NL5350 NaviLink™ 5.0 single-chip GPS solution

Key features

- Single chip using TI's DRP™ technology and 90-nm manufacturing process
- The smallest GPS solution with a board area around 25 mm^2
- Lowest total bill of materials for a complete GPS system with only 11 external passives required
- Low power with integrated power management
- High GPS performance with weaker satellite signals, exceeding 3GPP and 3GPP2 requirements
- Optimized to interface with TI's 3G chipsets and OMAP™ processors to deliver a complete solution for handset OEMs

PRODUCT BULLETIN

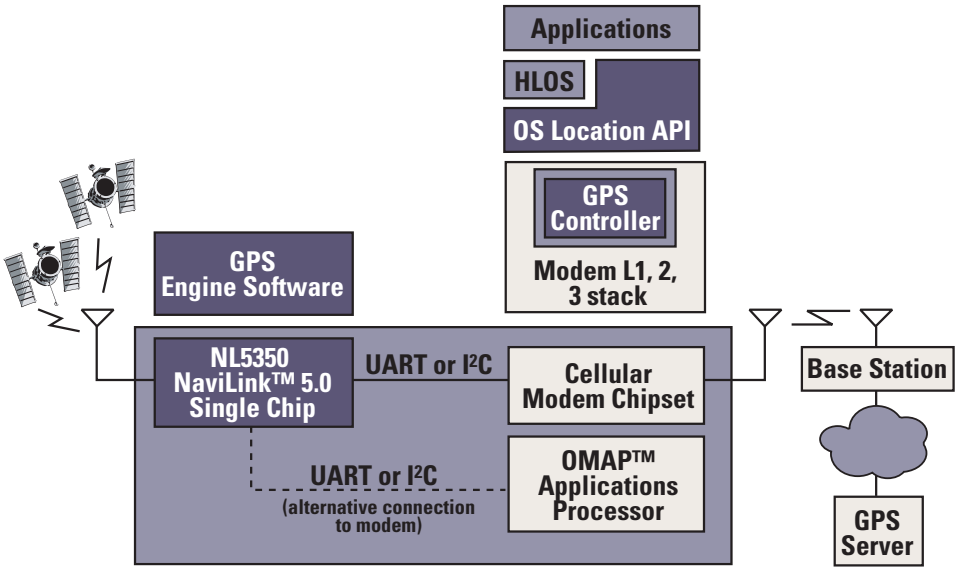
Overview

Consumers are becoming accustomed to using global positioning system (GPS) services on handheld devices and are demanding similar functionality on their mobile phone so it is with them at all times. Texas Instruments' (TI's) NL5350 NaviLink™ 5.0 single-chip solution for GPS and assisted GPS (A-GPS) applications is optimized for mobile phones to deliver applications such as mobile navigation, 3D maps, location-based services and safety services.

The NaviLink 5.0 GPS single-chip solution is manufactured in 90-nm process technology and uses TI's DRP™ single-chip technology. Through DRP technology, TI is able to provide the smallest size, lowest cost, low power, and high performance discrete GPS solution to mobile phone manufacturers.

- **Smallest Size:** The NL5350 NaviLink 5.0 solution integrates a complete GPS system into one chip significantly reducing the board layout area for a discrete GPS engine. The single-chip enables a board area for the complete system of around 25 mm^2.
- **Lowest Cost:** As a single chip the NL5350 only requires 11 external passives, a significant reduction over existing solutions which require up to 30 external passives. This level of integration delivers a total bill of materials that is almost 50 percent less than competition today.
- **Low Power:** The NL5350 NaviLink 5.0 solution has power management integrated on-chip, which simplifies design and further reduces the bill of materials. The single chip also allows direct connect to battery for easy incorporation into mobile phone designs.
- **High Performance:** The NL5350 NaviLink 5.0 solution enables a rapid time to first fix (TTFF) from weak satellite signals exceeding the GPS requirements for 3GPP and 3GPP2 operation.

NaviLink 5.0 Diagram



The NL5350 NaviLink 5.0 single-chip solution is expected to sample in 2Q 2007. Additionally, TI is collaborating with Murata to deliver a small module to handset OEMs to speed time to market of NaviLink solution-based GPS mobile phones.

www.ti.com/navilink_5

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