Low-cost Feature-rich RTK Receiver

SkyTraq Technology, a Taiwanese GNSS positioning technology company, has introduced S2525F8-RTK, a low-cost, low-power, single-frequency RTK receiver for applications requiring centimetre-level accuracy positioning. The multi-constellation GNSS RTK receiver can use 12 GPS, eight SBAS and six BDS signals and one QZSS signal. In situations where RTK fix is not possible, a Float RTK mode can be used for decimetre-level accuracy positioning.

A moving-base mode is also supported for precise heading GPS compass application. Its 25mm x 25mm form factor, 3 gram weight and 250mW power consumption makes it ideal for any outdoor mobile applications requiring high-precision RTK positioning.

S2525F8-RTK supports both base station and rover modes. As a rover, it receives RTCM 3.0 or 3.1 data from a base station, or raw measurements from another S2525F8-RTK receiver serving as base station, and performs carrier phase RTK processing to achieve relative positioning with 1cm + 1ppm position accuracy within 10Km baseline, and decimetre-level accuracy for over 10km baseline can be achieved using Float RTK mode. Two S2525F8-RTK receivers can be used to form GPS compass that provides 0.17degree heading accuracy at 1 meter baseline; better accuracy and more reliable than conventional digital magnetometers that's affected by changes in the magnetic environment.

An NS-HP evaluation board in breakout board form is available for easy evaluation and integration into portable survey equipment, unmanned vehicle, machine control, and robotic guidance applications. The standard nmea-navsat-driver package of Robot Operating System (ROS) works directly with NS-HP, enabling easy accessible centimetre-level accuracy positioning for robotic applications.

S2525F8-RTK is now in production. Sample, datasheet, and reference designs are available.

https://www.gim-international.com/content/news/low-cost-feature-rich-rtk-receiver