RT3000 v3

High performance GNSS/INS for ADAS and Autonomous vehicle testing

The RT3000 v3 combines the best of GNSS positioning technology with a high-grade IMU to deliver robust performance in all environments.

Trusted globally for ground truth measurements in:

/ Vehicle dynamics testing

/ Driving robot path following

/ Euro NCAP ADAS testing

/ NHTSA testing

/ Autonomous vehicle validation

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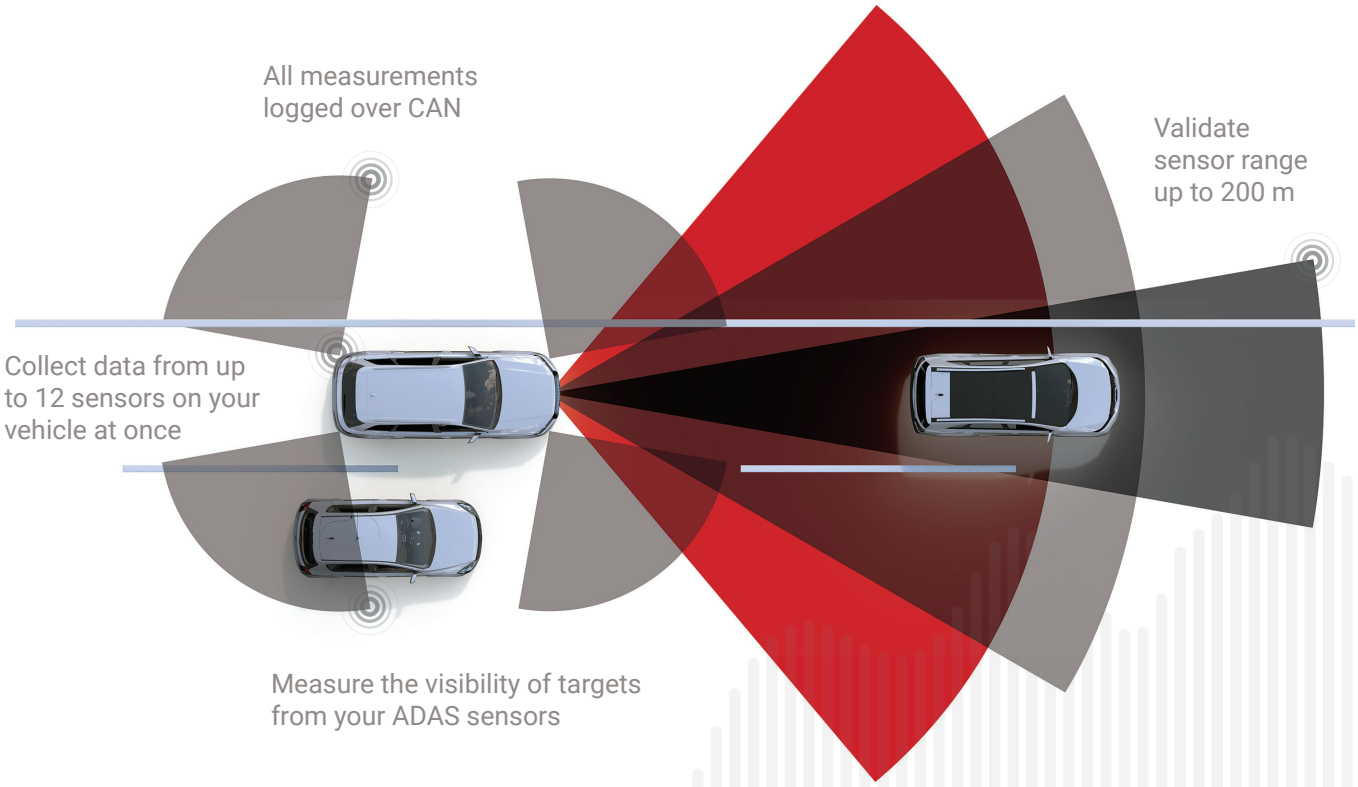
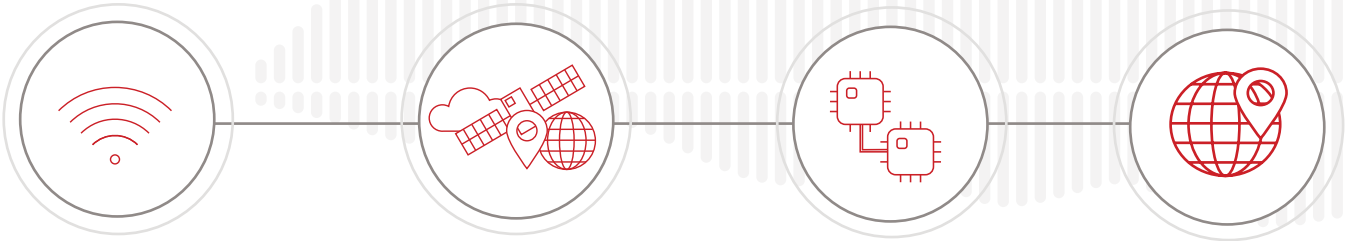
Now with onboard RT-Range S Hunter capabilities

The RT3000 v3 comes with optional RT-Range Hunter capabilities for ADAS testing. Track up to 4 moving targets, knowing their position, orientation, speed and acceleration relative to the vehicle under test. It all happens on one device meaning reduced setup times and less hassle.



Same high performance. Improved accessibility.



NEW integrated Wi-Fi for wireless device monitoring and communication

NEW integrated NTRIP client to receive corrections on the open road

NEW CAN-FD interface

NEW Quad-GNSS support included

- / High speed GNSS for high dynamic conditions
- / RTK 1 cm position accuracy
- / 0.150° slip angle accuracy
- / 0.03° Pitch/roll for high accuracy ride and handling tests
- / Driving robot interface
- / Up to 250 Hz data output rate
- / ***NEW*** GPS, GLONASS, Beidou and Galileo included as standard
- / Wheel speed input
- / Dual antenna

Options

- / ***NEW*** onboard RT-Range S Hunter processor for ADAS testing
- / CAN acquisition
- / Network DGPS
- / ISO 17025 calibration

Software features tailored to your application

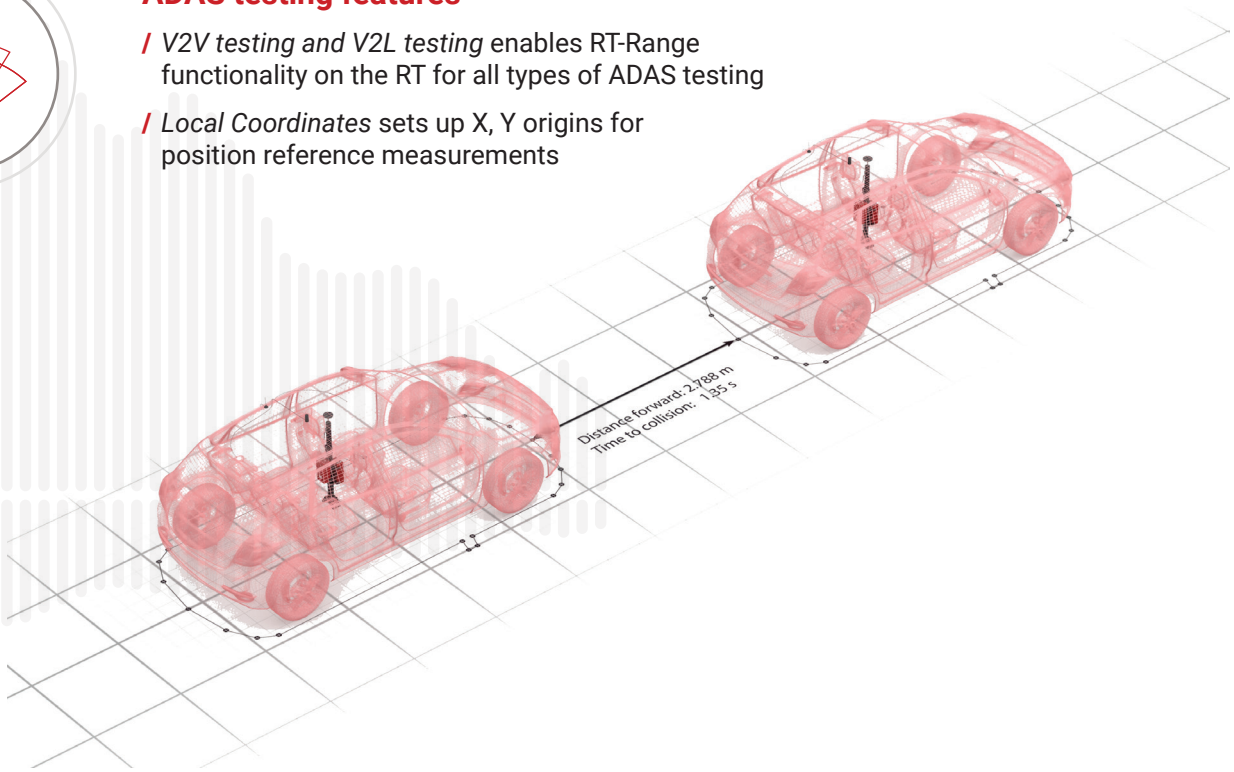
OxTS hardware comes pre-loaded with several features that tune and enhance the raw data output to meet requirements for specific applications. Over the years we've added to our portfolio of features. These are categorised into three areas: Track testing features, ADAS testing features and open-road features.

Test track testing features

- *Multiple Slip Points* allows you to measure slip angle from up to eight reference points
- *Angular and Linear Acceleration Filters* reduce unwanted noise
- *Surface Tilt* - where roll and pitch measurements are compared to an incline
- *Analogue output* enables measurement on 16 analogue channels
- *Robot interface* provides a direct navigation interface for path following

ADAS testing features

- *V2V testing and V2L testing* enables RT-Range functionality on the RT for all types of ADAS testing
- *Local Coordinates* sets up X, Y origins for position reference measurements



Open-road testing features

- *Our GNSS/INS tight coupling technology, gx/ix™ RTK,* improves position accuracy poor GNSS environments such as urban canyons. Really popular with autonomous vehicle test engineers.
- *Wheel Speed Odometer* interface reduces position drift by inputting velocity updates in real-time into our navigation solution.
- *Onboard NTRIP* client means you can receive RTK corrections during field projects on the open road.
- *Quad-GNSS* improves position data accuracy by providing increased satellite coverage along your test route.

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Hardware		
GPS+GLONASS+Galileo+BeiDou	RT3000 L1 only	RT3000

Performance[1]		
Positioning	L1	L1, L2, B1, B2, E1, E5
Position accuracy (CEP)		
SPS	1.8 m	1.5 m
SBAS	0.6 m	0.6 m
DGPS	0.4 m	0.4 m
RTK		0.01 m
Velocity accuracy (RMS)	0.1 km/h	0.05 km/h
Roll/pitch accuracy (1σ)	0.05º	0.03º
Heading accuracy (1σ)[2]	0.1º	0.1º
Track angle accuracy (1σ)[3]	0.1º	0.07º
Slip angle accuracy (1σ)[4]	0.2º	0.15º
Dual antenna	✗	✓

Hardware	
Dimensions	184 x 120 x 71 mm
Mass	1.4 kg
Input voltage	10-50 V dc
Power consumption	15 W
Operating temperature	-40º to +70ºC
Environmental protection	IP65
Vibration	0.1 g^2/Hz, 5-500 Hz
Shock survival	100 g, 11 ms
Internal storage	32 GB

Sensors		
Type	Accelerometers	Gyros
Technology	Servo	MEMS
Range Optional	10 g 30 g	100º/s 300º/s
Bias stability	2 µg	2º/hr
Linearity	0.01%	0.05%[5]
Scale factor	0.1%	0.1%
Random walk	0.005 m/s/√hr	0.2º/√hr
Axis alignment	<0.05º	<0.05º

1 Valid for open sky conditions.

2 Dual antenna heading valid for 2 m antenna separation. Wider separation will improve accuracy. Supports up to 5 m separation.

3/4 At 50km/h.

5 With SuperCAL adjustment.

OXTS Automotive

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Setting the standard in automotive testing

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