

GXB1000

GXB2000

By adopting a newly developed DSP (the Sony CXD2931R) and high-density mounting technology, Sony has succeeded in developing the industry's smallest mass produced GPS receiver.

In particular, the GXB2000 incorporates all the functionality except the antenna required for a GPS receiver on a mere 36.5×25.0 mm printed circuit board.

This receiver is not only for use in car navigation systems, but rather its significance lies in the point that it vastly expands the world of GPS applications to a wide range of portable equipment.

- Industry's smallest GPS receiver
- Parallel 16-channel GPS receiver that can receive signal from up to 16 GPS satellites at the same time.
- Supports both all-in-view and two-satellite positioning.
- Support for differential GPS
- Thin-form ultralight pack-type package
- Measures for reducing EMI (electromagnetic interference) provided

■ Industry's Smallest GPS Receiver

By adopting a newly developed GPS processor (the Sony CXD2931R) and Sony's unique high-level high-density mounting technology, Sony has succeeded in developing the industry's smallest mass produced GPS receiver. The GXB2000 incorporates all the functionality except the antenna required for a GPS receiver on a 36.5×25.0 mm printed circuit board. This allows a GPS receiver to be incorporated easily into portable equipment in which it was previously difficult to do so.

■ Sixteen-Channel GPS Receiver

The CXD2931R is capable of receiving signals from 16 satellites at the same time. These 16 channels will become useful when the number of GPS satellites is increased from the current 27. Support for multiple channels can reduce the time to first fix (TTFF).

■ Both All-in-View and Two-Satellite Positioning

These receivers adopt the all-in-view positioning technique, in which data from all satellites from which signals are received is used in the positioning calculation. This method increases the positioning accuracy. They also support the two-satellite positioning technique that can increase the positioning success ratio when signals can only be received from two satellites in locations with inferior reception conditions, such as on streets with tall buildings.

■ Differential GPS Support

The differential GPS allows the positioning accuracy to increase approximately 10 times compared with GPS alone by converting the correction data from the GPS satellites obtained at the base stations in the DARC or RTCM format.

■ Thin-Form Ultralight Pack-Type Package

Both the GXB1000 and the GXB2000 are provided in a shielded case that achieves a thickness of a mere 7.4 mm.

■ Measures for Reducing EMI (electromagnetic interference) Provided

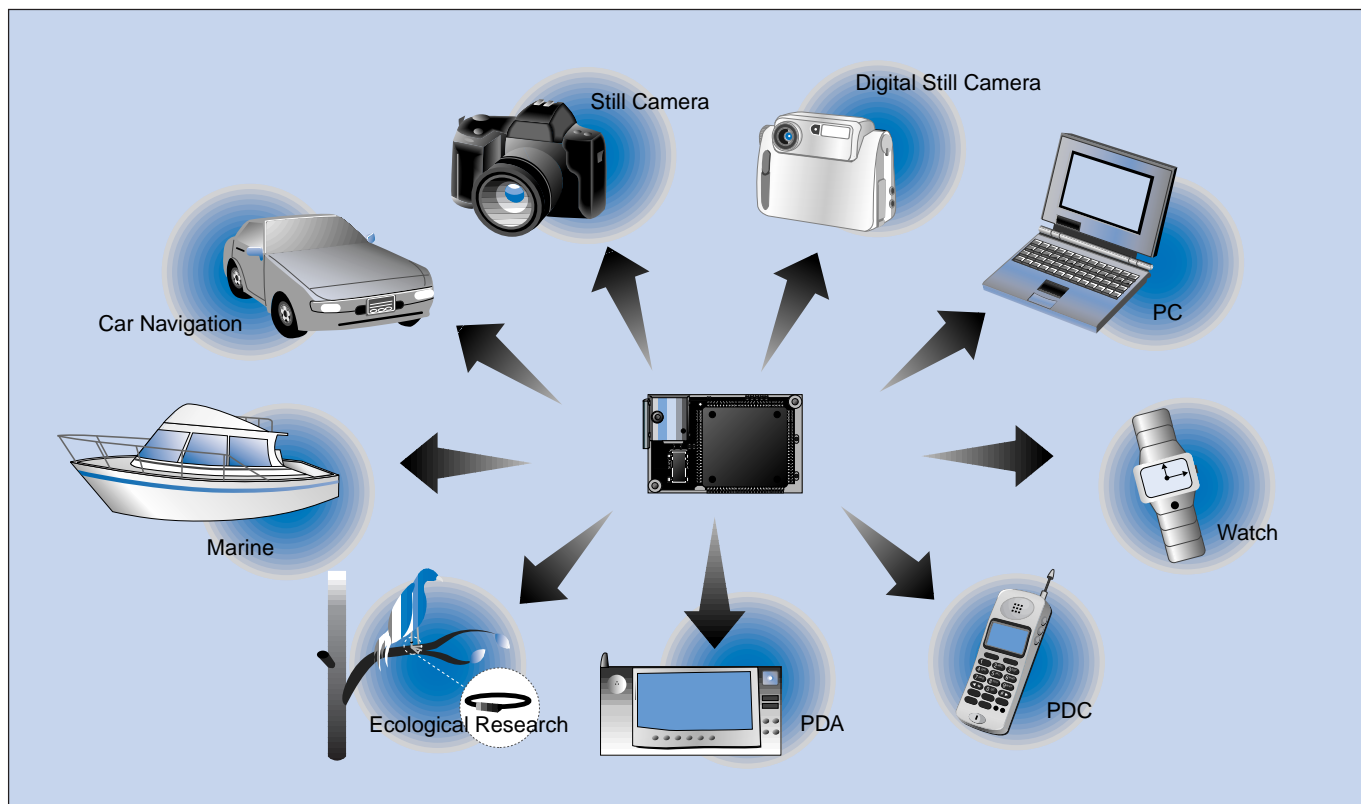
The generation of EMI is held to a minimum by enclosing the whole GPS receiver in a shielded case.

V O I C E

We designed this receiver based on the idea that if made smaller, GPS receivers could be used in a wide range of applications in addition to in-car navigation systems. In the future, we will be aiming for even smaller even lower power receivers. Recently, I've come to feel even more strongly that GPS development has only just begun.



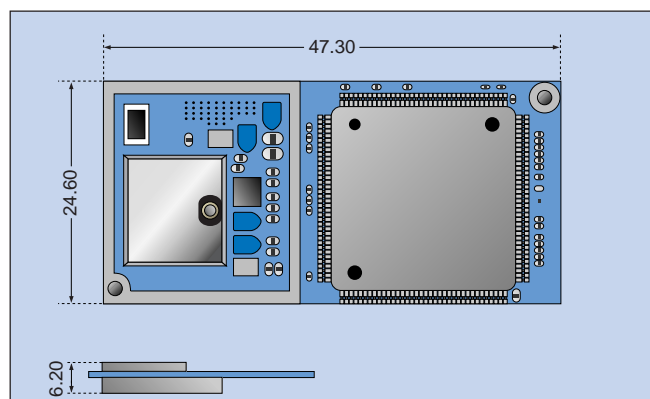
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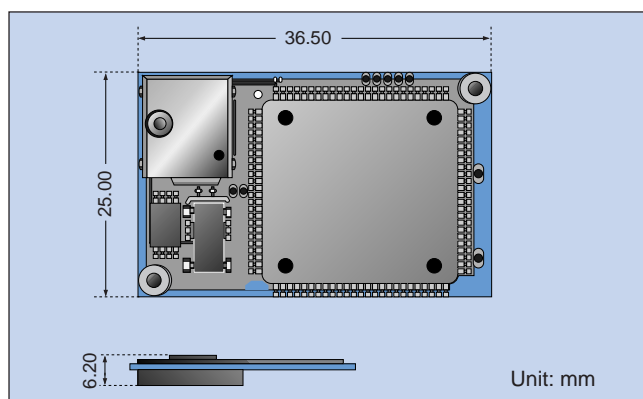
■ Figure 1 The GPS World: Expanding without Limit

■ Table 1 Electrical Characteristics

		GXB1000	GXB2000
Supply voltage	3-V specifications	3.1 to 3.6 V	
	5-V specifications	4.5 to 5.5 V	
Current consumption		83 mA (Typ.)	82 mA (Typ.)
Backup mode	Supply voltage	1.8 to 3.0 V	
	Current consumption	30 μ A (Typ.), 70 μ A (Max)	
Operating temperature		-30 to 85 °C	



■ Figure 2-1 GXB1000 Package Dimensions



■ Figure 2-2 GXB2000 Package Dimensions