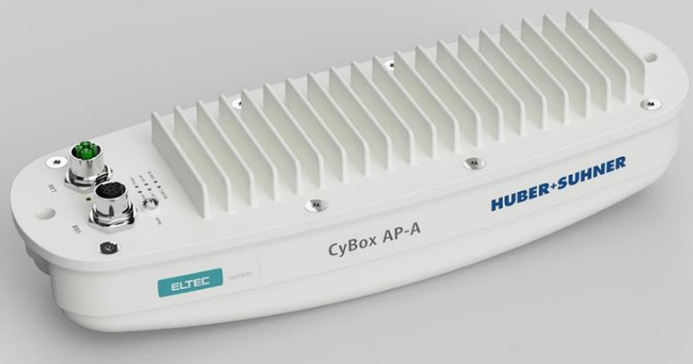
PRELIMINARY

CYBOX AP-A

RAILWAY ACCESS POINT WITH WI-FI 5 DUAL RADIO



Picture maybe subject to change

KEY FEATURES

- Compact access point with build-in antenna
- IEEE802.11ac compliant with 3x3 MIMO
- Up to two Wi-Fi interfaces for dual band mode
- Backwards compatible with 802.11a/b/g/n
- 1 Gigabit Ethernet on M12 X-coded connector
- Power over Ethernet (PoE+) according to IEEE 802.3at
- No external RF cables
- 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 CyBox AP-A is a member of the 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 CyBox AP-A is a very compact access point with build-in 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.

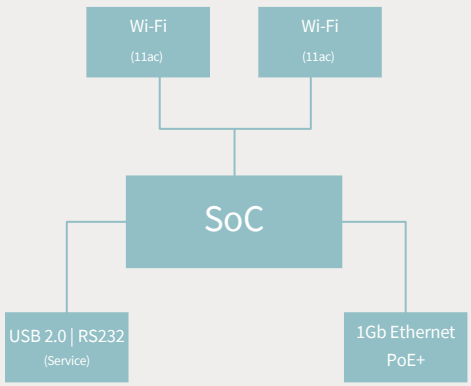
CUSTOMER FRIENDLY INSTALLTION

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 CyBox AP-A a superb solution for dense environments.

USER-INTERFACE AND SECURITY FEATURES

The CyBox AP-A 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



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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 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	13 W typ., 25 W max.

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. ~450.000 h

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, aluminum die-cast, conductive cooling

MODULES

WI-FI INTERFACE IEEE 802.11 a/b/g/n/ac	
Transfer Rates	up to 1300 Mbps
Frequency Range	2.412 GHz to 2.472 GHz, or 4.920 GHz to 5.825 GHz, selectable band
RF	3x RF antennas, 3x3 MIMO technology
Encryption	AES, TKIP, WPA, WPA2, WPA3
Operational Feature	up to 128 clients per radio
Security	stateful firewall with multi-level client isolation

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
	NFPA-130

STANDARD CONFIGURATIONS

ORDER NO. MODEL	DESCRIPTION
3200-0060*CYAPA-1000V0	2x Wi-Fi 802.11ac, 1x 1 Gb ETH (M12X), PoE+

Further information on www.westermo.com and www.eltec.com

*coming soon

OPTIONS

Evaluation Kit	soon available

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