

MBC 'Broadcast RTK' Service

March 2018

1. Case Study

- The use of expensive L1/L2 GNSS equipment is increasing in machine control areas such as precision agriculture and smart construction.
- On the other hand, there is an inconvenience that the current method is to install the expensive L1/L2 mobile station in the field every time. Also, VRS(Virtual Reference Station) method has disadvantages of a burden of mobile communication fee and frequent VRS connection failure and access limitation.



- Smart Construction -

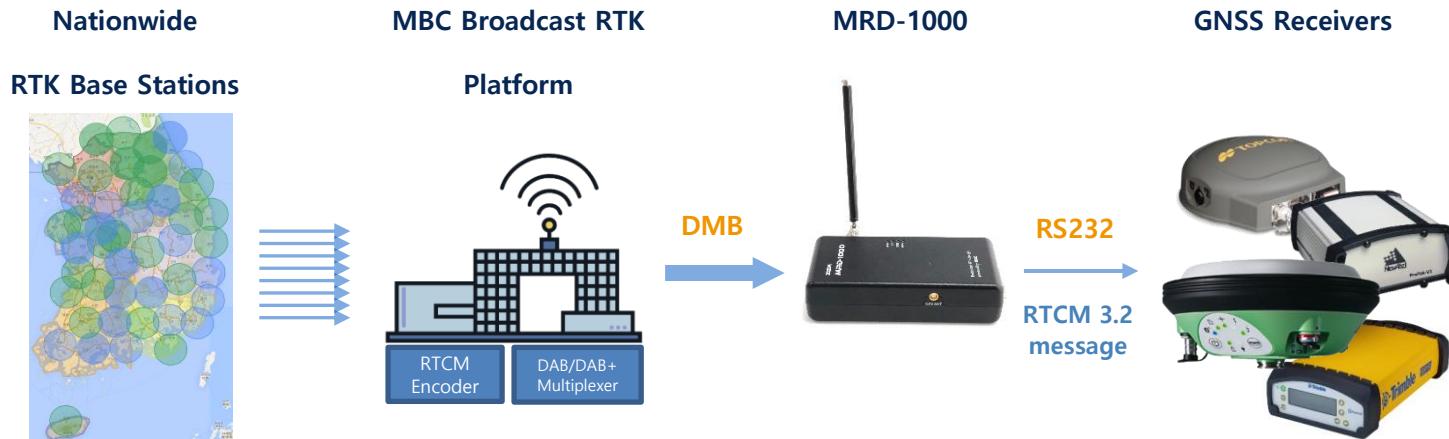


- Precision autonomous agriculture -

- Broadcast RTK service can solve the above problems at once. Demand for dongle-type receiver is expected to increase explosively if a broadcast RTK service is available by attaching a dongle-type receiver to the existing L1/L2 GNSS equipment.

2. Service & Receiver

- The information of the L1/L2 base station deployed directly by Korea National Geographical Information Institute and MBC is transmitted through DMB network for each region.
- The broadcast RTK dongle-type receiver receives the base station information of the corresponding area and inputs it to the existing L1/L2 GNSS equipment over the general interface(RS232).
 - Guaranteed that it is compatible with all of existing L1/L2 GNSS equipments without any modifications.



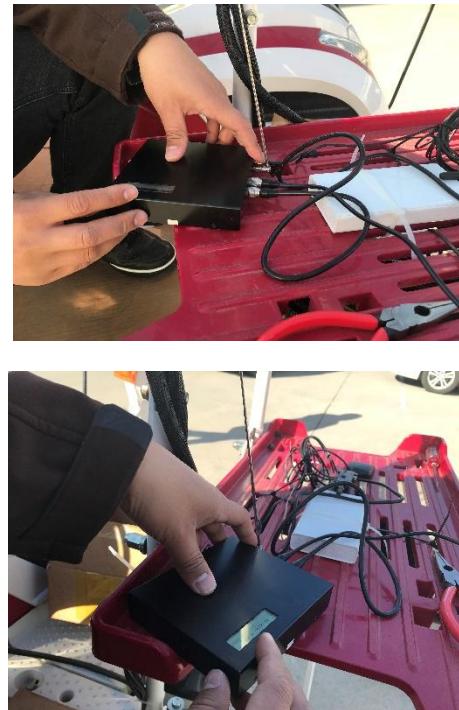
3. Proof of Concept

- Broadcast RTK dongle-type receiver was applied to demonstration of "GNSS Auto Steering System", and technical and merchandise validation was completed with "Topcon"
- Demonstrated at Korea Rural Development Administration "Smart Farm" center
- Sokkia Korea(one of Topcon group) started to purchase MDR1000 from April, 2018

'Topcon' Auto Steering System



Demo Photo



4. Demo equipments



GNSS Antenna



Broadcast RTK dongle



GNSS and Auto
Steering equipments



GNSS Monitor(RTK correction
signal connection)

Demo Video <https://youtu.be/8DnNFVYZAzY>

5. Demo Scenario & Video

Demo Video <https://youtu.be/8DnNFVYZAzY>



Demo Scenario

The driver goes directly to the destination, puts the reverse gear, switches to auto steering mode (from the 33 second part of the video), and automatically goes back to the previous route.

Thank you!

JD, Park

+82 1566 6795

jdpark@synerex.kr
www.synerex.kr