Firmware GLIDE™

SUPERIOR PASS-TO-PASS PERFORMANCE IN APPLICATIONS WHERE RELATIVE POSITIONING IS CRITICAL

SUPERIOR PASS-TO-PASS PERFORMANCE

NovAtel's GLIDE technology offers superior pass-to-pass performance for applications, such as agricultural guidance, where relative positioning is critical. GLIDE significantly reduces the variation in position error differences to less than 1 cm RMS[1,2] from one epoch to the next. GLIDE works in autonomous, DGNSS and SBAS positioning modes, and is optimized for use in open sky conditions. GLIDE technology also utilizes GLONASS[3] and BeiDou[3] satellites as well as GPS, when in SBAS positioning mode, providing better solution availability.

SINGLE-FREQUENCY GLIDE

Our GLIDE technology offers users of autonomous L1 code positioning superior stability previously available only for dual-frequency carrier phase solutions. GLIDE combines L1 code and phase data to produce a smooth positioning solution well suited for applications such as agricultural guidance.

DUAL-FREQUENCY GLIDE

Dual-frequency GLIDE improves the absolute accuracy of the GLIDE position and creates a robust solution resistant to the effects of high ionospheric activity. Dual-frequency GLIDE also helps improve the pass-to-pass position performance.

The graphs[1] on the following page show the dramatic improvement in short term position stability for a single point solution using dual-frequency GLIDE over the standard 15 minute time frame for pass-to-pass testing.

BENEFITS

+ Position smoothing to provide superior accurate pass-to-pass performance
+ Ideal for agricultural and machine guidance systems
+ 15 minute pass-to-pass accuracies, of better than 20 cm, in areas with no SBAS or other wide area correction services[1,2]

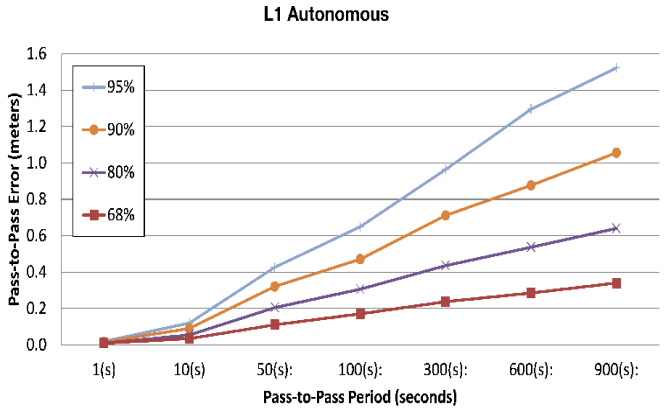
FEATURES

+ Works in autonomous, DGNSS and SBAS positioning modes
+ Auto-detection mode to automatically switch between dynamic and static modes
+ Runs with GPS-only or GPS+GLONASS or GPS+GLONASS+BeiDou with or without SBAS[3]
+ Works with single and dual-frequency solutions

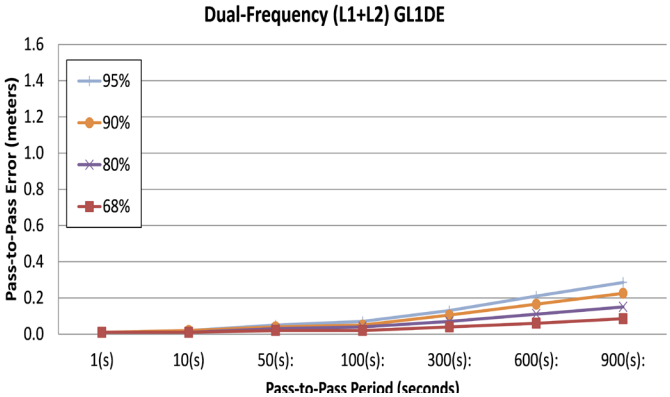
If you require more information about Firmware, visit www.novatel.com/products/firmware-options

1. Typical values. Performance specifications subject to GPS system characteristics, US DOD operational degradation, ionospheric and tropospheric conditions, satellite geometry, baseline length, multipath effects and the presence of intentional or unintentional interference sources. GLIDE is optimized for use in open sky conditions and accuracy can vary dependent on changes in satellite visibility.
2. Accuracy specified in RMS. Using dual frequency GLIDE in open sky conditions.
3. When GLONASS and BeiDou option is supported by the receiver firmware model and hardware.

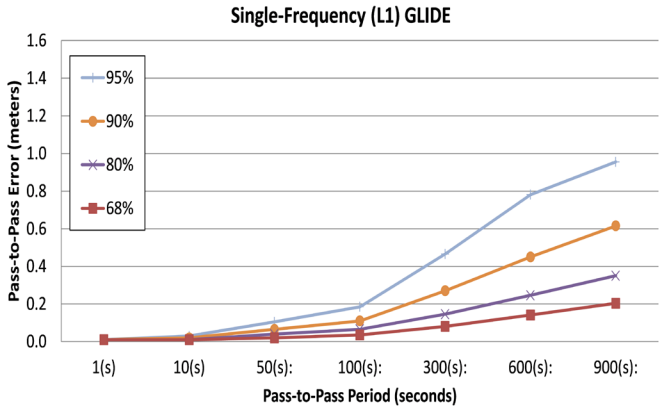
GLIDE



The graph above shows pass-to-pass accuracy with probability when using an L1-only receiver in autonomous mode without GLIDE.



Using the dual-frequency GLIDE filter further improves upon single-frequency GLIDE pass-to-pass accuracy by better reducing ionospheric errors without the need of SBAS corrections.



Using the single-frequency GLIDE filter significantly improves pass-to-pass accuracy without using SBAS corrections. Using SBAS corrections with GLIDE will further improve absolute and pass-to-pass accuracy.

For the most recent details of this product, visit www.novatel.com/products/firmware-options/glide-smooth-positioning-gnss-firmware

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D13884 November 2015 Printed in Canada.