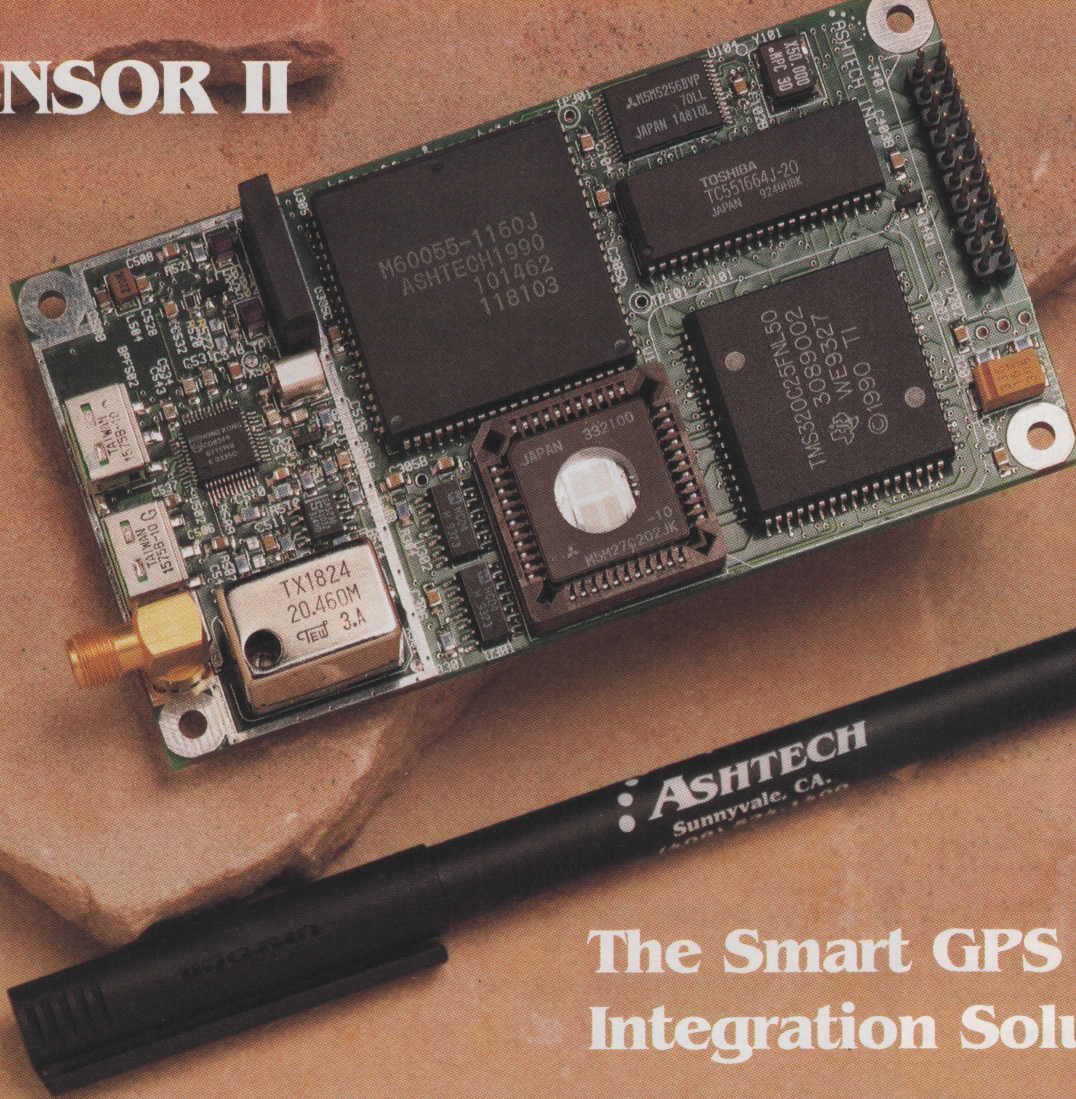


SENSOR II



The Smart GPS Integration Solution

The Ashtech Sensor II has been specifically designed to meet the needs of high-end systems integrators. Up to twelve satellites are tracked in high dynamic airborne operations with a "loss of lock" reacquisition time of less than two (2) seconds. The single board format is ideal for a variety of OEM marine, airborne or land navigation applications. The Sensor II provides three-dimensional position accuracy of 1-3 meters rms (PDOP ≤ 4) using the Real-Time Differential mode. Independent measurements are determined at once per second. Accurate time tags are provided with just one satellite and no knowledge of position. The Sensor II Receiver Module weighs just two (2) ounces measuring 4.25" x 2.25" x .44" and operates with a DC input of 5 volts with a connection for battery backup of "Keep Alive" memory.

The Sensor II offers the most complete package of standard features including:

- 12 Channel carrier-smoothed C/A code with "All-In-View" operation
- Real-Time Differential - receives RTCM 104 format Type 1, 2, 3, 6, 9, 16
- 1 PPS time pulse
- Raw GPS data outputs (pseudo ranges, integrated Doppler, ephemeris)
- 1 Second update rate
- NMEA 0183 outputs of position, velocity, time, command and satellite information
- Two RS-232 I/O Ports (38,400 Baud) with flow control
- 2 Second reacquisition time after temporary loss of lock

The Ashtech Sensor II GPS Receiver module provides real-time position, speed over ground, course over ground and time measurements using twelve channels of C/A code on the L1 band. Using the carrier phase, the Sensor II smooths all raw ranges for position computation and updates all data every second. The Sensor II is feature-rich, concise and priced to meet the most challenging integration requirements. Call Ashtech Navigation Sales at (800) 229-2400 for more information.



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Circle 4

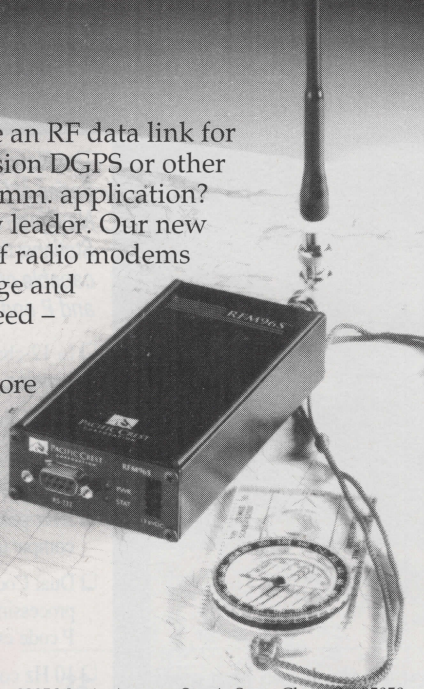
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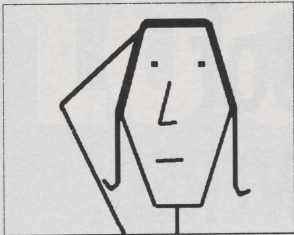
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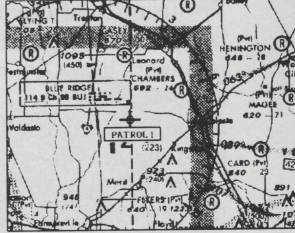
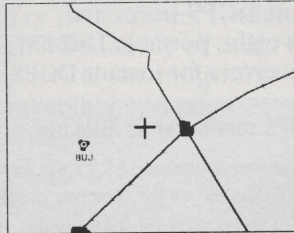
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Circle 18

Consumer Lab Tests

GPS is an amazing technology, but it's not always the best tool for the job. Sometimes that reflects an inappropriate application of GPS: tracking children at a daycare center, for instance, or navigating to the local convenience store.

But often, GPS fails as a tool, not because of inadequate function or technology but because the tool doesn't fit the user — physical dimensions, operating system, display screen, inadequate documentation, and so forth. That's where consumers come in, taking a place alongside the professional and commercial users of GPS in the great beta test site of the marketplace. Yes, consumers — the backpackers, the tourists, the average citizens in the street and on the highway — are more than just tomorrow's mass market. They are, collectively, experts in testing GPS equipment.

Casual observers might believe that the flow of GPS technology into consumer products is a simple, one-way process: structuring GPS functions and physical design to maximize high-volume, low-cost manufacturing. What, they wonder, do consumers have to teach engineers, pilots, manufacturers, system developers, and other professional or business members of the GPS community?

Well, first off, anyone who has ever childproofed a home knows that an OSHA inspector with the latest electronics is no match for a three-year-old with a hairpin in ferreting out household hazards. Similarly, taken as a whole, the handling of a product by the masses probably provides a surer measure of hardness, utility, and user-friendly interface than the most rigorous MILSPEC.

Secondly, competitive labor-cost pressures are transforming the nature of work in more than one profession where GPS is used or likely to be used. Lamentably, this often means the substitution of technology for worker skills and judgment. As employees increasingly come off the street rather than out of universities, institutes, or trade union and professional apprenticeship programs, the experience of consumers with GPS equipment gains relevance.

If new GPS equipment is going to get an advanced degree from the School of Hard Knocks, it has to pass the dumb test. That observation isn't intended to malign the great consuming public or the labor force of the future. They usually know what they want to do with that new gadget, and where, how, and with whom they want to do it. They just may not know what the people who built it intended them to do with it. Companies shouldn't fight these customers; they should learn from them. Otherwise, they will be hit over the head with that basic lesson of marketing: you've got to sell benefits, not features.

Glen Gibbons

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