



CAR-A-WAN.COACH

Always a good connection

The CAR-A-WAN.COACH – Mobile Internet
Mobile WLAN – Mobile vehicle data





Happy passengers assured

Your passengers will enjoy travelling with mobile Internet access! IPmotion means stable Internet linking on the road. Be it old or young – work or entertainment – stable WLAN is a must for competitive travel and long-distance products.

”The CAR-A-WAN.coach will connect up to 80 mobile phones, tablets and laptops of your passengers to the Internet“

► **Bus trips with the IPmotion mobile Internet**

The Internet router CAR-A-WAN.coach Plus LTE v4 was developed especially for installation in buses and long-distance coaches. Leading manufacturers are installing it in the factory already. IPmotion supports you with retrofitting your existing fleets.

► **All passengers online with the CAR-A-WAN.coach Internet router**

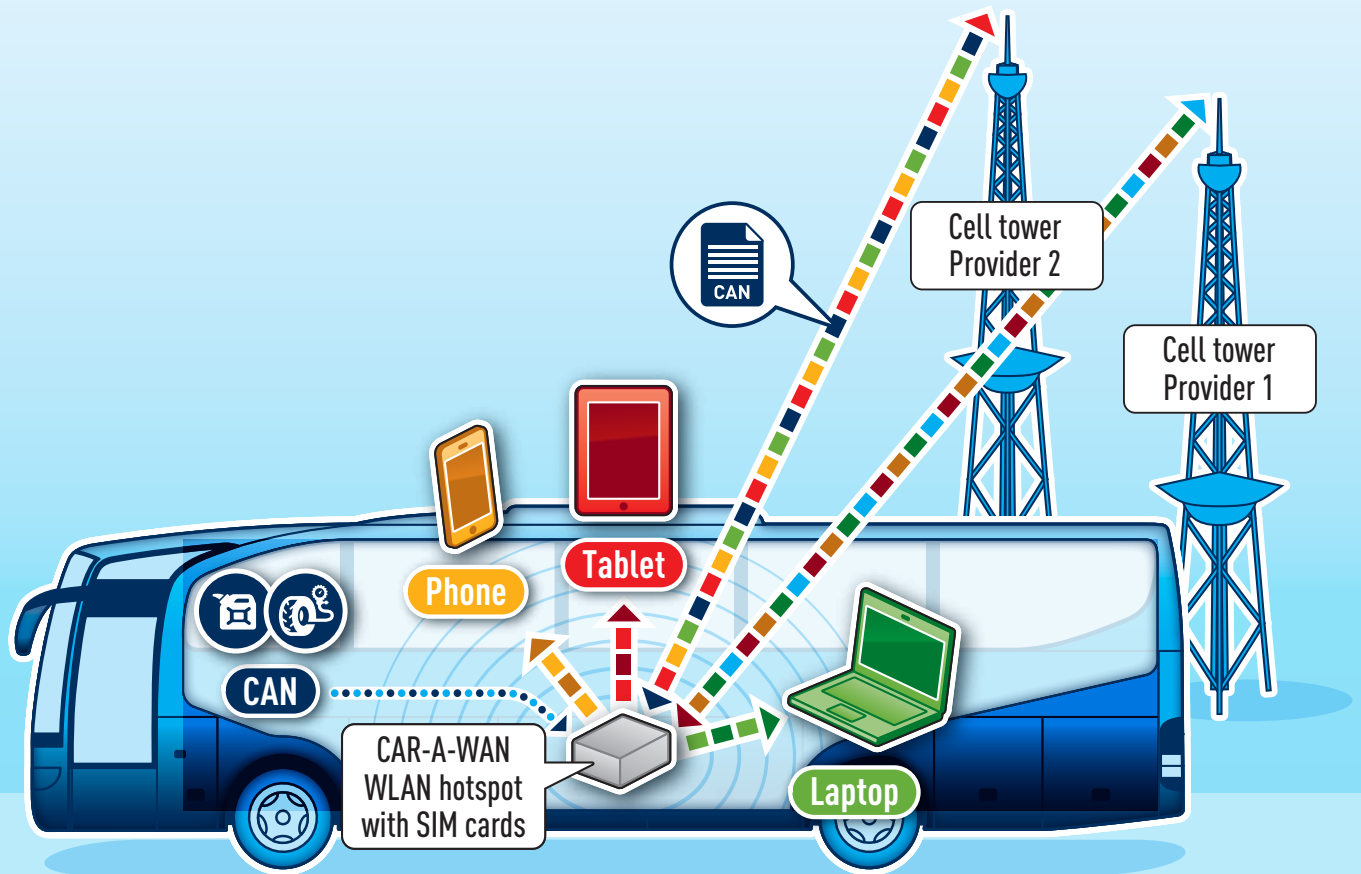
With a standard WLAN hotspot and cable network connection, you can offer up to 80 passengers wireless Internet with excellent reception. Dead zones or failed cell handover at full travelling speed are a thing of the past.

► **Online also when travelling across borders**

The CAR-A-WAN is a mobile Internet router, fail-safe and reliably connected. It connects your buses to the Internet during domestic travel and even abroad. This is unique!

► **Certification for guaranteed security**

The CAR-A-WAN.coach is a certified, legally approved accessory and standard built-in part for bus manufacturers and bus fleet operators: R&TTE for device and wireless security, E1 of the KBA [Federal Office for Motor Vehicles]. These certificates certify that our devices will operate interference-free on the road and will also not interfere with other devices.



CAR-A-WAN Internet routers in tour, long-distance and regional buses

► Communication technology remaining connected without fail.

No mobile service provider in Germany guarantees 100% network coverage. The CAR-A-WAN uses SIM cards from different providers. This guarantees high network availability. The gaps between different providers will be covered. A foreign SIM card may be inserted when travelling abroad.

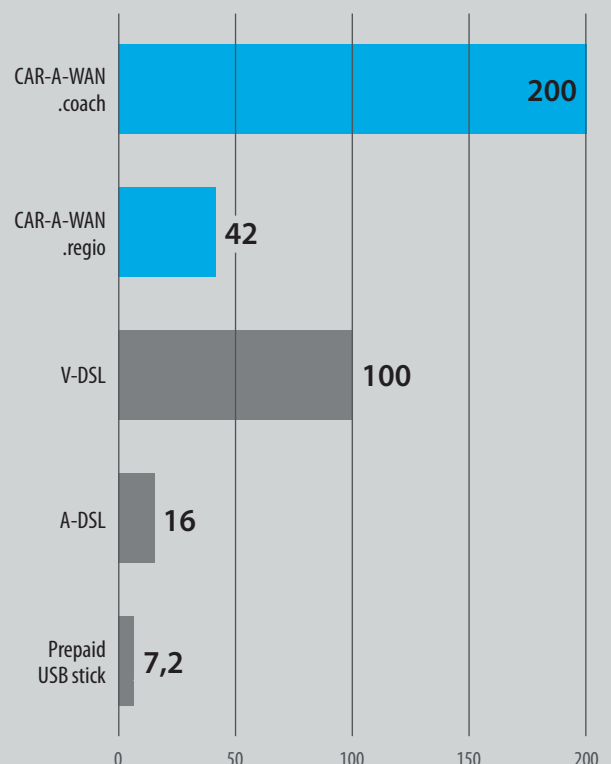
► Transmission of vehicle data via CAN bus interface

The CAR-A-WAN serves as a basis for monitoring important parameters of your on-board electronics (CAN) and for planning your proactive maintenance.

► Better use of travelling time

High speed for your mobile office, social networks and Web TV: Time will absolutely fly!

Maximum download bandwidth comparison, MBit/s



The CAR-A-WAN in use - Mobile Internet for international bus travel route

Example: The coach operator, Walliser Reisen, commissions IPmotion GmbH to fully equip an international coach travel route (Munich-Ljubljana-Zagreb) with mobile WLAN. The trip takes 7.5 hours and passes through Germany, Austria, Slovenia and Croatia.

Scenario: Passengers with reliable Internet access are more content on long trips. A reliable WLAN is therefore an essential component of a competitive premium travel product.

Stable, cross-border Internet access poses a challenge to coach operators, since each country has its own mobile service providers with their own SIM cards which the mobile WLAN router CAR-A-WAN is equipped with. It allows Internet access in the bus. A German SIM card used for Internet access across Europe will attract high data roaming costs outside Germany.

Solution: IPmotion offers Walliser Reisen a customised technical solution for its 4-country journey: Two mobile WLAN routers CAR-A-WAN.coach Plus LTE v4 are installed in the bus and synchronised (master/slave configuration). Each of the two devices has two SIM cards suitable for the relevant countries. (The CAR-A-WAN.coach Plus LTE v4 used here have two SIM cards used simultaneously.)

Result: All the passengers have stable and interference-free Internet access for work or entertainment during their Munich-Ljubljana-Zagreb trip.

IPmotion GmbH is successfully equipping Walliser Reisen coaches and other DB Fernverkehr AG partners with mobile WLAN for their many cross-border international trips.



It's all built in! SET of WLAN router CAR-A-WAN.coach Plus LTE v4

Router, LTE MIMO antennae for roof installation, cables, mountings, two 1 amp fuses

WLAN interior antennae for vehicles with steel tops and double-deckers at no extra charge

► **The CAR-A-WAN is preconfigured**

We will coordinate the configuration and SIM card procurement with you. Your CAR-A-WAN is ready-to-use. And, if you wish, we will install it as well.

► **A CAR-A-WAN for all applications**

The choice is yours: IPmotion will provide customised technical configurations for city buses, inter-city buses and touring/long-distance coaches.

.CITY (for city buses)

.REGIO (for inter-city buses)

.COACH (for touring/long-distance coaches)

► **Up to date via remote maintenance and retrofitting**

Changes possible online. Router upgrades are modular, e.g. by changing 3G+ modems to LTE. Result: Service life increases from two to up to eight years!

CAR-A-WAN	Users (max)	Bandwidth MBit/s	SIM cards	GPS	Telemetry	Remote maintenance	Landing page	Weight
.city	10	21	1 x MiniSIM (Standard) 3G+	optional	optional	optional	optional	389 grams
.regio	30	42	2 x MiniSIM (Standard) 3G+	optional	optional	optional	optional	403 grams
.coach	80	200	2 x MiniSIM (Standard) LTE	yes	yes	yes	yes	411 grams



At a glance: Some important CAR-A-WAN data



General

Power consumption at 24 V	max. 630 mA
Supply voltage	8-38 V DC, typ. 12/24 VDC
Enclosure dimensions	112 x 30 x 184 mm (137 mm x 33 mm x 184 mm incl. enclosure bracket)

Mobile radio

Mobile radio technologies	2G (GPRS/EDGE); 3G (UMTS); 3,5G (HSDPA, HSUPA, HSPA+); LTE
Max. download per modem	100 MBit/s
Max. upload per modem	50 MBit/s
No. of modems	max. 2

WLAN

Compatibility	IEEE 802.11b/g/n 2.4 GHz, EN 60950-1:2006/A11:2009
Max. WLAN speed	11/54/130/300 MBit/s

CAN

Compatibility	ISO 11898-2 and ISO 11898-5 compliant
API technologies	FMS 2.0 / FMS 3.0 / CAN2IP-Gateway

Interfaces

SIM cards	2 x Mini-SIM cards
Ethernet	RJ45, 100 MBit/s
USB	2 x USB 2.0
WWAN	4 x FAKRA-D (bordeaux), front Main, back MIMO, marked as 1/1M or 2/2M
GPS	FAKRA-C (blue)
WLAN	2 x FAKRA-I (beige)

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