

OmniSTAR - Global Real Time Positioning for GIS



OmniSTAR has been delivering high quality satellite solutions into the Asia Pacific region since 1994 for land based GIS applications. OmniSTAR is the world leader in providing high accuracy positioning data via satellite.

Now with three options, OmniSTAR VBS, XP, and (HP) High Performance OmniSTAR solutions have been specifically developed to satisfy the requirement for high accuracy positioning systems and services for GIS applications.

OmniSTAR services allow data collection and 'set out' activities to be performed anywhere with minimal set up and without the need for large capital outlay.

OmniSTAR Services

OmniSTAR transmits GPS correction data world wide from a global network of over 90 GPS reference stations. Each station transmits GPS measurements and correction data to two Network Control Centres (NCC). All reference stations have redundant data connections to the network control centres. The reference data is gathered at a Network Control Centre (NCC) where it is checked for integrity, reliability and quality before being up-linked to a series of L-band geo-stationary satellites, which broadcast the data to users. Additional GPS 'clock' and 'precise orbit' augmentation data is transmitted for use with OmniSTAR's phase solutions.

OmniSTAR HP Service

OmniSTAR-HP is the latest GPS augmentation service in the OmniSTAR family of network GPS solutions. Using dual frequency phase measurements and corrections the HP solution provides a robust and reliable decimetre level GPS service anywhere within the coverage area. By using dual frequency GPS receivers the true ionosphere delay can be measured at the reference and user location, so eliminating this error. Using ionosphere free phase measurements with wide area network reference station correction information the HP solution is able to generate positioning results of unmatched accuracy and performance. OmniSTAR-HP accuracies have been demonstrated as better than 10cm 95% (2sigma).

OmniSTAR's VBS Service

OmniSTAR's Virtual Base Station (VBS) Service is a unique, worldwide high accuracy service capable of providing sub-metre performance throughout the coverage area. A high level of reliability is made possible by processing all of the data from the available reference stations and processing this information using a weighted, least squares solution. The corrections are adjusted for the user's specific position giving an optimal solution.

OmniSTAR XP Service

OmniSTAR-XP takes the proven HP solution and makes it available anywhere in the world irrespective of the user's proximity to a reference station. The solution combines OmniSTAR's HP dual frequency phase solution with clock and orbit corrections for each GPS satellite, so providing sub half metre position solutions anywhere in the world that an OmniSTAR L-band broadcast can be received.





OmniSTAR Hardware

OmniSTAR positioning solutions and services are compatible with a wide range of GPS equipment available from all the major equipment manufacturers. Equipment is generally low powered, portable, and self contained combining both GPS and OmniSTAR receivers and using a single antenna. OmniSTAR based GIS systems come complete with backpack, rechargeable battery, mains charger, combined GPS & DGPS antenna mount, cabling and user manual. Support for OmniSTAR's solution has been built into a wide range of data controllers and recorders commonly used in GIS applications, allowing the user to best select the solution that meets their requirements.

OmniSTAR compatible GIS / GPS equipment is available now from the following manufacturers:



GIS and GPS applications

- Accident reconstruction
- Agriculture & forestry condition surveys
- Boundary surveys
- Emergency management
- Irrigation surveys
- Landscape surveys
- Mapping utilities lines and assets
- Resource mapping
- Stake out for construction mapping
- Utility mapping

OmniSTAR Pty Ltd - Australia

18 Prowse Street
West Perth
Western Australia 6005
T: +61 8 9322 5295
F: +61 8 9322 4164
E: sales@omnistar.com.au

OmniSTAR Pty Ltd - Singapore

Loyang Offshore Supply Base
Loyang Crescent
Singapore 508 988
T: +65 6542 5001
F: +65 6542 2208
E: t.walker@omnistar.co.sg

OmniSTAR (NZ) Ltd - New Zealand

8 Opawa Road
Opawa, Christchurch
New Zealand
T: +64 3961 1130
F: +64 3961 1131
E: s.lloyd@omnistar.com.au