

Introduction

The APR2044ax is Teldat's new WiFi Access Point for railway applications. It features two state of the art WiFi 6 modules that can provide connectivity to a high number of passengers. It's especially designed to meet the more demanding railway regulations (such as EN 50155). The APR2044ax seamless integrates with HotSpot and WebFilter applications, creating a full solution for on-train Internet connectivity. With two 2.5GbE ports It has the ability to be mounted on a daisy chain configuration which reduces the need of additional switches.

Product Highlights

- ▶ Wi-Fi 6 Multi-User-MIMO 4x4 for up- and down link
- ▶ 2,4 Gbit/s @ 5GHz and 1,1 Gbit/s* @ 2,4 GHz
- ▶ 802.11ax technology for 2,4 and 5 GHz band
- ▶ Compliant with Railway Regulations
- ▶ Integrated Bluetooth for IoT applications
- ▶ 8 antennas for optimized coverage and performance

Interfaces

Ethernet	2x port switch 100/1000/2500BASE-T, auto
Radio 1	IEEE 802.11b/g/n/ax MIMO 4x4
Radio 2	IEEE 802.11ax/ac/n/a MU-MIMO 4x4
Bluetooth	Bluetooth LE 4.2

Teldat APR2044ax

Competitive Advantage

State of Art Wi-Fi Technology	Dual-Radio 4x4 MU-MIMO 802.11ax Wi-Fi 6 with high level security WPA3
Access Point for railway environments	Offers professional connectivity in railway environments on different bands
Ruggedized HW and Fanless architecture	Designed to withstand vibrations and extreme temp (-25 to 70°C). Certified according to railway standards (EN 50155, EN 50121-3-2, EN 45545-2, EN 301 908-1)
Simple, efficient administration	Web configuration (http/https), CAPWAP support from WLAN Controller in Teldat router, Teldat's Cloud base management

Scenarios

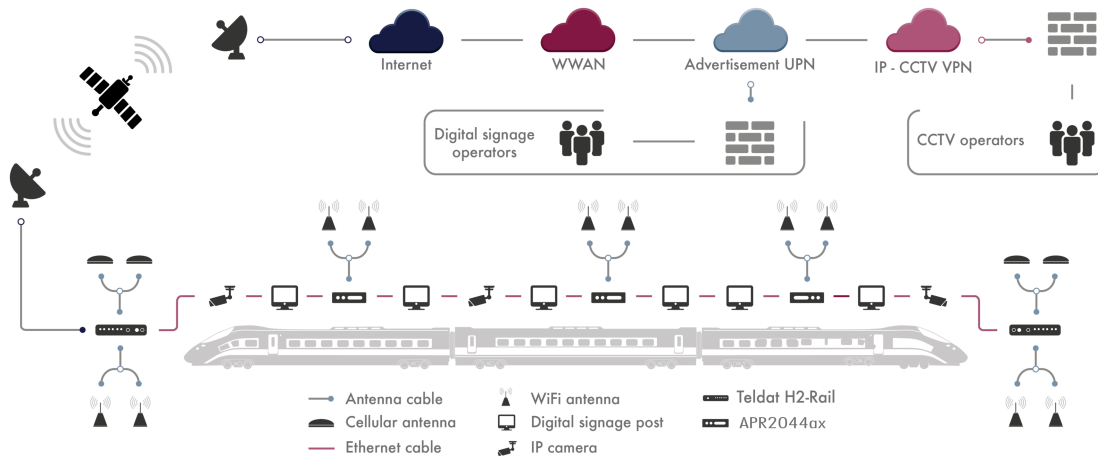


Figure: Connected Train: New Railway Transport Paradigm

Key Features

Use Cases Wi-Fi LAN connectivity for high density railway environments and critical scenarios dependant on latency or high capacity

Security Most updated encrypted and secured with WPA3-Personal/Enterprise, Rogue APs detection, 802.1x

Quality of Service Traffic prioritization by means of categories based on 802.11e/WMM

Very easy configuration

- Centralized mode: Zero Touch Provisioning from Cloud Net Manager
- Local mode: WLAN Controller detects and configures the new Access Point connected to the LAN
- Manual Mode: Simple GUI

Optimized WAN 802.1k, 802.1v, 802.1r together provide with a fast and transparent roaming to the user

HARDWARE TECHNICAL FEATURES

Interfaces and connectors

2 x 100/1000/2500 Mbps Ethernet twisted pair, autosensing, auto MDI/MDI-X

1 x Radio module IEEE 802.11b/g/n/ax MIMO 4x4

1 x Radio module IEEE 802.11ax/ac/n/a MU-MIMO 4x4

Environmental specifications and consumption

Temperature operating: 0°C to 45°C; storage: -25°C to 70°C

Relative humidity: up to 95%

Max Consumption: T.B.D

Dimensions and casting

Approx. 216 mm x 216 mm x 51 mm (width x depth x height)

Status, Activity for WLAN1, WLAN2 and Ethernet, LEDs defeatable

Internal Power Supply

24-110 VDC M12 Connector / PoE

Antennas

2 x 2 female QMA external antennas connectors by radio module WLAN

1 female QMA antenna connector by Bluetooth

SOFTWARE TECHNICAL FEATURES

Wi-Fi interface

Airtime Fairness, Client Band Select, Client Management, Data rate trimming

Client Management 802.11k/v, Low SNR threshold management

Seamless roaming with IAPP, Fast BSS Transition 802.11r

Management/administration

Graphical user interface

Managed by a local WLAN Controller, works as WTP

Supported Cloud Management Systems

IEEE802.11i Authentication and encryption

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

802.1x/EAP-PEAP, key management

Power optimization

TWT

WLAN Security Modes

WPA3-SAE; WPA2/3-PSK; WPA2-PSK; WPA1/2-PSK; WPA-PSK;

WPA3-Enterprise

WPA2/3-Enterprise; WPA2-Enterprise; WPA1/2-Enterprise;

WPAEnterprise

Open, OWE; OWE-Transition

Energy Management

MIMO 1x1 shift down

802.3az support

The LEDs has three operation mode: Status, Flashing, Off

Detection mechanisms

MAC address filter for WLAN clients (white list)

Rogue AP, Neighbor AP

VLANs

Network segments on layer2 is possible

For each SSID one VLAN ID is available

Static VLAN configuration according IEEE 802.1q

ADDITIONAL TECHNICAL FEATURES

Certifications

Directive 2014/53/EU, 2011/65/EU, Regulation (EC)

EN 50155:2017; EN 300 328; EN 301489-1; EN 301489-17; EN 301893;

EN 62368-1: 2014; EN 50121-3-2; EN45545-2:2013; EN IEC 63000;

EN 62311:2008

Open Source information at www.teldat.com

FLEXIBLE

COMMUNICATIONS SOLUTIONS

THAT GROW WITH YOU.

Teldat APR2044ax

Railway Access Point for WiFi services on all trains



Teldat is a leading provider in Enterprise Communications equipment and Services for the top corporate to mid-sized and SME markets.

About TELDAT



ROUTERS | Wi-Fi | MANAGEMENT | TRANSPORT | SMART GRID | INDUSTRIAL | VoIP | CLOUD | SECURITY | NFV |

Teldat Group is a leading technology holding that designs, manufactures and distributes advanced Internetworking platforms for corporate environments, providing new and cutting-edge communication solutions without ever losing sight of its customers real requirements. Teldat's solutions development is based on proprietary technology, which is in the Group's DNA. This allows Teldat to be a leading provider in Enterprise Communications equipment and Services for the top corporate to midsized markets, as well as the SME and SoHo markets.

From a geographical viewpoint, Teldat Group has a presence in all continents, with its corporate headquarters located in Spain, and operational affiliates in Europe (Germany, Austria, Portugal, Italy and France) and in LATAM (Mexico and Brazil), as well as two business development offices in USA and China.

 **Teldat** | GROUP | Headquarters

Spain

Teldat S.A.
Parque Tecnológico de Madrid
Tres Cantos - 28760
Madrid (Spain)
Phone: +34 91 807 6565
info@teldat.com

Germany

bintec elmeg GmbH
Suedwestpark 94. 90449
Nuremberg (Germany)
Phone: +49 911 9673 0
info@bintec-elmeg.com

Our sales offices contact details are on www.teldat.com



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