



LASER-PRECISE MEASUREMENTS

## Overview

The HS713 DSP sensor is a totally self-contained, handheld, laser profiler. Expanding on the unique capabilities of the LaserGauge® line of DSP sensors, the HS713 uses cutting edge optics and is specifically designed for inspecting and measuring smaller features that require a narrower field-of-view and higher scanning resolution.

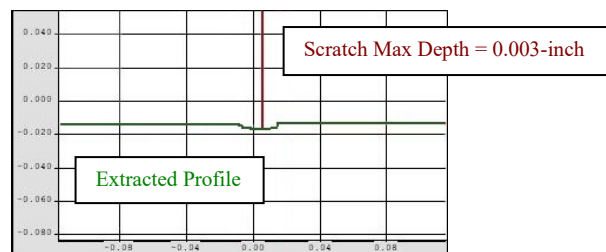
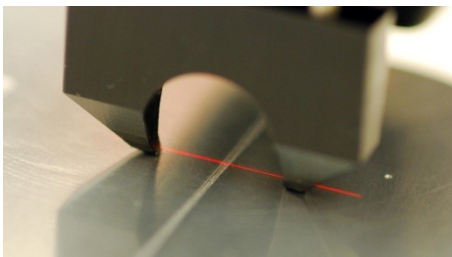
As with the other LaserGauge® DSP sensors, a high-resolution imager captures the 2D surface profile and an on-board DSP performs the complex processing. Profiles are displayed in real-time on the color LCD, and measurements are extracted and simultaneously written to the data table. All of the innovative LaserGauge® virtual gauges and complex measurement algorithms can be run on the sensor.



## Operating Features

**High Resolution** – With a horizontal scanning resolution of 1280 surface points within the field-of-view (FOV), the sensor has 250% greater resolution than most other handheld profilers. The HS713 is available with a 0.75-inch FOV.

The steeper triangulation angle and the high resolution makes the HS713 well suited for inspecting pits, scratches and other foreign object damage on flat and curved surfaces and for measuring critical features such as steps, gaps and radii on small parts.



**Color Display** – The 3.5" high resolution color touchscreen LCD provides graphical and textual information before, during and after the scanning. The surface profile is plotted in real-time and the measurement results are instantly written to the data table. Results are color coded for immediate identification of out-of-spec conditions.

**User Interface** – Operators can use the touch screen to navigate menus and access on-screen functions, or the 5-way joystick and two keypad buttons can be used to perform all the same operations without needing a second hand. Color LED's on the top and the bottom of the sensor provide roll angle and error feedback on each scan.

**Wireless Communications** – Data files and scan files that have been saved on the sensor can be retrieved wirelessly using the integral 2.4GHz ZigBee module to a matching USB stick plugged into a local computer. A USB cable can also be used to send files to and retrieve files from a computer.

**Processor and Memory** – The 1GHz processor speeds through the scans and algorithms producing final results in less than one second. Graphics and surface profiles are plotted instantly. 8GB of memory provides plenty of space to save data and scans.

**Virtual Gauges, Custom Gauges and Match-to-CAD** – All LaserGauge® measurement algorithms are supported by the HS713 sensor. Measurements can be expressed in millimeters or inches.

**Options** – An optional holster and belt can be used to secure and protect the sensor while the operator moves from part to part.

## Advantages

**GO/NO-GO Gauge** – Gauge settings and limits can be programmed into the sensor in advance so an inspector only has to select the part that is to be inspected and take the scans. The inspector is alerted to Pass or Fail conditions by red or green value indicators and by identifying audio tones.

**Fully Portable** – A rechargeable, lithium-ion battery provides power for three to four hours of constant operation in the stand-alone mode. When operating in the stand-alone mode, the sensor is not tethered to a computer of any type and not to an external power source. Power saving functions can be used to extend operating times even longer. Files are constantly saved, so data is never lost. The on-screen fuel gauge and a “low battery” message informs the operator when it is time for a fresh battery.

**Ease of Use** –As with other LaserGauge® sensors, the DSP sensor adjusts the contrast automatically to optimize the image for surfaces of all colors.

## Sensor Specifications

Type	DSP – Handheld
Size	3.6" (w) x 3.8" (h) x 9.7" (l)
Weight	23 oz. (27 oz. with battery)
User Interface	3.5" Color Touchscreen Display, 2 sets of 3 LED's, 5-Way Joystick and 2 buttons
Communications	Wireless – 2.4GHz ZigBee module with ZigBee USB Stick for computer Cable – USB 2.0A to Mini 5-pin USB, 6' length
Processor	1GHz Speed
Memory	8GB of data/scans/routines
Battery	Rechargeable lithium-ion, camcorder type, recommend Energizer Model ER-C680, Samsung Model SB-L160, or equivalent
FOV Options / Horizontal Scanning Resolution / Depth Accuracy	0.75" (19mm) / 0.0006" (15mm) / ± 0.0005" (12mm)
Shock Protection	Cast urethane housing
Environment	0° – 70° C

