

# EN 50155 WLAN Dual Radio AP

## RT-610-HV

- ⌘ Compact WLAN access point
  - 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
- ⌘ Latest generation 802.11 design
  - IEEE 802.11ac Wave2 for maximum capacity
  - 4x4 Multi-User MIMO



The Westermo RT-610-HV is a concurrent dual-band 802.11ac Wave2 Wireless LAN Access Point for on-board and stationary applications. It ensures reliable, high-speed data, airtime fairness, band steering, and client steering, and it can be used as a passenger hotspot or as an access point for connecting wireless industrial clients.

The RT-610-HV is designed to withstand the tough environment on-board trains, exposing the switch to constant vibration, extreme temperatures, humidity and a demanding electromagnetic environment.

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. 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 in space restricted installations 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-610-HV 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
3623-073101	RT-610-HV EU, EN 50155 WLAN Dual Radio Access Point
3623-073102	RT-610-HV NA, EN 50155 WLAN Dual Radio Access Point
3623-0799	Factory Reset Plug (Accessory)

## Specifications RT-610-HV

Functionality	802.11ac dual concurrent access point for public transport and industrial applications
Operating Modes	Access Point
Operating temp. range	-40 to +70 °C
Power feed	72-110 VDC Isolated, 0.2 A max
Size and weight	Approx. 52 x 110 x 193 mm (H x W x L) and approx. 1,2 kg, without antennas
Environmental protection	IP66
MTBF	200,000 hours (IEC 62380)
Wireless standards supported	IEEE 802.11g, 802.11a, 802.11n, 802.11ac
Frequency range	2.400 to 2.4835 GHz 5.150 to 5.350 GHz, 5.470 to 5.725 GHz, 5.725 to 5.875 GHz
Occupied channel bandwidth	According to IEEE 802.11
Data rates supported	802.11a/g: 6 Mbit/s, 9, 12, 18, 24, 36, 48 & 54 Mbit/s 802.11n 20MHz BW, LGI/SGI: from MCS0 6.5/7.2 Mbit/s to MCS23 195/216.7 Mbit/s 802.11n 40MHz BW, LGI/SGI: from MCS0 13.5/15 Mbit/s to MCS23 405/450 Mbit/s 802.11ac 20MHz BW, LGI/SGI: from VHT0 6.5/7.2 Mbit/s to VHT9 312/346.7 Mbit/s 802.11ac 40MHz BW, LGI/SGI: from VHT0 13.5/15 Mbit/s to VHT9 720/800 Mbit/s 802.11ac 80MHz BW, LGI/SGI: from VHT0 29.3/32.5 Mbit/s to VHT9 1560/1733.3 Mbit/s 802.11ac 160MHz BW, LGI/SGI: from VHT0 58.5/65 Mbit/s to VHT9 1560/1733.3 Mbit/s (2SS)
RF transmit power 2.4 GHz*	Max. conducted transmit power, 802.11g/n, up to +18dBm for all data rates
RF transmit power 5 GHz*	Max. conducted transmit power, 802.11a/n/ac, up to +18dBm for all data rates
RF antenna interfaces	4 x QMA compatible antenna connectors, 4x4 MU-MIMO for 5GHz 2 x QMA compatible antenna connectors, 2x2 MIMO for 2.4GHz
Receiver sensitivity (typical)	-95 dBm (6 Mbit/s), -85 (36Mbit/s), -80 dBm (54 Mbit/s) 20MHz: -95 dBm (MCS0), -79 dBm (MCS7), -75 dBm (MCS8) (max. 4SS) 40MHz: -92 dBm (MCS0), -77 dBm (MCS7), -71 dBm (MCS9) (max. 4SS) 80MHz: -88 dBm (MCS0), -74 dBm (MCS7), -67 dBm (MCS9) (max. 4SS) 160MHz: -88 dBm (MCS0), -74 dBm (MCS7), -67 dBm (MCS9) (max. 2SS)
MIMO features supported	Space Time Block Coding (STBC), RX Low Density Parity Check (LDPC), Maximum Likelihood Demodulation (MLD), Maximum Ratio Combining (MRC), Multi-User-MIMO (MU-MIMO), Transmit Beamforming (TxBF)
Client connectivity management	Configurable max. number of clients, client steering between APs, band steering between bands, air time fairness between clients
Security	WPA2 (CCMP), WPA3-Personal (SAE/OWE), WPA3-Enterprise (Suite-B), 802.11w, 802.1X
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	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, EN 301 893, EN 300 328, EN 300 440, 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