

News Release

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Extended Ephemeris now for SiRFstarIII Modules

A fast way to a first position – Vincotech's service especially for telematics applications

Munich, Germany – January 13, 2009 - Vincotech, a leading supplier of GPS receiver and telematics hardware solutions, can offer use of “Extended Ephemeris” data for its portfolio of SiRFstarIII modules (namely A1084 and A1035-H). This was enabled due to a close cooperation with SiRF, now the GPS entity of CSR. This way GPS modules and GPS antenna modules can calculate a first position after long breaks even under bad conditions much faster than before.

Today most GPS applications ask for a short time to first fix (TTFF) after the GPS receiver was switched on. The structural conditions of the GPS system require a new download of the orbital data (Ephemeris) of the satellites in case the receiver was switched off for more than 4 hours and is now being switched on again. The time needed to do so is between 18 and 36 s under good conditions. Therefore the calculation of a first position takes typically 27 or 28 seconds. The now available Ephemeris data have again a validity of 2 to 4 hours only. Therefore one will see the same problem with the next longer off/on cycle again. To overcome a new load of the Ephemeris data everytime such a cycle has passed “Extended Ephemeris“ models have been introduced. In principal these models include an extrapolation of the currently valid Ephemeris data based on mathematical methods taking the ellipsoid orbits of the satellites and gravitational effects into account. The validity is extended to several days, the calculation itself is done on separate servers.

With the support of SiRF (CSR) Vincotech can now offer these “Extended Ephemeris“ data for its current SiRFstarIII based GPS modules A1084-A/B (GPS receiver module) and A1035-H (GPS antenna module). Vincotech provides these data on its server for its customers. The customer may access these data once a day and use them for his applications. A typical example are telematics units – devices mainly based on GSM/GPRS and GPS. They are often used in applications such as fleet management or stolen vehicle recovery. Vincotech's customer (in this case a service provider) transmits the „Extended

Ephemeris“ data then to the units in the field. There a few commands are enough to feed the data into the receiver and store them. If sent to a low power mode, where only the RTC keeps running and SRAM is maintained, and powered on again afterwards maybe the real Ephemeris data are invalid (e.g. after a switch off over night). But the “Extended Ephemeris“ data can still be used. No new loading is necessary and a first position can be calculated within a few seconds (instead of nearly half a minute). The goal of a short TTFF is achieved.

There is an additional positive effect. As long as Ephemeris data are available – no matter if real or “artificial“ ones – the GPS receiver can work with lower signal strength. Therefore a position can be calculated in positions even, where it wouldn't be possible without Ephemeris data. This is important for example for units inside a vehicle or generally covered installations. Naturally Vincotech enables the use of “Extended Ephemeris“ data on its own telematics box A1074.

Vincotech is a trademark.

ABOUT VINCOTECH

Vincotech develops and manufactures subsystems and electronic components and offers manufacturing services geared to help customers to master complex challenges in electronics integration. Vincotech's extensive portfolio encompasses standard and tailored solutions, engineering services, and technical support for customers worldwide. These products and services contribute to sustainable, environmentally sound solutions that help modern society embrace mega-trends and explore new avenues. With approximately 600 employees worldwide, backed by vast experience and a long history in electronics integration, Vincotech leverages these assets to help customers achieve maximum market success. To learn more about Vincotech, please visit www.vincotech.com.