

# $\pm 2$ cm



## ascos PED

Precise real-time service for dual frequency receivers with a measurement accuracy of  $\pm 2$  cm.



## The precise real-time service.

**ascos** provides correction data everywhere in Germany for real-time positioning with GPS and GLONASS. Location coordinates can be determined with high accuracy using **ascos** PED correction data on geodetic dual frequency receivers – made by any major manufacturer in the market!

Coordinate determination is easy and reliable, and does not require any additional components.

**ascos** PED, the precise real-time correction service, enables determination of coordinates with tolerances of only 2 cm in location and 4 cm in height. This is achieved with geodetic dual frequency receivers.

To complement its own network of reference stations, **ascos** has entered into a Public Private Partnership (PPP) with the Working Committee of the Surveying Authorities of the German States (AdV). This gives us access to more than 300 reference stations across Germany. The reference network is the basis for modelling and correcting significant satellite signal errors. Most signal errors are caused by imprecision of satellite orbits and clocks, or by delays of the navigation signals during their passage through the ionosphere and troposphere.

Users connect to **ascos** via GSM or GPRS and transmit their approximate location in standard NMEA format to the **ascos** computing centre. In return, **ascos** computes correction models based on reference station data, and makes them available to users. Users will receive correction data tailored to their individual position. Correction data is transmitted to users via GSM at intervals of one second in standard RTCM 2.3 data format. The user's satellite receiver uses **ascos** correction data to rectify its original, approximate GNSS coordinates.

Optionally, virtual reference stations (VRS) are generated, or area correction parameters (FKP) are calculated. Using either correction model, systematic errors can be removed completely. The

process of computing virtual reference stations (VRS) is performed individually for every user.

In addition to GNSS correction data, **ascos** provides expert support regarding all positioning applications. A team of experts develops customised services – made for users by users. Typical applications for high precision real-time data include engineering tasks, cadastre, registration and documentation of utility networks for electricity, gas, water, district heating and telecommunications, or preparatory and final surveying in road and railway constructions.

We will be pleased to answer your request! – For free calls from Germany please dial our service number +49 (0) 800 11 27 267.

Your **ascos** team

Overview of ascos services		
		Measurement accuracy
PED	Dual frequency receivers	±2 cm
ED	Single frequency receivers	±30 to ±50 cm
NET	Broadcast service via the Internet	±1 m
net4free	Free broadcast service	>1 m
ViPP	Virtual RINEX via the Internet	<1 cm
Trans	Real-time coordinate transformation	

### ascos – satellite positioning services

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certified according ISO 9001:2000

