

## The world's greatest toolmakers asked Enginasion to develop a superior wireless data-collection product

The L.S. Starrett® Company is recognized worldwide for its superior tools. In keeping with that leadership role, Starrett wanted to develop a superior, wireless data-collection product line. However, the product line was not simple to develop, as it required the unique blend of sophisticated software programming with exceptional electrical engineering expertise.

**"Enginasion is my first call on any engineering consulting or development project," says Jeff Wilkinson, General Manager, Advanced Technology Division, The L.S. Starrett Company.**

Clients of Enginasion include "big" and "little" companies in the Industrial, Medtech, Military, and Pharmaceutical sectors—some of whom have in-house engineering resources while some do not. Enginasion has helped clients to design and build hardware and software that monitors, measures and controls mechanical, electrical and fluidic systems.

Data collection is an increasingly important part of manufacturing, one of the main drivers in the movement toward electronic measuring tools output. At the top of the Starrett line, DataSure® Wireless Data Collection is a state-of-the-art system for realtime collection and recording of measurement data.



DataSure®

With help from Enginasion, Starrett has developed a robust system that includes operator feedback to ensure transmission. From measurement to input, DataSure reduces steps, saves time, and eliminates error in the data collection process.

The L.S. Starrett Company has been known for Quality, Precision and Innovation since 1880.

**OVERVIEW:** Enginasion specializes in solving the most difficult automation problems, applying ingenuity, in-depth understanding of physical phenomena and materials, and wide-ranging expertise in digital and analog electronics, software, user interfaces, networks, fluid controls, motion control systems and measurement techniques.

**CLIENT:** The L.S. Starrett Company, founded in 1880, manufactures more than 5,000 variations of Precision Tools, Gages, Measuring Instruments and Saw Blades for industrial, professional and consumer markets worldwide. Starrett, a leader who has set the standard for fine precision tools in industry for over 123 years, has rightfully earned the title, **"World's Greatest Toolmakers."**

**CHALLENGE:** Develop software for a data collection system made up of very small radio packs that attach to tools, and a Gateway "receiver" that attaches to a PC; make certain the system is cost-effective for benchtop data-collection or shop-wide, including shop floors spanning many thousands of square feet. This effort required specialized knowledge of wireless networks, software programming, and interface of non-uniform hardware platforms.

**SOLUTION:** Enginasion's electrical engineers and software programmers completed the DataSure® Wireless Data Collection system for Starrett in only 60 days. The software that comes with the system handles interfacing the DataSure wireless tool network with a customer's favorite SPC software, and also handles administrative functions such as setting-up data multipliers, directing data log files to a particular application, naming tools specific to user or work cell, configuring archive times, setting system performance features, and other critical functions. Equally important, Starrett almost never receives a tech support call about DataSure.

### What the experts are saying...



**Jeff Wilkinson**

GM, Advanced Technology Division  
The L.S. Starrett Corporation

*"Enginasion's professionals have extensive software and firmware development skills. I consider them as an extension of our R&D team."*



**Roy Greenwood, BSEE**

VP, Electronic Software & Hardware Design  
Enginasion

*"It is very unusual for one firm to combine electrical engineering expertise with software programming mastery. We are unique in our skillsets."*



**David Bonneau, BSEE**

Founder and CEO  
Enginasion

*"This project for L.S. Starrett required that electrical engineers perform the software programming fixes necessary to ensure a reliable and stable environment."*