

RT-Backpack

Vehicle-to-Pedestrian Tracking

Features

- 2cm Positioning
- Precise measurements
- Data transmission over Wireless LAN
- Real-Time
- Portable
- Compact Size

Vehicle Applications

- ADAS testing
- Car-to-pedestrian tracking
- Car-to-cyclist tracking
- Tracking of multiple pedestrians or motorcyclists possible

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RT-Backpack

Car-to-Pedestrian Communication



The RT-Backpack, an additional component for the RT-Range systems, is ideal for car-to-pedestrian tracking. This represents a turnkey solution for tracking the position of pedestrians relative to a moving vehicle.

The RT-Backpack is a complete Target system in a backpack that can be carried by a pedestrian. The RT-Backpack transmits all the signals to the Hunter vehicle in the same way as a normal Target.

The RT-Backpack helps car manufacturers to develop and test vehicle-to-pedestrian tracking systems by giving an objective and accurate measurement of the distance from the car to the pedestrian.

The RT-Backpack includes a highly accurate RT3000 Inertial and GPS navigation system, which is mounted securely on a frame, a battery



capable of powering the RT3000 for up to 5 hours, a precision GPS antenna, wireless LAN and a battery charger.

The unique RT-Backpack system works just like a Target in the RT-Range. The RT-Backpack feeds real-time measurements to the Hunter vehicle using Wireless LAN.

The RT-Range Hunter receives data from the RT-Backpack Target system, computes the measurements online and outputs them on the CAN bus.

This means that if you already have an RT-Range system for developing and testing Advanced Driver Assistance Systems (ADAS), you can now expand your tests to include car-to-pedestrian tracking. Both systems can be used together to get accurate measurements of the distance from a vehicle to the pedestrian.

The compact and portable RT-Backpack can be used to track motorcyclists as well as pedestrians.

The RT-Backpack system has additional straps on it, so that it can be tightly and securely mounted to the pedestrian, giving the best possible accuracy.



Car-to-pedestrian tracking



With the addition of the RT-Backpack to your RT-Range system, you can now reproduce all possible traffic scenarios for your ADAS testing needs with ease and high accuracy.

Data from the pedestrian wearing the RT-Backpack to the

vehicle is transmitted over wireless LAN which works – without any obstruction such as trees or buildings - more than 200m.

The data can be checked by the pedestrian during the tests using the OxTS RT-Graph software on a pocket PC.

As all measurement systems from OxTS, the RT-Backpack can be set up quickly and requires no further user intervention once configured.

For further information please contact Oxford Technical Solutions or your nearest local agent.

Vehicle-to-pedestrian measurements

Parameter	Conditions	Specification
Longitudinal Range	±200m	0.03m
Lateral Range	±20m	0.03m
Resulting Range	200m	0.03m
Longitudinal Range Rate	±50m/s	0.02m/s
Lateral Range Rate	±20m/s	0.02m/s
Resulting Range Rate	±50m/s	0.02m/s
Resulting Yaw Angle	360°	0.1°

RT-Backpack



RT-Backpack Components

Qty	Description
1	Backpack
1	Frame to hold the RT3000
1	Survey Grade Antenna for multi-path rejection
1	7 Ah battery
1	Wireless LAN
1	Cables
1	Mains Charger
1	Technical User Manual

RT-Range



RT-Backpack Technical Specifications

Parameter	Specification
Wireless LAN Radio Range	>200m line of sight
Wireless LAN Delay	<70ms RMS
Temperature Range	-10 °C to 50 °C
Dimensions (mm)	340 x 270 x 180
Weight	5 kg