

## Integrated CDGPS, SBAS and OMNISTAR Capabilities



CDGPS is accessible coast-to-coast, beyond the U.S. border, and into the Arctic.

Coverage area supported by CDGPS

Terraplus Inc., is pleased to announce the availability of a new Canada-wide DGPS positioning option and OmniSTAR support for its leading line of ground, airborne and stationary magnetometers. The new option, CDGPS, is a nation-wide DGPS service that provides unmatched accuracy and coverage for positioning applications across the country. CDGPS, recognized as a new Canadian standard for DGPS, was developed specifically for the Canadian market. Worldwide DPGS coverage is provided via OmniStar and SBAS.

### Surveying in Canada

The CDGPS DGPS service uses "wide-area" technology deriving corrections from real-time positioning information collected across the country. This data is transmitted to Ottawa where mathematical algorithms produce a single GPS\*C correction data stream which is uplinked to the MSAT satellites for broadcast across Canada.

CDGPS has many advantages over existing wide area correction systems. One example is the high Arctic where GPS coverage is poor. Our customers will benefit significantly as CDGPS delivers superior correction signal penetration with high accuracy and high-resolution differential GPS corrections.

And perhaps the best news is that CDGPS is a free service that can now be accessed easily via our magnetometers.

Magnetic surveys using CDGPS have better resolution (0.7 m) than standard SBAS positioning (1.2 m) and OmniSTAR (1.0 m). The new magnetometer option also supports 86 datums through CDGPS.

As an integrated technology available as an option with our magnetometers, CDGPS also brings other advantages. For instance, GPS data is available up to 20 times per second. This means that even the GSMP-35 Magnetometer (Potassium) running at 20 times per second will provide readings with each reading having a time, position and altitude stamp.

Position is selectable (either latitude /longitude or UTM) giving our customers, for the first time, UTM availability directly from the GPS receiver. Users also have the built-in ability to select the GPS datum; previously this was only available as an option.

For users working with airborne data, we are also now offering an aircraft-certified antenna with CDGPS support.

### **Benefits of CDGPS**

CDGPS provides a low-cost / high performance solution well-suited to the real-time data collection needs of Canadian users. It includes:

- nation-wide Canadian coverage
- superior performance in foliated conditions
- meter-level positioning accuracy (~1m) with mapping-grade GPS receivers
- spatial integrity with all Government maps and surveys
- 24 x 7 operations with built-in network redundancy
- open published broadcast protocol
- no service costs

The data signal is structured to perform well in difficult, or foliated conditions, so the service is available more consistently. The network, which includes redundancy at the data collection, transmission and processing layers, has a high degree of service reliability.

The corrections signal has been structured around an open broadcast protocol so that additional hardware and software developers can easily extend the value of the data.



## **Worldwide DGPS Coverage via OmniSTAR and SBAS**

For customers working globally, there are two advanced options that are available to assist in acquiring high resolution positioning information. These include OmniSTAR and SBAS.

### **OmniSTAR Support**

Terraplus is pleased to provide support through the OmniSTAR positioning technology across its leading line of Magnetometers. OmniSTAR provides a cost-based GPS enhancement data via satellite for worldwide coverage. 70 reference stations and 3 network control centers provide a highly reliable positioning service.

Terraplus currently supports the OmniSTAR VBS level of differential GPS service. VBS is a "sub-meter" level of service. A typical 24-hour sample of VBS will show a 2-sigma (95%) of significantly less than 1 meter horizontal position error and the 3-sigma (99%) horizontal error will be close to 1 meter.

Activation of OmniSTAR service is typically through a special phone line monitored by a technician. After receiving the model number and serial number of your receiver as well as payment information, the technician will activate your subscription, typically within 15 minutes or up to ½ hour for first time receiver use.

### **SBAS Support**

For users who require slightly less accuracy (1.2 m), and who also want to use a free service, SBAS is a proven option. SBAS comprises the US-based WAAS, European EGNOS and Japanese MSAS systems.

SBAS supports wide-area or regional augmentation through the use of a satellite-broadcast message. Such systems are commonly composed of multiple ground stations, which take measurements concerning the networks' accuracy, reliability, and availability, and one or more satellites, which broadcast the information to the receivers