

GPS GYRO SYSTEM

Accurate to the centimeter

Genesys (Germany) has released the GPS/Inertial platform Adma 3.0 with additional functions: with the Delta function for ADAS, relative distances can be measured.

THE GPS-AIDED GYRO SYSTEM ADMA WAS DEVELOPED for measurements of vehicle dynamics and driver assistance parameters in the automotive sector. The Automotive Dynamic Motion Analyzer, Adma in short, permits a high-precision dynamic measurement of all states of motion such as acceleration, velocity, position, rotational speed, position angle, and slip angle of the vehicle.

With Adma 3.0, a number of additional functions are available. One of the added functions is that the system allows an output rate of 1000 Hz with unlimited data records and a data latency of less than 1 ms. Besides CAN interfaces, the device includes Ethernet interfaces for data output, configuration, updating, and driving robot.

In practice, such high data rates in real time prove valuable in developing driver assistance systems. For example, at 1000 Hz the longitudinal position of a vehicle moving at 100 km/h can spatially be resolved to less than 3 cm.



Adma with an output rate of 1000 Hz (Photo: Genesys)



Adma with an output rate of 1000 Hz (Photo: Genesys)

Another option is the Delta function, which even enables centimeter-accurate measurement of distances, relative speed or relative angles between several vehicles in real-time just by interfacing two Admas via Wifi. The set-up for testing range based sensors (e.g. radar or lidar) and ADAS systems (e.g. ACC, FCW, and AEB) becomes more reliable.

The general settings are configured via a web browser. The new web interface offers additional functions and in consequence replaces the previous ADMA System Software. Besides vehicle dynamics testing, the ADMA can be the choice for evaluating driver assistance systems, e.g. ACC, FCW, AEB and LDW.