

- > Measures 3D features such as heights, volumes and surface tilts
- > Factory-calibrated with results in real world units, micron-level accuracy
- > Industry-leading 2D and 3D machine vision software
- > Industrial IP65 laser and camera

The DS1000 3D sensor optimizes product quality by providing three-dimensional inspection of your products. Compact and industrially designed for the even the harshest factory environment, it also includes industry-leading Cognex vision software with a powerful new 3D toolset.

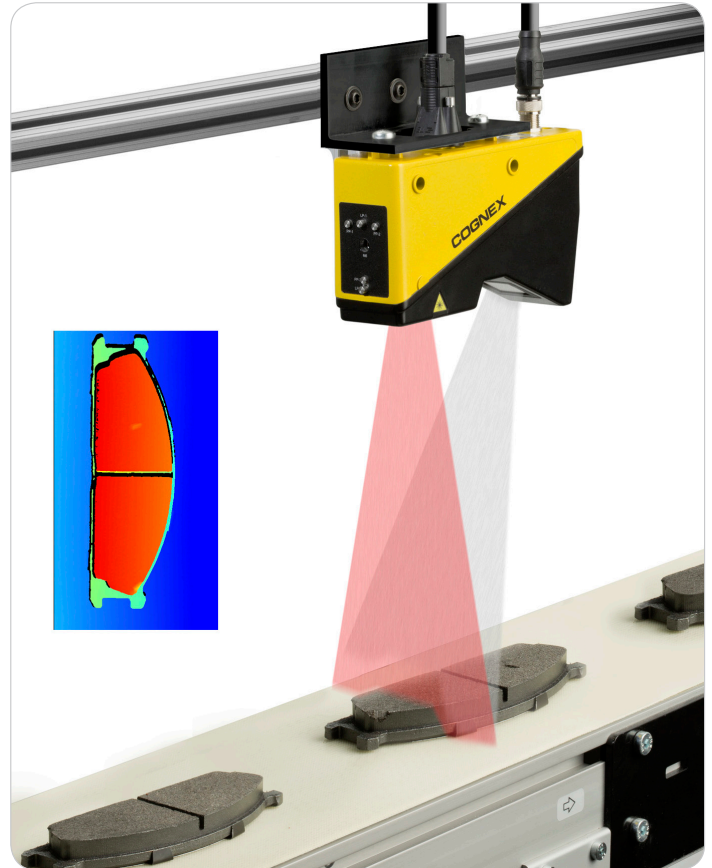
Calibrated 3D Vision from Cognex

The factory-calibrated DS1000 provides results in real units of measurement with micron-level accuracy, making 3D applications easier to use and quicker to deploy.

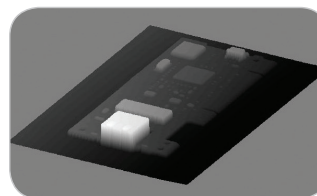
Unlike traditional 2D machine vision, the system provides a topographical representation of your part from which you can measure 3D features such as length, width, height, tilt or volume relative to any surface. It also simplifies challenging OCR or presence/absence applications by creating contrast from height changes, independent of color.

Application examples include:

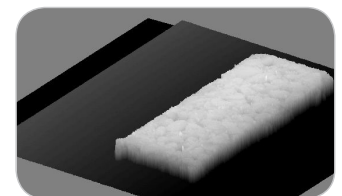
- Reading embossed or raised characters such as those on automobile tires
- Detecting missing objects in boxes or packages by height inspection
- Identifying surface defects and chips
- Measuring heights and tilts of components to determine misalignment
- Verify the correct volume for portion control



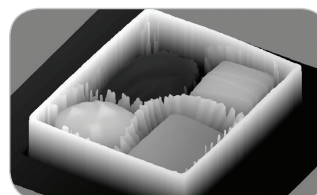
Optical Character Recognition (OCR)



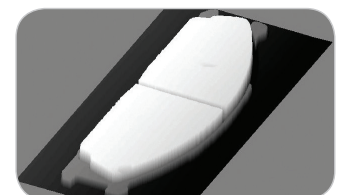
Measure heights



Verify volumes




Determine presence/absence



Identify surface defects

DS1000 Series

Specifications

| | |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions | 93.3 mm to 115.2 mm (H) x 50 mm (W) x 167.06 mm (L) |
| Weight | 700 g |
| Operating Temperature | 0°C to 50°C (32°F to 113°F) |
| Storage Temperature | -10°C to 60°C (-14°F to 140°F) |
| Maximum Humidity | 95% (non-condensing) |
| Housing | IP65 (with Cognex recommended IP65 Ethernet and power I/O cables) |
| Shock | 10 gs for 5 ms (any access) |
| Vibration | 8 gs (any access, any frequency) |
| Discrete I/O Operating Limits | Trigger input voltage limits: - 24 VDC – +24 VDC Input ON: > 10 VDC (>6mA) Input OFF: < 2 VDC (<1.5 mA) |
| Encoder Input Specifications | Differential: A+/B+: 5-24V (50 kHz max) A-/B-: Inverted (A+/B+) Single-ended: A+/B+: 5-24V (50 kHz max) A-/B-: +0VDC=½(A+/B+) |
| Power Supply | Voltage: +24 VDC (22-26 VDC) Current: 500 mA max |
| Scan Rate | Up to 10 ⁴ Hz |
| Resolution Z | .007 mm to .040 mm |
| Resolution X | .070 mm to .150 mm |
| Maximum Profile Points | 1024 |
| Laser Class | 658 nm Class 2M and Class 3B options |
| Software | VisionPro software |
| Ethernet | Gigabit Ethernet interface Integrated link and traffic LEDs Standard RJ-45 connector |
| Certifications |  |
| Accessories | Ethernet cable: 5m, IP65-rated Power: + I/O + Encoder cable, IP65-rated Mounting bracket Stainless steel enclosure, IP69K-rated for the food industry |

Benefits and Features

Sensor inspects and measures in 3D

- Volume, height, tilt, OCR

Results in real-world units (mm)

- Calibrated 3D system
- Micron-level accuracy

Contrast independent inspection

- Dark object on dark background
- Independent of color

Ability to combine 3D and 2D cameras

- Many applications require both

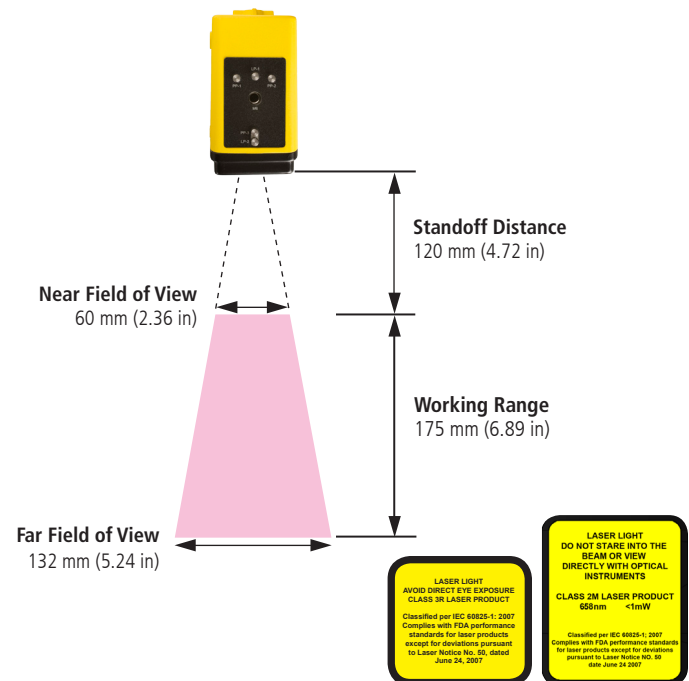
World-class 3D and 2D vision tools

- Height, volume, plane fitting and tilt tools
- PatMax®, IDMax® and OCRMax™ algorithms

Industrial IP65 Housing

- IP69K enclosure option for food and beverage applications

For a simplified overview of how it works, watch the demonstration video at www.cognex.com/ds1000.



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