A winning combination.

Multi-sourced GNSS chipsets and Telit’s unmatched module manufacturing expertise.
GNSS encapsulates some spectacular technology that most of us take for granted. The increased functionality of locations-based devices means that we are entering an era in which easy access to information on the position of people and services will be something we take for granted.

Right now there are applications that cover: public transport; public works and civil engineering; immigration and border control; police; monitoring of prisoners; environmental management; medical applications and people with disabilities; sports; tourism; waste disposal, etc. However, it’s clear that we are going to witness an even wider range of location-based applications in the future—many of which will be tailored to meet the needs of specific market niches and individuals.

Opportunities for innovation abound and chipset technology is evolving to meet the market’s fast-changing requirements. Solutions should therefore employ GNSS chipsets that have leading-edge technology and at the same time solutions should be future proofed. It’s a tall order, but one that Telit is filling every day.

Partnership agreements

Our GNSS offerings are based on a winning combination of strategic partnership agreements with leading edge chipset companies and our global module manufacturing expertise. These agreements enable the best chipsets of the moment to be employed in our modules. This would not be possible if Telit was vertically integrated—if we owned and employed our own GNSS chipset technology.

However we do own the technology in which the chipset is packaged. Telit’s unrivalled manufacturing expertise allows chipsets to be embedded in the modems; normally they are placed on the printed circuit board. This technique is employed in a comprehensive portfolio of GNSS/GPS modules that are efficiently produced, at very competitive price points, and that have the same form factor.

Partnership agreements go much further than merely selecting whatever chipset has the best performance and lowest cost at a certain time. Having such a wide choice allows us to establish the options that will enable the solution to be tailored to match the use case. For example, being able to support a single constellation such as GLONASS or GPS and not simply expect OEMs to purchase a global bundle. Other options might include selecting the chipset having the highest sensitivity, or the lowest power consumption, or support for dead reckoning and geo-fencing.

Unified form factors

Telit is the first and, to date, only module manufacturer to offer its customers a "standard" form factor and family concept. All modules in a family have the same form factors and functionality—the same size, the same shape, the same connectors and the same software interface. This is a key Telit benefit since it means that GNSS OEMs can design and manufacture a "generic" board and incorporate or exchange modules in line with changes in the marketplace. This is the way that we future-proof our products, which was an important part of that earlier tall order.
Enabling optimum solutions

OEMs only need to design and manufacture one PCB: the platform that provides the requisite location-based service is the module; different chipsets do not need to be placed on the board. Therefore development efforts and time to market are reduced. In addition, different GNSS solutions can be marketed on the same footprint.

A comprehensive portfolio

As indicated earlier, the Jupiter SL871 is the smallest multi-constellation GNSS module in the Telit portfolio. It is designed for global compliance with the whole set of GNSS constellations, either those already in place (GPS, QZSS and GLONASS) or constellations that are under deployment (Galileo and Compass/Beidou). We can ensure compliance with these new constellations by selecting the best relevant chipset at the relevant time. Solutions based on this module are therefore future proof.

Jupiter SL869 V2 is a member of the SL869 family that is based on the low-power Mediatek MT3333 chipset. This module simultaneously tracks GPS + GLONASS or GPS + Beidou and it is Galileo ready. The combination of GPS and GLONASS provides an accurate location service, but there are cases where accuracy is not needed and price is particularly important. Therefore the portfolio includes the Jupiter JN3, which is a GPS-only module. It is pin-to-pin compatible to the SL869 family, so OEMs only need one design for the two alternatives and can migrate whenever needed to one or the other without any problems.

Jupiter SE868 V2 is a hybrid positioning system that combines GPS, GLONASS, and SBAS to provide a high performance position reporting and navigation solution. Like all our GNSS modules, it supports ephemeris file injection (A-GPS) as well as Satellite Based Augmentation System (SBAS) to increase position accuracy. SE868 V2 is pin-to-pin and protocol compatible with its single constellation counterpart Jupiter JF2.

The DE910-DUAL is recommended for CDMA/EV-DO applications that require or can benefit from accurate positioning information. This module is designed for applications such as mobile computing and video surveillance.

Jupiter SE880 is an ultra-compact GPS receiver module for applications in the commercial, industrial, and consumer segments, including wearable and handheld devices. It was conceived to shorten Time-to-Market and to make the chipset-versus-module decision an easy one to make.
Summary

Telit employs different GNSS chipsets, thereby ensuring that we always offer leading-edge solutions tailored to meet specific customer requirements. The chipsets are integrated in different module families that have the same footprint and electrical and logical interfaces but which employ different radio access technologies.

Telit’s Unified Form Factor brings significant benefits. For example: reuse of the customer’s board; easy integration with other cellular modules because the GPS commands are already integrated in Telit’s AT command interface; and easy migration to different GNSS technologies on the same board with some mount/no-mount options. This concept also allows solutions to be future-proofed; modules can be exchanged in line with changes in the marketplace. Check it out.

A winning combination.

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