

## NAVCOM TECHNOLOGY

# Precise Positioning Solutions from a John Deere Company



robotics.



NavCom Technology, Inc., a John Deere Company based in Torrance, California, USA, is a leading provider of advanced GNSS products for OEMs, VARs, and system integrators requiring high-performance RTK systems, global five centimetre-level GNSS satellite corrections, geodetic-quality GNSS receivers and engineering consulting in the areas of precise positioning and

Founded in 1992 during the early development of GPS, NavCom contributed greatly to the evolution of GPS by designing innovative solutions and technologies. These efforts led to a noteworthy number of NavCom patents and patent applications in the areas of GPS, signal acquisition, wireless communications, antenna design and frequency modulation techniques.

*NavCom's Sapphire OEM board and SF-3050 RTK/GNSS receiver.*

NavCom was acquired in 1999 by John Deere, one of its largest clients at the time, after successfully completing many contract engineering projects for the company. NavCom now operates as a wholly owned subsidiary of Deere & Company, the worldwide leader in agriculture, and is dedicated to John Deere's 176-year-old traditions of integrity, quality, commitment and innovation.

One of its first innovations as a John Deere Company was the introduction of the StarFire Network (known then as the Wide Area Correction Transform) – one of the first global satellite-based augmentation systems capable of delivering high-accuracy positioning anywhere in the world, without a local base station.

### Partner and pathfinder

NavCom's close relationship with its parent company has contributed to substantial growth and innovation within the precision-agriculture marketplace, producing a number of advanced products and services that have revolutionised farming practices and work-site productivity. NavCom's vision is to replicate this successful formula in other market sectors such as construction, land survey, offshore exploration and others. Today, NavCom partners with VARs, OEMs and system integrators who have the same goals and aspirations in delivering customer solutions that provide a sustainable competitive advantage to support growth.

As one of the industry's leaders, NavCom's key personnel include a winner of the Johannes Kepler Award and the inventor of the Hatch-Filter Technique. The company employs a management team with over 150 years of collective GPS/GNSS experience, as well as more than 70 engineers and scientists capable of taking a project from conception, through design, to a complete system solution.

### High-precision solutions for a global market

NavCom provides an extensive range of geodetic-quality GNSS and RTK receivers as well as the StarFire five-centimetre GSBAS correction service to precise positioning and navigation markets. NavCom's ability to tightly couple the design of its GNSS receivers and StarFire service provides innovative solutions to the marketplace that enhance the quality and competitiveness of its customers' solutions.

Building upon these innovative solutions, NavCom introduced solutions that further enhanced and addressed key customer pain points with such innovations as RTK Extend and StarFire Rapid Recovery. Outages from radio communications or physical signal blockages, such as shading, can leave a customer without positioning data, thus slowing down projects and increasing costs. In response to such key productivity concerns, NavCom developed these game-changing solutions that allow users to maintain accuracy despite loss of radio signals or even to reacquire positioning almost instantaneously.

NavCom is represented worldwide by a growing network of OEMs and Value Added Resellers (VARs) who serve a diverse and growing set of

*NavCom's LAND-PAK survey solution.*

applications that span land survey, machine control, offshore and military/government markets.

### Future of GNSS

High-precision GNSS products are providing mission-critical solutions in agriculture, construction, land survey, offshore exploration and many other markets. The adoption of these solutions has resulted in substantial productivity benefits that will continue to drive the demand for GNSS technology. The GNSS industry is not standing still either. With new signals on both the GPS and GLONASS constellations, the planned deployment of new global constellations like Galileo and BeiDou and the deployment of a variety of regional augmentation constellations, the GNSS end user will have an ever-increasing portfolio of options to choose from. These developments will continue to drive the growth of the GNSS market as continued GNSS receiver technology improvements substantially improve the capability and performance of GNSS receiver products while at the same time reducing size, power consumption and cost. All of these changes will result in greater capability for the end user that will further improve the quality and productivity of their current solutions while opening up the potential for new applications.

NavCom will continue to meet these demands for its customers, providing sustainable solutions that meet both integrator and end-user needs.

---

<https://www.gim-international.com/content/article/precise-positioning-solutions-from-a-john-deere-company>

---