

### Introduction

The Teldat APR222ac Access Point is especially designed for WLAN applications in railway environments. In order to provide on-board Wi-Fi connectivity, the APR222ac can be installed in high-speed and freight trains, trams, etc., and complies with the railway regulations (including EN 50155). Furthermore, its two radio modules offer simultaneous dual band Wi-Fi connectivity. It is a flexible device that can be integrated in cloud and HotSpot management platforms, in addition to offering a wide variety of features.



### Product Highlights

- ▶ WLAN access for passengers and staff
- ▶ Extended temperature range - 25 °C to +70 °C
- ▶ Two 2.4/5 GHz radio modules
- ▶ Two M-12 Gb Ethernet LAN ports
- ▶ WLAN controller 5+1 APs in Master-AP mode
- ▶ Multi-SSID support (up to 16 per radio), 32 VLAN
- ▶ Railway environment certificate

### Product Description

The Teldat APR222ac Access point is especially designed to comply with the railway regulations and can stand up to extreme vibrations and temperatures. It incorporates 2 radio modules and operates on both 2,4/5 GHz bandwidths simultaneously. Furthermore, it includes 2 LAN Gigabit interfaces with features such as Airtime Fairness and Band Steering to optimize bandwidth usage connected through high and low range terminals. The device also supports 20/40 MHz channels, Beamforming and allows you to configure advanced network parameters such as DTIM-Period and Short Guard Interval. The APR222ac, in terms of advanced security mechanisms, incorporates 802.11i for user authentication, ACLs and WIDS/WIPS. It allows you to control the number of connected users and bandwidth, among other features, and supports up to 32 SSIDs/VLANs for service separation.

### Competitive Advantage

Access point for railway environments	The Teldat APR222ac is a suitable access point for railway environments, which offers professional connectivity carrying services to clients on different bands.
Professional Wi-Fi technology	It supports airtime fairness, band steering, IAPP roaming (802.11f), 802.11e WMM, and bandwidth limitation per-SSID and per user.
Simple, efficient administration	Web configuration (http/https), Telnet, SSH, SNMP, CAPWAP support from WLC in Teldat router, Dime Manager (up to 50 devices), CNM.
Wireless LAN controller included	In Master-AP mode, you can manage and configure up to 5 additional Access Points.

## HARDWARE TECHNICAL FEATURES

### Interfaces and connectors

LAN: 2x10/100/1000 Mbps, auto MDI/MDIX, M12 connector (8-pole, X-coded)

Wi-Fi: 2 x 802.11ac modules (2.4/5 GHz), MIMO 2x2

M-12 (D-encrypted, 4 poles) power connector. Type-N antenna connectors

### Antennas

2 x female N-type external antennas connectors by radio module

4 x antenna connectors in total

### Power

110 or 24 VDC power supply

M-12 connector (4-poles, A-coded)

Max. consumption: 20 W

### Dimensions and casing

Approx.: 21 cm x 21 cm x 4 cm (Width x Length x Height)

Metal casing. Can be wall mounted or installed on desktop

Weight (approx.): 2.6 Kg.

### Environmental specifications

Operating temperature range: -25 °C to 75 °C

Relative humidity: up to 95%

## SOFTWARE TECHNICAL FEATURES

### Wi-Fi interface

Beamforming, short guard interval, adjustable DTIM, Maximum Ratio combining

Multi-SSID: up to 16 per radio, each with a MAC address

SSID broadcasting, allowed/blocked

### Wi-Fi security and authentication

Open, WEP64/128, WPA Personal/Enterprise, WPA2 Personal/Enterprise

802.1x/EAP-MD5, 802.1x/EAP-TLS, 802.1x/EAP-TTLS, 802.1x/EAP-PEAP

Key management, PSK/TKIP encryption, AES encryption, 802.x/EAP

### Management/administration

HTTP/HTTPS, Telnet, SSH, Dime Manager, CNM

SNMP (v1, v2, v3), SNMP traps (v1, v2, v3) conf., SNMP IP access list conf.

Configuration backup/restoration

### Supervision

Syslog client with different message severity levels

Emission of alarms by e-mail

Programming reset, interface activation/deactivation, SSIDs, etc.

### Wi-Fi optimization

Airtime fairness, load balancing, IAPP roaming(802.11f)

Client limitation, data rate trimming

WMM 802.11e power save

### Detection mechanisms

MAC filtering (static and dynamic blacklist )

WIDS: rogue AP, neighbour AP and client detection

WIPS: rogue client protection

### Operating modes

WLAN managed AP

WLAN Master AP (it manages up to 5 additional APs)

WLAN Standalone (AP, client and bridge)

### VLANs

VLAN configuration according IEEE 802.1q

Up to 32 VLANs

## ADDITIONAL TECHNICAL FEATURES

### Other functionalities

NTP Client, NTP Server, manual configuration

DNS Client, DNS Server, DNS Relay

DHCP Client, DHCP Server, DHCP Relay

### CE and Railway certifications

CE: EN 60950; EN 300328; EN 301489-1; EN 301489-17; EN 301893; EN

62311

Railway: EN 50155; EN 50121-3-2; EN 61373; EN 60068-2-1; EN 60068-2-2

EN 60068-2-27; EN 60068-2-30; EN 60068-2-47;EN 60068-2-64; EN 60068-3-1

### Other functionalities (2)

Discovery protocol: CAPWAP (DHCP option RFC1517)

Configurable roaming (off, slow, normal, fast, custom)

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