



Contact us for product details and pricing



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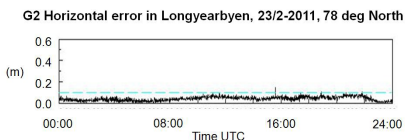
MARINESTAR™ ARCTIC SERVICES

HIGH PERFORMANCE POSITIONING IN HIGH LATITUDES

Fugro high performance satellite navigation augmentation services can be delivered beyond normal coverage limits.

GNSS SERVICES ARE GLOBAL

Global Navigation Satellites System services are indeed global and so are the Fugro G4, G2, XP2, and XP augmentation services as the test data from Longyearbyen in Svalbard at latitude 78° North demonstrates. This is true for both the American GPS constellation and the Russian GLONASS constellation of satellites.



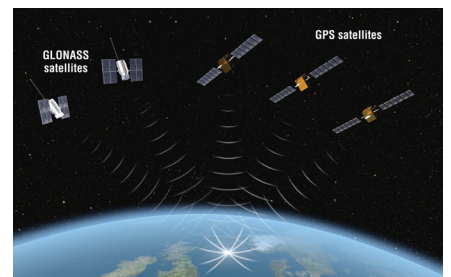
Data logging shows G2 horizontal position accuracy as better than 10cm at 78° N

CORRECTION DATA DELIVERY

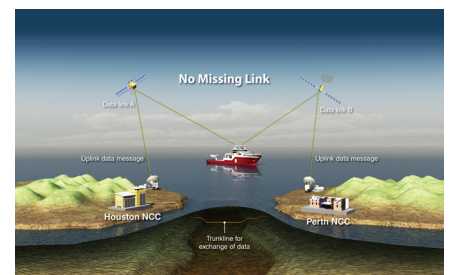
The problem with high latitude operations does not lay with correction data validity, but rather with delivery of this data.

The standard method of correction data delivery is by broadcast over the Fugro network of L- Band geostationary communication satellites.

Dual independent satellite broadcasts in all ocean regions ensure that this is an extremely reliable and robust system. But geostationary satellites, which are located above the equator, have a coverage footprint which is limited to around 70° North when using standard spotbeam antennas.



More is Better: the G2 service utilises both American GPS and Russian GLONASS satellites.



Dual satellite broadcast data links in all ocean regions.



70° PLUS DELIVERY SOLUTIONS

Two options for correction data delivery above 70° North exist: enhanced L-Band reception and alternative delivery channels.

ENHANCED L-BAND DELIVERY

Standard systems can be enhanced by use of a dedicated, special L-Band antenna - the AD493 model, which will allow reception to a lower satellite elevation giving correction data receipt up to around 75° North depending upon exact location. A further method to enhance performance is to use a 3610 or 3710 L-band receiver connected to the vessel's Inmarsat F77 terminal which, having a high gain dish antenna, will provide enhanced performance.

ALTERNATIVE DELIVERY CHANNELS

The Fugro NTRIP (Network Transport of RTCM over Internet Protocol) service is available as a backup method over data delivery for all users.

In areas of marginal broadcast coverage and beyond this can provide a method of extending correction services. NTRIP delivery can be via a vessels existing VSAT communications system where coverage exists.

Full polar coverage can be achieved by use of the NTRIP delivery in conjunction with the Iridium™ low orbit satellite communications system. The Iridium™ OpenPort system provides Internet access and can easily be interfaced with Fugro compatible hardware for full polar coverage.



Fugro L-Band broadcasts at 5° elevation.



L-Band Antenna AD493 Model.



Iridium™ "OpenPort" Above Deck Terminal.

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