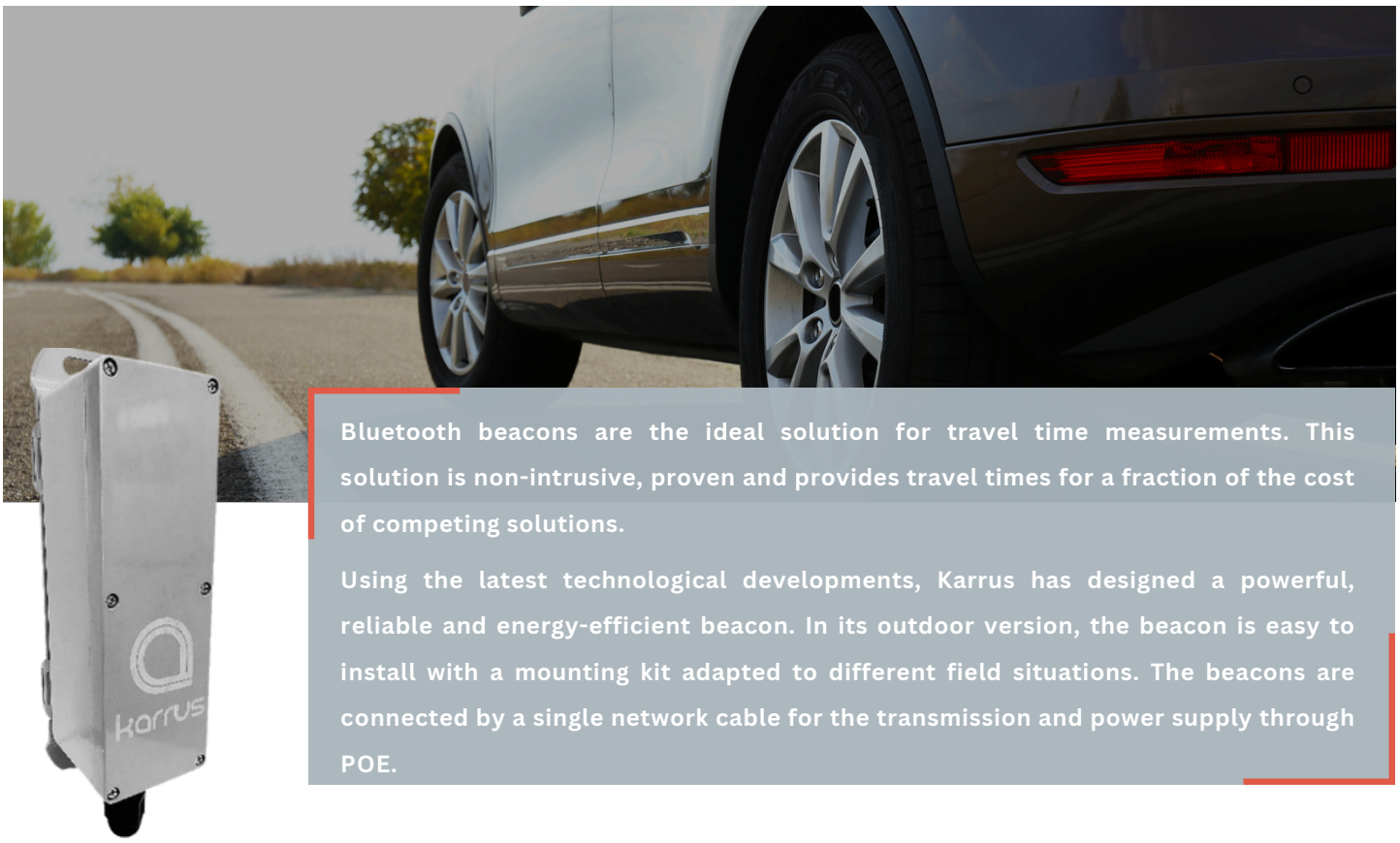
NEW

BLUETOOTH BEACON



Bluetooth beacons are the ideal solution for travel time measurements. This solution is non-intrusive, proven and provides travel times for a fraction of the cost of competing solutions.

Using the latest technological developments, Karrus has designed a powerful, reliable and energy-efficient beacon. In its outdoor version, the beacon is easy to install with a mounting kit adapted to different field situations. The beacons are connected by a single network cable for the transmission and power supply through POE.

APPLICATIONS

- Travel time measurements

CUSTOMERS BENEFITS

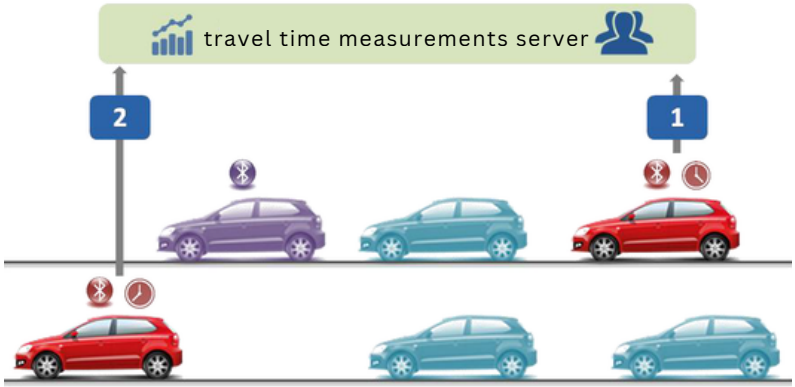
- Periodic calculation of the average travel times of vehicles on different sections.

PRODUCT STRENGTHS

- Easy to install with a mounting kit
- Powerful, reliable and energy-efficient beacon
- Resistant to external aggressions

OPERATION

The Bluetooth beacons are arranged along the road to be monitored. The number of beacons to install depends on the volume of traffic, the desired accuracy and the expected responsiveness during abrupt changes in traffic.



When a vehicle equipped with a Bluetooth device passes near a beacon, the beacon collects and time stamps the anonymized MAC address, the class of the equipment and the power of the radio signal. The processing, on a central server, of the data collected during the successive passages of the vehicle near the different beacons makes it possible to calculate its Individual Travel Time (ITT). The statistic of these ITT makes it possible to periodically evaluate the mean travel times on the different sections..

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BLUETOOTH Beacon Ref : BT64001A - May 2025

INSTALLATION

The outdoor beacon comes in a polyester case resistant to external aggressions. **A modular mounting** kit allows its installation **on a wall or on a mast**. An RJ45 socket is accessible on the underside for the POE.

The outdoor beacon is equipped with **an omnidirectional antenna** involving few installation constraints. The beacon is ideally installed at a **height between 1 and 5 meters** with direct visibility of the traffic.

Each tag has a unique identifier on 4 hexadecimal characters engraved on the front panel.

CONNECTION

Outdoor beacons are connected via **a single RJ45 connector** accessible on the underside. The power supply is POE (Power Over Ethernet) on a CAT5e or CAT6 cable. Three variations are proposed to adapt to the constraints of each site..

POE 12V	For solar installations or battery powered installations (cable < 50m)
POE 24V	For 24V cabinets (cable < 100m).

TECHNICAL SPECIFICATIONS

BLUETOOTH

Standard	2.0+EDR Class1, compatible Bluetooth low energy.
Chipset	Cambridge Silicon Radio CSR8311-A08
Antenna	RP-SMA connector. Omnidirectional 5 dBi. Directional option
Range	Theoretical: 100 meters. Practical on roads: 45m.

SYSTEM

Operating system	Linux
CPU	500 MHz.
Memory	256 MB.
Storage	6Go.
Synchronization	NTP/ RTC clock/ GPS (option)
VPN	OpenVPN, IPsec and PPTP
Configuration	Web browser

POWER SUPPLY

Supply voltage	POE 12V. POE 24V (option).
Consumption	1,5W.

OPTIONS

Double detection method Bluetooth and WIFI.

Antenna type: gain and directivity.

Power supply by POE 24V or 48V.

Embedded 4G modem.

Embedded GPS for time synchronization and geolocation.

ENVIRONMENT

Size	HxPxL = 290 x 90 x 75 mm. weight : 1,35 kg.
Mounting	Modular mounting kit for wall with and mast.
Operating temperature	-40°C to 70°C.
Protection rating	IP66

CONNECTIVITY

Ethernet	Fast Ethernet 10/100Mbps.
RS232 (option)	3 wires.
USB (option)	USB 2.0.

WIFI

Standard	IEEE 802.11 a/b/g/n
Chipset	Atheros AR9220.
Antenna	RP-SMA connector. Omnidirectional 5 dBi. Directional option.
Range	Theoretical: 100 meters. Practical on roads: 45m

Related products and services: time travel server, beacon network design, data analysis, production of traffic indicators

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