

Hardware for Mobile Mapping

Mobile Computers

GBM Mobile V3.50 operates on mobile computers (PDAs) running Pocket PC 2003 (Windows Mobile 2003) and that supports the ARM instruction set required by MapX Mobile. The modern Intel XScale processors found in most of the upmarket PDA units are suitable. GBM Mobile V2.51 will operate on either Pocket PC 2002 or Pocket PC 2003.

If you are buying a new device, look for one with the newer Intel PXA255, PXA265 or later processor, as these are significantly faster with large MapInfo .tab files and images. Upgrade to Pocket PC 2003 is essential for customers using Bluetooth devices (see technical bulletin no 4).

The majority of our customers use iPAQ units (especially models 2970, 2210, 2750, 5550 and units in the 4xxx ranges). For further information go to www.HP.com and follow the link to handheld devices. From V3.50, GBM Mobile supports the high resolution and landscape format display found in newer devices such as the iPAQ 4700.

Customers operating consumer level PDAs in hostile environments sometimes choose to protect them in ruggedised cases. These are available from a range of suppliers including Otterbox (www.otterbox.com) and Micronics (www.micronicsgps.com)

A number of vendors, including TDS, Trimble, ike and Symbol build systems that are specially manufactured for operation in rugged conditions. We have successfully tested GBM Mobile with the Trimble Recon (Pocket PC 2003 version) and with ike hardware (www.survey-lab.com). See technical bulletin no 6 for information on the special features of ike hardware.

GBM Mobile will only operate on systems running Microsoft Pocket PC. It will not operate on Windows CE, CE .NET or Palm based mobile devices.

GPS Receivers

GBM Mobile will work with any GPS unit that outputs NMEA standard data. Almost all commercial units conform to this specification.

Our customers use GPS hardware that is mounted on CF cards inserted into the PDA, or packaged as external units that are connected to the PDA by serial cable or Bluetooth Wireless.

Selecting the right GPS hardware is largely a balancing act between accuracy and price. Brand names commonly quoted by our customers include Trimble, Garmin, Haicom, Emtac and Micronics among others. There are many other reputable manufacturers and new models are continuously coming to market.

Most users make do with low priced autonomous GPS receivers. Differentially corrected receivers are required for recording high accuracy location data. There is a host of options to choose from, including differential correction signals available on a free-to-air or subscription basis, as well as post-processing services. The various differential correction technologies boast accuracies ranging from a few metres to sub-millimetre.

Contact a local GPS reseller for information on differential correction options and pricing models that operate in your area. Useful information on GPS technologies and products is available on the following sites:

www.ja-gps.com.au/gis_gbmmobile_accs.html

www.survey-lab.com

www.trimble.com

www.micronicsgps.com

www.haicom.com.tw

www.emtac.com

www.nmea.org

GPS retail outlet (Australia)

Manufacturer of composite hardware

GPS hardware manufacturer

GPS hardware manufacturer

GPS hardware manufacturer

GPS hardware manufacturer

Standards Organisation

Call Exa-Min for assistance in putting together the right hardware/software combination.