



— **Suchy Data Systems** — 

**xProGPS** – The Speed Sensor  
based on GPS technology  
for precision measurements in  
a new dimension.



## xProGPS – the latest technology sensor for achieving a new level of measurement precision

From 0 to 200 – with minimum effort and with the help of a comfortable measurement system! Do you want to achieve a completely new level of precision when measuring speed as part of your vehicle development? Without significant technological build up, quickly, effortlessly and with highest economic perspectives? Our GPS based xProGPS is the perfect solution for getting measurement results that cannot be achieved

with other technologies. And this comes

with the advantage that our xProGPS

can be used anywhere, offering

you the highest level of flexibility.

Use it as an independent

measurement sensor that

can quickly and comfortably

deliver measurements fol-

lowing one time initialisation

supported by our special application

software. Connect it to a Laptop and immedi-

tely get the benefit of the most exact results without

spending time on installation. Or use it as a conventional

speed sensor, that feeds its measurement data over standard


interfaces into a larger data acquisition system – such as the

2HE-PCI that we can also supply. Whatever type of system

configuration will best fit your application: if electronic speed

measurement is your task then using the xProGPS from Suchy

Data Systems ensures the highest level of safety and precision.



Very high measurement precision in a compact solution: The **xProGPS** uses the Global Positioning System for measurement, analysis and evaluation.



## xProGPS for high precision speed measurement

The **xProGPS** from Suchy Data Systems is a speed sensor based on GPS technology. Our measurement system calculates a high accuracy speed signal over Doppler analysis of satellite signal. Data updates occur according to selected version with 20Hz or 100Hz. The sensor delivers speed values from less than 0.1 km/h up to more than 500 km/h. Compared to conventional speed measurement, such as 5th wheel sensors that can only provide speed and distance, **xProGPS** generates much more information. The benefits are obvious.

## Many different areas of application

The sophisticated signal preparation by means of digital signal processing ensures extreme precision. Complex filter processes (Kalman) cover short drop-outs of the signal using extrapolation so that, even when the reception conditions are very difficult, the system can continue to deliver plausible data. This makes it possible to use the sensor in many different vehicle tests:

- Fuel Consumption measurement
- Vehicle performance tests
- Coast Down tests
- Braking measurements
- Endurance Tests
- Test rides on public roads and highways
- Distance measurements
- and much more

Our **xProGPS** can be used wherever a high precision speed measurement is particularly important:

- Vehicle development
- Motorcycle applications
- Motor sport
- Motor boats
- Railways
- Off-Road
- Aircraft



Ideal for comprehensive measurement results:

- Vehicle Position (Geo-coordinates)
- Height of the vehicle above sea level
- Heading
- Lateral acceleration
- and much more



## These are the advantages in measurement technology offered by xProGPS

- Contactless sensor
- practically no change to vehicle wind resistance
- no slippage
- the same level of accuracy in wet, snowy or icy conditions
- no danger from attachments
- can be used in difficult terrains to evaluate off-road vehicles such as tractors or tanks
- very broad temperature range
- also accurate at very high speeds
- Values are even delivered at speeds below 0.1 km/h
- no calibration required

## xProGPS can be made ready for operation with very little preparation – get ready for test within seconds!

- Simply attach the miniature antenna to the vehicle roof using the magnetic feet – and you are ready to go!
- Major attachments such as with wheel mounted sensors or a fifth wheel are not needed. That is an important safety aspect when testing on public roads.

## Comfortable „stand alone“ solution

**xProGPS** provides you with a new level of technical independence. Along with the driver display from Suchy Data Systems it offers a compact stand-alone solution for complete measurement and analysis.



## Multiple Standard interfaces

**xProGPS** offers a range of universal interfaces that allow easy adaptation to almost any measurement system:

- USB interface for easy connection to a Laptop etc.
- Serial output of NMEA data sets
- Programmable CAN-Bus data output
- Output as analogue voltage over 2 channels
- Simulation of a conventional Speed Sensor through output of a speed dependent frequency
- Trigger input for light barrier/brake contact with a resolution of 1 micro second
- Save data to Flash Card
- Two additional CAN interfaces for recording vehicle data and external signal processing units

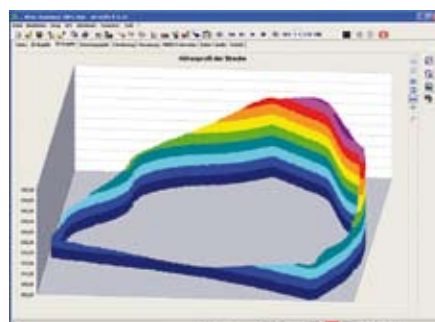
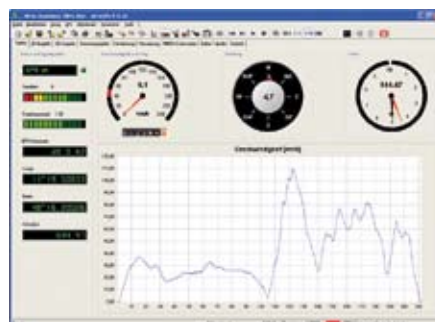
## xProGPS-LS Low-Speed-System

As an economic alternative to our **xProGPS** we can recommend the **xProGPS-LS**, a very attractively priced GPS Receiver, that is suitable for long run measurements such as durability tests or fuel consumption analyses under customer conditions. The GPS data is output with a data rate of up to 4 Hz in standard NMEA format via a serial interface. **xProGPS-LS** is a „Ready-to-go“ solution offering extremely comfortable operation.

## xProGPS with Setup-Software

A highly efficient Setup-Software is available for **xProGPS**. This can run under Microsoft Windows and supports all present versions of the operating system. The Setup-Software allows the **xProGPS**'s many parameters to be set and downloaded into the equipment:

- Select measurement values to be output by **xProGPS**



- Scale the voltage output of the Analogue channels
- Filter functions (Kalman Filter, Moving Average filter, etc.)
- Set scaling factor for distance pulse
- Activate Trigger function from **xProGPS**
- Set up CAN-Bus
- Visualise GPS data

## Record and analyse data

Moreover, as an option, we offer a complete data logging and analysis software. It provides many different possibilities for presentation of various and the most demanding applications:

- numerical and graphical presentation of the most important GPS values
- Data logging with various graphics
- 3D presentations
- 2D course diagram with classification function
- Classification according to DIN 45667
- Measurement tables and statistical evaluations
- Replay Function for simulation of test drives





### Performance test analysis

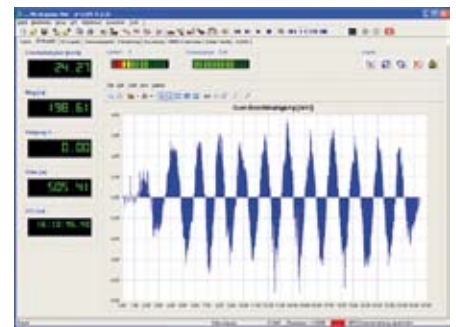
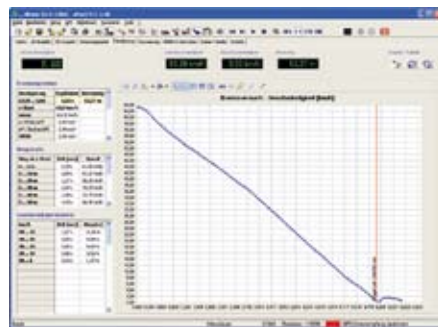
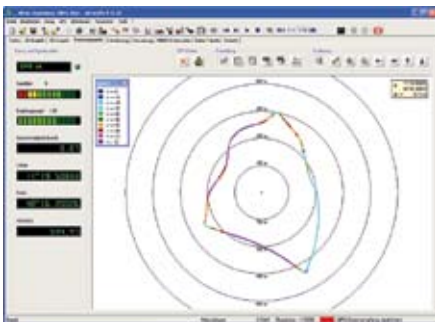
Performance tests can be examined in even greater detail: **xProGPS's** optional performance test module contains special data logging and analysis functions for performance test analysis with various tables and graphic presentations for the operational modes:

- Acceleration from a standing start
- Flexibility
- Coast down with calculation of coast down co-efficients
- Braking measurements
- Tacho deviation

### Graphic presentations

Results can be presented in highly informative ways: The xProGPS analysis module offers graphical presentations such as the following:

- Acceleration over time
- Acceleration over speed
- Lateral acceleration over time
- 3D-height diagram
- 3D-speed profile
- Classification diagrams
- and far more



### Suchy Data Systems – Experts in measurement technology

When considering highly technical solutions for technical hard and software measurement systems, we are your reliable partner. We have specialised on highly individual concepts in this area for over 20 years. Alongside innovation, creativity, technical measurement precision and flexibility we also place emphasis on the value of fairness and willingness to enter into dialogue. Many renowned companies have trusted us over many years and have profited from our excellent Hard and Software products: for maximum efficiency, superior quality and simple utilisation

**Suchy Data Systems – first class measurement technology – against which you can measure us at any time.**



## — **Suchy Data Systems** —



### **Do you want to know more?**

We would be pleased to provide more detailed information, technical facts and a complete consultancy support. Please call us for an individual solution.

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