating conditions and tough environments, for instance in the mining or shipping industry.

Ordering Information	
Art.no	**Description**
3623-071001	RT-310 EU, EN 50155 WLAN Access Point
3623-071002	RT-310 NA, EN 50155 WLAN Access Point
3623-0799	Factory Reset Plug (Accessory)

Specifications RT-310

Functionality	802.11n access point for Public Transport, Outdoor and Industrial applications
Operating Modes	Access Point
Operating temp. range	-40 to +70 °C
Power feed	24 VDC Isolated, 0.6 A or IEEE 802.3 at 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	IP66
MTBF	307,000 hours (IEC 62380)
Wireless standards supported	IEEE 802.11b, 802.11g, 802.11a and 802.11n
Frequency range	2.400 to 2.4835 GHz 5.150 to 5.350 GHz, 5.470 to 5.725 GHz, 5.725 to 5.850 GHz
Occupied channel bandwith	According to the IEEE 802.11
Data rates supported	802.11b: 1 Mbit/s, 2, 5.5 & 11 Mbit/s 802.11g & 802.11a: 6 Mbit/s, 9, 12, 18, 24, 36, 48 & 54 Mbit/s 802.11n 20 MHz BW, Long GI/Short GI: from MCS0 6.5/7.2 Mbps to MCS23 195/216.7 Mbps 802.11n 40 MHz 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, up to +18 dBm for all data rates
RF transmit power 5150MHz – 5350MHz*	Max. conducted transmit power, 802.11a/n, up to +18 dBm for all data rates
RF transmit power 5470MHz – 5850MHz*	Max. conducted transmit power, 802.11a/n, up to +18 dBm 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 (36 Mbit/), -80 dBm (54 Mbit/s) 802.11a: -95 dBm (6 Mbit/s), -85 (36 Mbit/), -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, EN 301 893, EN 300 328, EN 301 489-1/-17, EN 60950, EN 50121-3-2, EN 50121-4, EN 50155, EN 45545-2, NFPA 130

* Note: Depending on the regulatory limitations and selected antennas