

Certus MEMS GNSS/INS Car Dead Reckoning Test



REVISION HISTORY

| VERSION | DATE | CHANGES |
|---------|---------------|-----------------|
| 1.0 | December 2023 | Initial Release |

Table 1. Revision history

Certus is a tactical grade MEMS based GNSS/INS with dual antenna heading and 10mm RTK.

When aided with an external velocity source, Certus can achieve long term dead reckoning performance better than 1% of distance travelled.

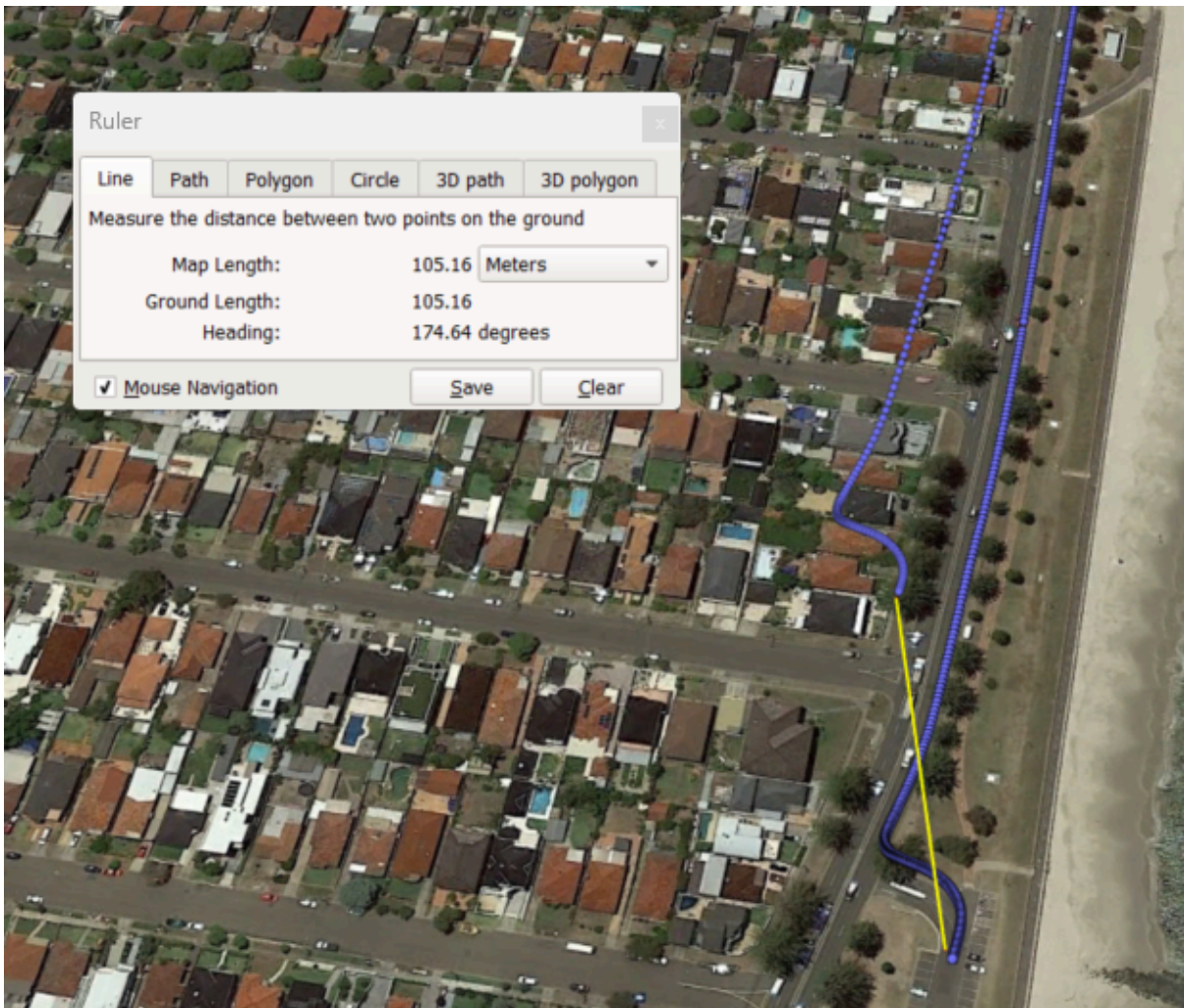
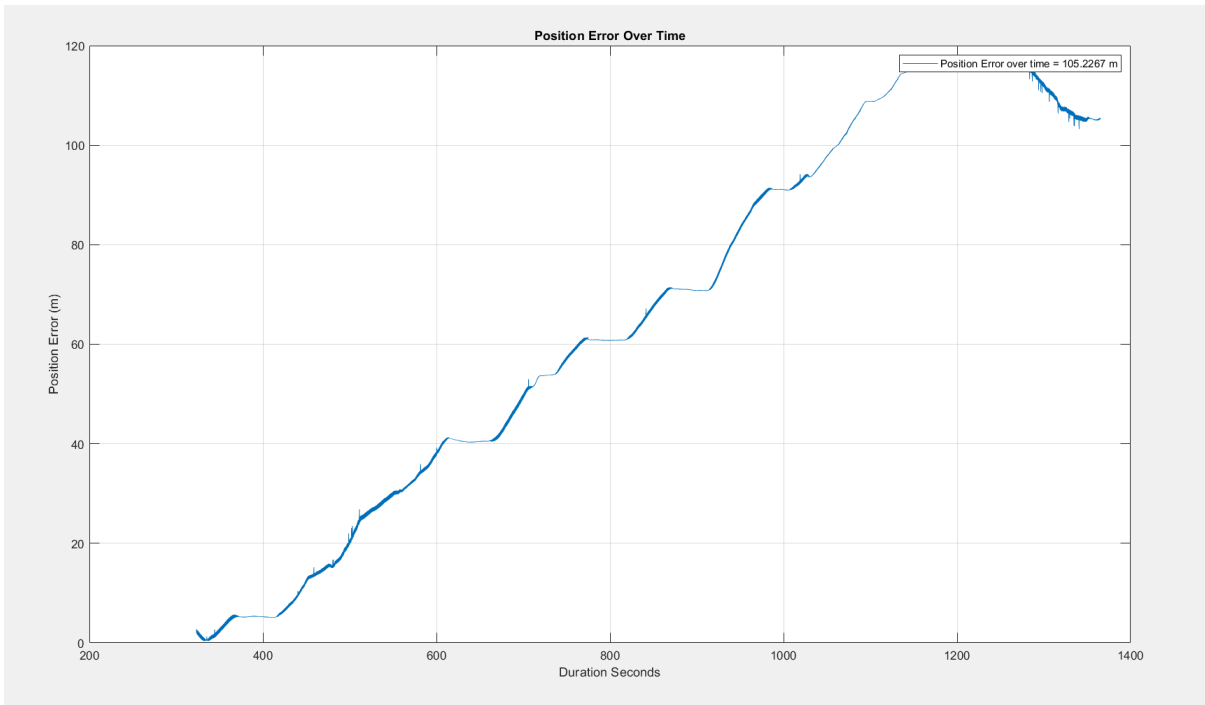
Certus was installed in a passenger car and fitted with a high accuracy wheel encoder.



The test was completed along primary urban roads over a distance of 10.5km and position data between the GNSS reference and the INS compared at the end of the journey.



At the end of the test, Certus' dead reckoning position was compared with the GNSS reference position and the error was found to be just 105.2 metres or 1.0% of distance travelled. The position error over time and final approach can be seen below comparing the Certus position output with the GNSS reference position.



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