Global positioning system (GPS) applications are increasing in popularity in mobile phones worldwide for mobile navigation, mapping and safety services. Texas Instruments’ (TI’s) GPS5300 NaviLink™ 4.0 single-chip solution for assisted global positioning system (A-GPS) applications is optimized for 3G mobile phones.

The NaviLink single-chip solution is the industry’s first A-GPS solution manufactured in 90nm process technology and extends TI’s leadership in single-chip integrated solutions using TI’s DRP™ technology. Through DRP technology, TI is able to provide the smallest size, lowest cost, low power and high performance discrete A-GPS solution to mobile phone manufacturers.

- **Smallest size**: The GPS5300 NaviLink 4.0 solution integrates a complete A-GPS system into one chip significantly reducing the board layout area for a discrete A-GPS engine. The single-chip enables a board area for the complete system of less than 50 mm².

- **Lowest cost**: As a single chip the GPS5300 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 GPS5300 NaviLink 4.0 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 GPS5300 NaviLink 4.0 solution enables a rapid time to first fix (TTFF) from weak satellite signals exceeding the A-GPS requirements for 3GPP and 3GPP2 operation.

The GPS5300 NaviLink 4.0 single-chip solution is sampling now and is expected to be in production in 2Q 2006. Additionally, TI is collaborating with Murata to deliver a small module to handset OEMs to speed time to market of NaviLink-based A-GPS mobile phones.