RailBridger

Compact wireless inter-carriage link

- Point-to-point interconnection solution operating in license-free 60 GHz frequency bands
- Based on the 802.11ad standard
- 1.2 Gbps connectivity
- Very Compact size with integrated beamforming antenna
- Rugged device designed for railway: shocks & vibrations proof, wide temperature range -40°C to +70°C, EN50155 and EN 45545-2 certified
- Plug & play installation
- Powered by standard PoE switch (802.3af)
- Support of dynamic carriage composition

RoHS · WEEE · COMPLIANT

802.11ad

2 YEAR WARRANTY

Introduction

The RailBridger ACKSYS is a product designed specifically for inter-car and inter-train wireless connection.

It is the ideal solution for train refurbishment or modernization projects, where there is no IP backbone or where the on-board network is limited (100 Mbps). Using wireless couplers is much easier and more cost-effective than using cables.

- High throughput: use of the 60GHz band avoids interference with 2.4GHz and 5 GHz WiFi, and enables very high data rates of the order of 1.2Gbps.
- Extremely compact dimensions
- Plug&Play: easy mechanical installation (4 screws), PoE power supply and virtually no configuration required
- Intelligent inter-car coupling: the wireless IP backbone automatically reconfigures itself to adapt to any changes in car composition.
- Redundancy: two RailBridger couplers can be used on either side for redundancy or link aggregation.
- Highly robust: IP-69K

ACKSYS COMMUNICATIONS & SYSTEMS
Z.A. Val Joyeux - 10, rue des Entrepreneurs - 78450 Villepreux (FRANCE) - T : +33 (0) 1 30 56 46 46 - F : +33 (0) 1 30 56 12 95
www.acksys.fr - sales@acksys.fr

Technical characteristics overview

Physical interfaces	Outdoor Unit with integrated antenna PoE interface: outdoor CAT-5e or CAT-6 via M12 X-coded connector; Maximum cable length: 75m for 2500BaseT Mounting by 4 screws with flanges or external mounting plate	
Radio data rate	Max Capacity: Up to 1.5Gbps Channel Bandwidth: 2.16GHz Modulation: BPSK, QPSK, QAM (MCS 1-8); Single Carrier	
Output power	Up to 32dBm EIRP	
Performance	Link Acquisition time 5 seconds	
Ethernet routing	Layer 2 Bridge Mode	
Security	Management VLAN, SNMP v3, Encryption AES 128	
Administration	SNMP v3; HTTPS using web browser	
Operating frequencies	EN 302 567 V2.1.1 - Operation within the band 57-66 GHz	
Dimensions and weight	12x12x2.25 cm / 300g and 440g with mounting plate	
Power supply	802.3af standard PoE	
Consumption	Up to 12W	
Environment	Operating Temperatures -40° to +70°C Storage Temperatures -40° to +85°C IP-69K, NEMA-type 4	
Standard and certifications	**US/CAN (cTUVus)**	UL 62368-1, UL 60950-22, CAN/CSA C22.2 62368-1, CAN/CSA C22.2 60950-22
	CE/IEC	EN/IEC 62368-1, EN/IEC 60950-22
	FCC	47 CFR Part15, Subpart B, Class B
	CE	EN 301 489-1, EN 301 489-17
	CAN/CSA-CEI/IEC	ICES-003: 2017 Issue 6, Class B
	AS/NZS	CISPR 32-2015 Class B
	EMC	EN 50121-3-2, EN 50121-4 Class B, EN 50155
	Electronic	EN 50155, IEC 60571
	Shock & Vibration	EN 61373, EN 50155, IEC 60571
	Fire/smoke	EN 45545-2
Warranty	Default 2 years, and can be extended to 5 years	
Reliability	MTBF >131,400 Hours for outdoor and rail environment	

Ordering references

RailBridger	Wireless inter-carriage link 802.11ad, with an integrated antenna, supporting 60 GHz ETSI frequency band

ACKSYS COMMUNICATIONS & SYSTEMS

Z.A. Val Joyeux - 10, rue des Entrepreneurs - 78450 Villepreux (FRANCE) - T : +33 (0) 1 30 56 46 46 - F : +33 (0) 1 30 56 12 95
www.acksys.fr - sales@acksys.fr