PRELIMINARY

Ibex-A2510

RAILWAY ACCESS POINT WITH WI-FI 6 DUAL RADIO AND INTEGRATED ANTENNA

KEY FEATURES

- Compact access point with integrated antenna
- IEEE802.11ax compliant with 3x3 MU-MIMO
- Two Wi-Fi 6 interfaces for dual band mode
- Backwards compatible with 802.11a/b/g/n/ac
- 1 Gigabit Ethernet on M12 X-coded connector
- Power over Ethernet (PoE+) according to IEEE 802.3at
- No external RF cables required
- Built-in cyber security
- Maintenance-free design
- -40 °C to +70 °C operating temperature
- EN 50155 compliant

TYPICAL APPLICATIONS

- Passenger Wi-Fi
- Passenger Entertainment
- Passenger Information
- Ticketing System
- Fleet Management

HIGH-END WIRELESS COMMUNICATION

The Ibex-A2510 is a member of the Ibex (formerly CyBox) family – robust access points for railway applications. It is particularly designed to meet the requirements of rolling stock applications. It offers stable, secure, and high bandwidth connections between the local Ethernet and wireless clients. With the assistance of the access point, multiple mobile Wi-Fi-compatible devices in a passenger train or subway have the possibility to communicate with the Internet or access local data, such as timetable information and multimedia data.

COMPACT DESIGN

The Ibex-A2510 is a very compact access point with integrated antenna and a slim design, which integrates seamlessly into the environment. Furthermore, it meets aesthetic requirements as it resigns from external antennas with visible cables and connections for a sleek understated look that is ideal in customer facing areas.

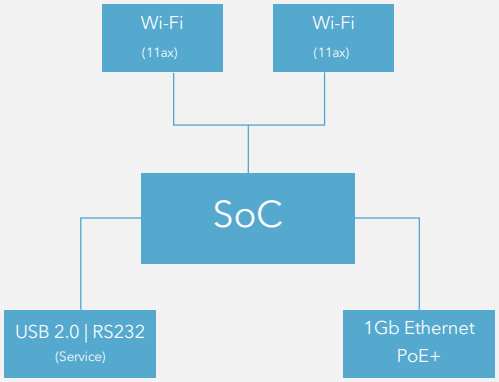
CUSTOMER FRIENDLY INSTALLTION

On the fixed network side, the access point features one Gigabit Ethernet port and is powered over a single cable via Power-over-Ethernet (PoE+), which reduces additional components and installation cost. The combination of cost-effectiveness and compact design with high bandwidth wireless performance makes the Ibex-A2510 a superb solution for dense environments.

USER-INTERFACE AND SECURITY FEATURES

The Ibex-A2510 firmware provides a convenient management interface via a web service. Besides global setup parameters the open source software OpenWrt allows the configuration of the radio and the login dialog, as well as the setup of the stateful firewall. The access point configurations as well as the management firmware can be updated remotely. Furthermore, the built-in fully configurable stateful firewall and multi-VPN support with hardware-accelerated encryption ensures communication security.

BLOCK DIAGRAM



PRELIMINARY

Ibex-A2510

RAILWAY ACCESS POINT WITH WI-FI 6 DUAL RADIO AND INTEGRATED ANTENNA

TECHNICAL DATA

PHYSICAL INTERFACES	
System Architecture	Dual-Core CPU T1023, 1200 MHz 1 GB RAM, 128 MB Flash
Software	Linux OS OpenWrt
Antenna	Integrated, no wiring
LAN	1x 10/100/1000BaseT(X), M12 8-pin female X-coded
USB/Serial Port	M12 8-pin female A-coded, USB 2.0, RS232
Reset Switch	available on the connector side

ELECTRICAL SPECIFICATIONS	
Power over Ethernet	PoE+, Class-4 powered device, IEEE 802.3at
Power Consumption	20 W typ., 25 W max. (TBD)

ENVIRONMENTAL CONDITIONS	
Ambient Temperature	depending on temperature class of Wi-Fi module Class OT4, -40.. +70 °C (85 °C) operating or Class OT3, -25.. +70 °C (85 °C) operating -40.. +85 °C storage
Humidity	max. 95 % non-condensing operating and storage
Altitude	Class AX, up to +2000 m
PCB Protection	conformal coating

RELIABILITY	
MTBF	approx. ~430.000 h (acc. to IEC 62380) (TBD)
Mission Profile	40 °C ambient temperature, 75 % working time ratio with 365 days annual cycle

MECHANICAL SPECIFICATIONS	
Dimensions	289 mm x 99 mm x 69 mm (w h d), (incl. mounting points and cooling fins)
Weight	up to 1200 g
Housing	IP54, IK10, aluminum die-cast, conductive cooling
Radome / Back Plate Colour	similar to RAL 9003 (signal white) / NCS S 0505-R80B

STANDARD CONFIGURATIONS

ORDER NO.	MODEL	DESCRIPTION
3632-25101	Ibex-A2510-T1G-PoE	2x Wi-Fi 802.11ax, 1x 1 Gb ETH (M12X), PoE+

Further information on www.eltec.com

MODULES

WI-FI INTERFACE IEEE 802.11 a/b/g/n/ac/ax	
Transfer Rates	up to 3603 Mbps @ 5 GHz and 860 Mbps @ 2.4 GHz
Frequency Range	2.412 GHz to 2.472 GHz, or 4.920 GHz to 5.875 GHz, selectable band
RF	3x RF antennas, 3x3 MU-MIMO technology
Encryption	OPEN, AES, TKIP, WPA, WPA2-PSK/EAP, WPA3-PSK/EAP, mixed modes, OWE
Operational Feature	up to 512 clients per module

STANDARDS AND SPECIFICATIONS

Directive (EU) 2016/797	EN 50155 (IEC 60571)
	EN 45545-2 (HL 1 to HL 3)
	EN 61373 (Category 1, Class B)
RED – 2014/53/EU	EMC
	radio spectrum
	health & safety
USA	FCC Title 47 CFR Part 15B (TBD)
	NFPA-130

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