

# MA-10P MADODCA/PPP Performance

## Test Report

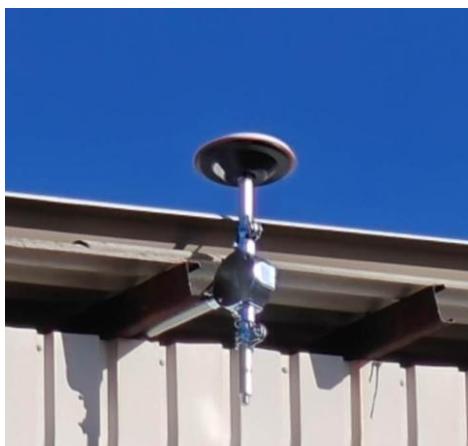
The purpose of this test is to verify the PPP positioning performance of the MA-10P<sup>[1]</sup>. The verification method involves comparing the results with known points, as well as comparing them with the results of the MALIB<sup>[2]</sup> tests.

The results of the test shall be based on the coordinates from MALIB.

Test scenario:

OSAKA, JAPAN

Open sky environment



Test:

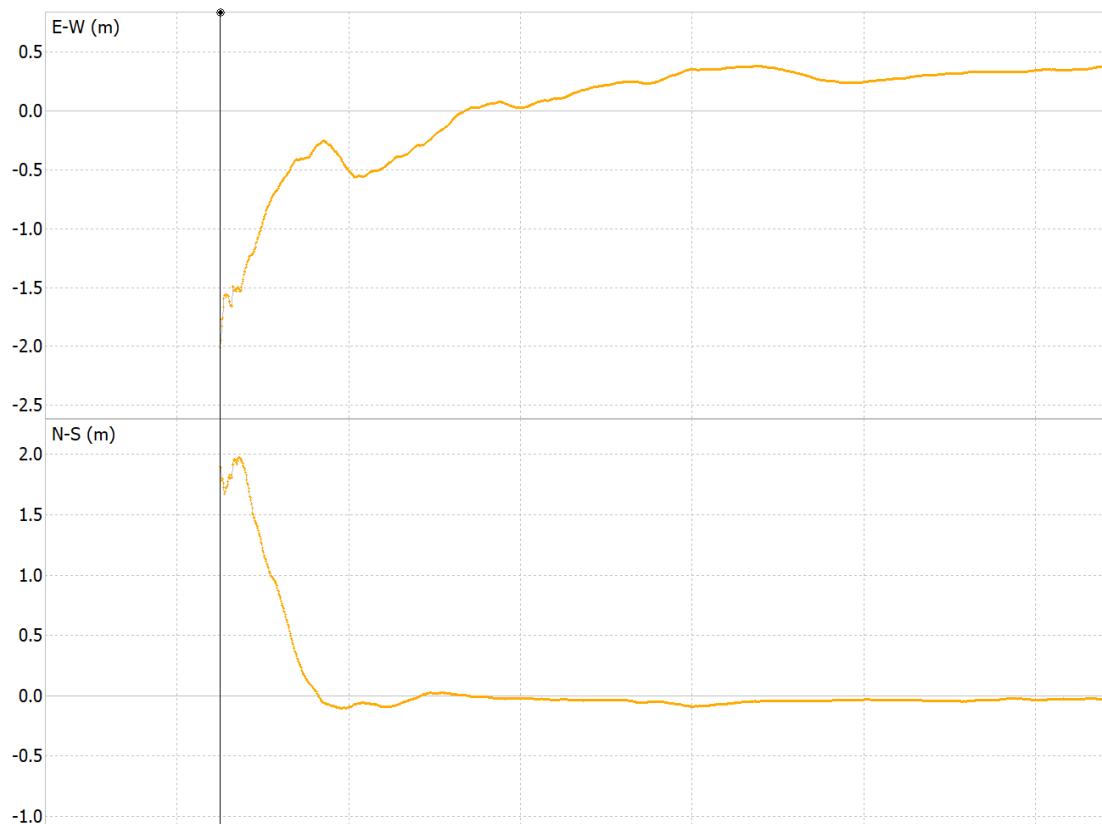
Use a RF splitter to split the signal into two parts. One MA-10P device outputs NMEA data, while the other outputs RTCM3 data for processing by MALIB.

MALIB is running on X86\_64 under WSL Ubuntu, and the system has sufficient computational power.

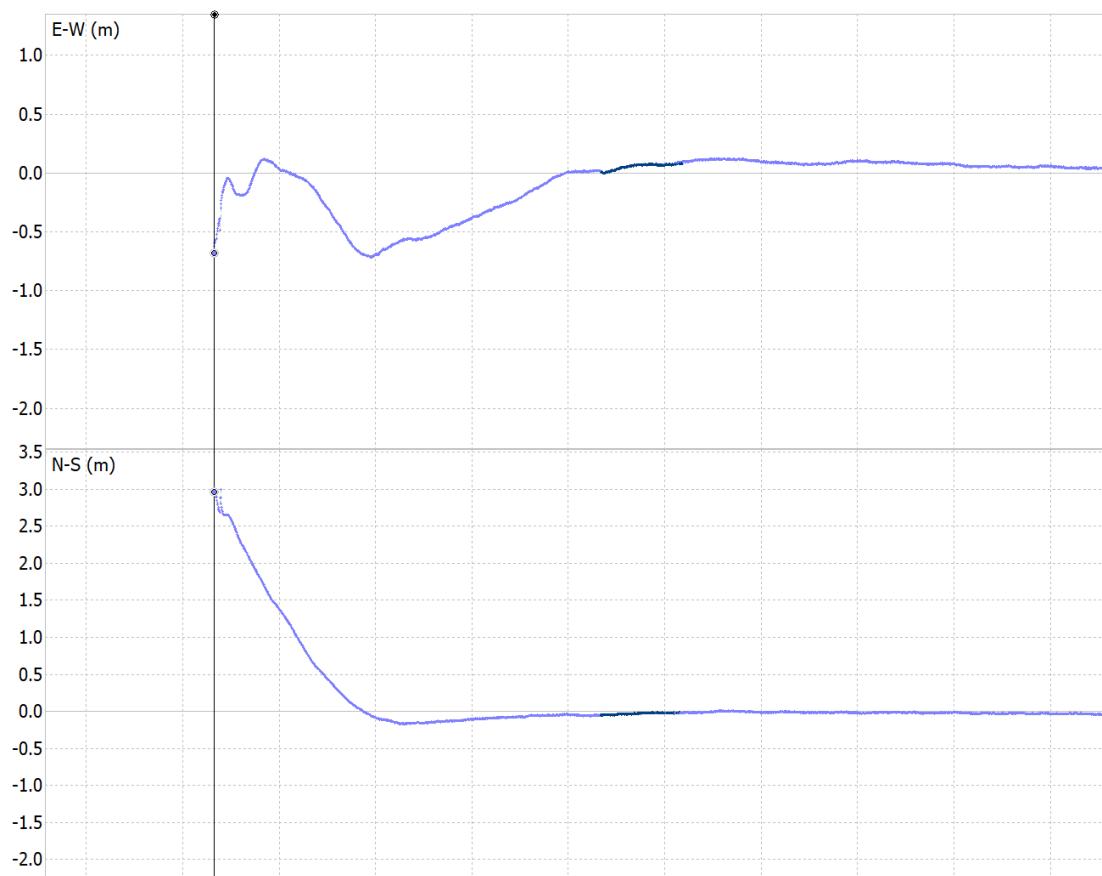
The correction data for MADODCA/PPP comes from QZS-6C.

Configuration: Elev mask 15°.

### 1. Initial time for PPP

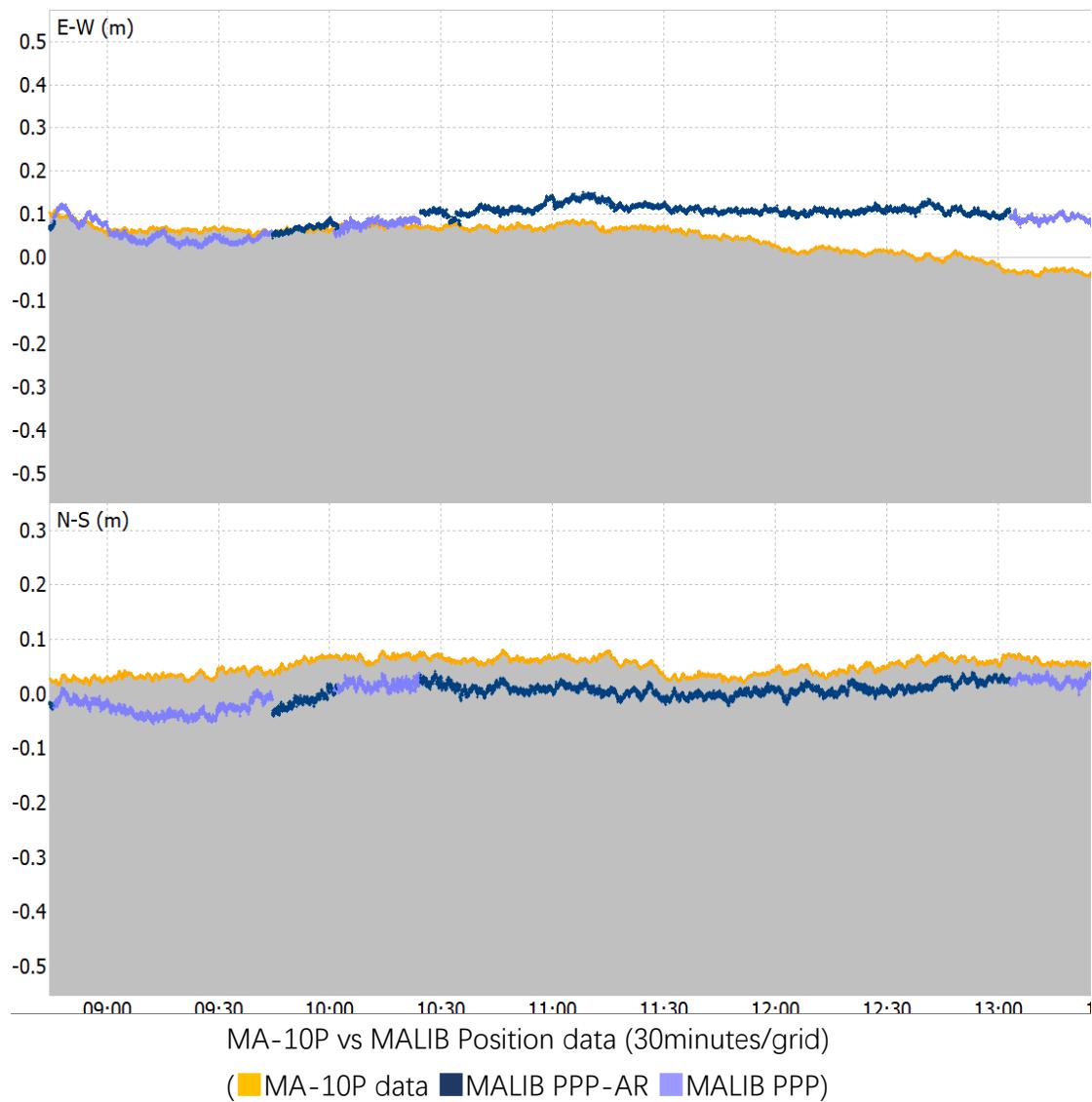


MA-10P coverage time (5minutes/grid)

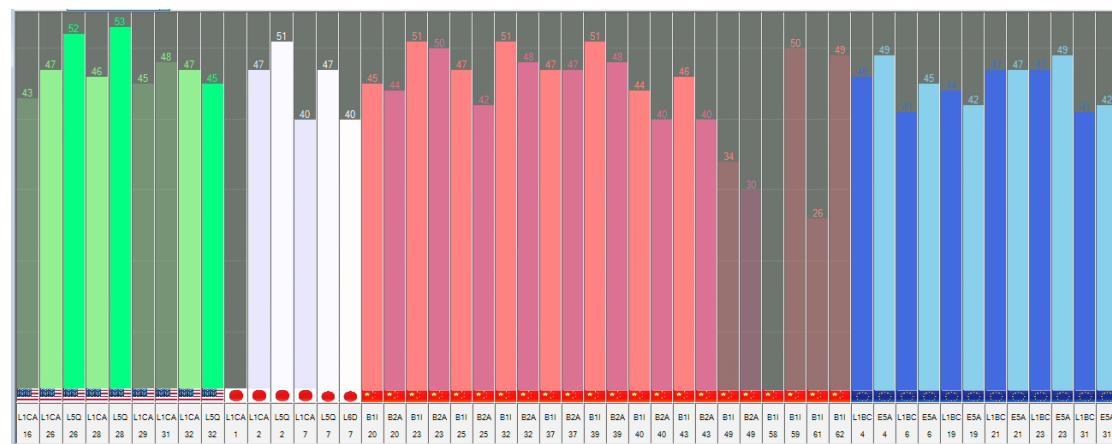


MALIB coverage time (5minutes/grid)

## 2. Accuracy



### 3. Satellites view



The highlighted bar chart represents the satellites that participated in the PPP.

#### 4. Conclusion

Horizontal accuracy (m)	
0.10	CEP 50%
0.14	RMS 68%
0.33	95%

The MA-10P can complete PPP initialization within 15 minutes in opensky environment.

The MA-10P can achieve MADDOCA/PPP positioning results with an accuracy of 0.1 meters in opensky environment.

The MA-10P currently does not support PPP-AR.

#### Reference:

[1] [https://docs.datagnss.com/gnss/rtk\\_receiver/MA-10P/](https://docs.datagnss.com/gnss/rtk_receiver/MA-10P/)

[2] <https://github.com/JAXA-SNU/MALIB>