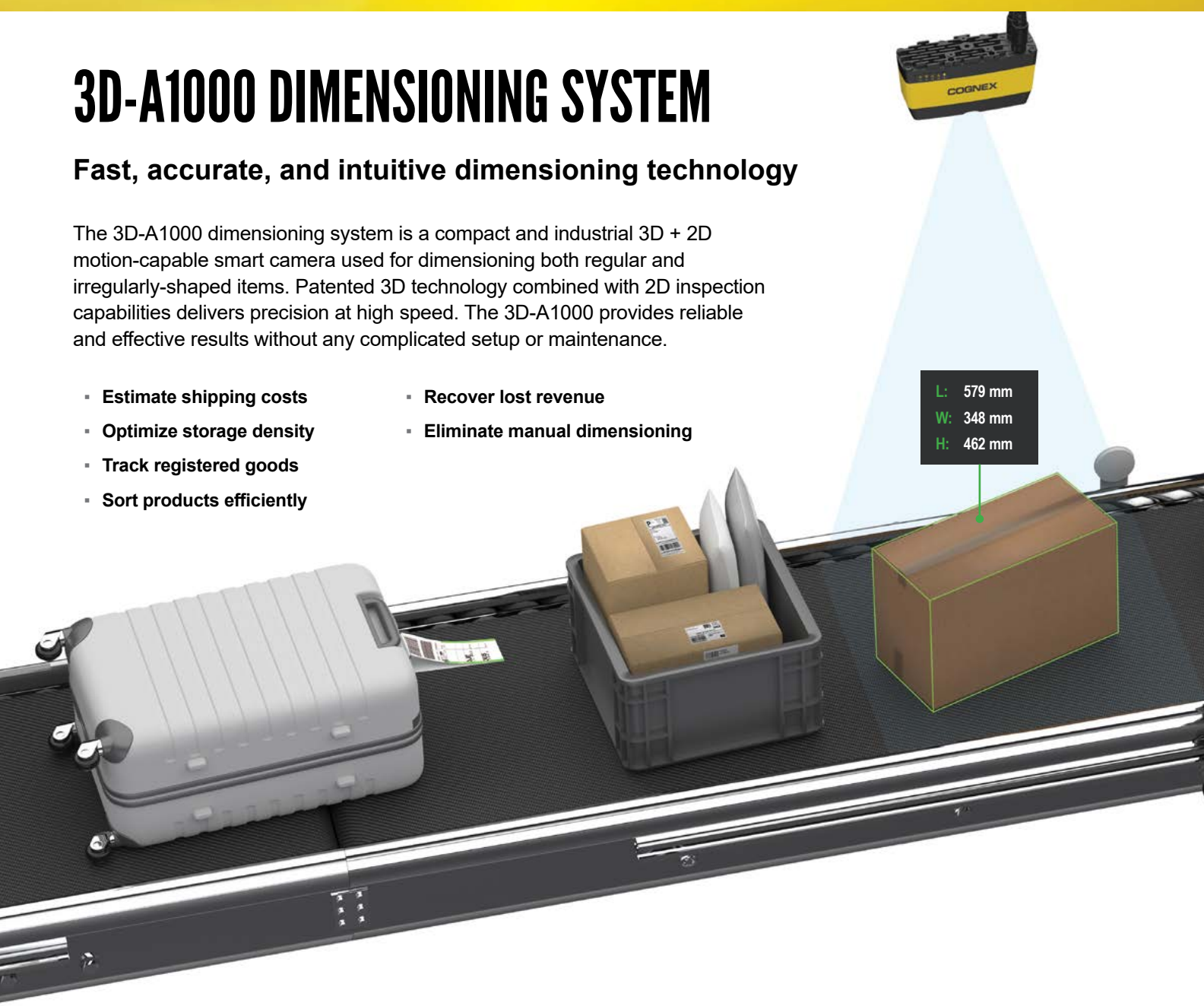
COGNEX

3D-A1000 DIMENSIONING SYSTEM

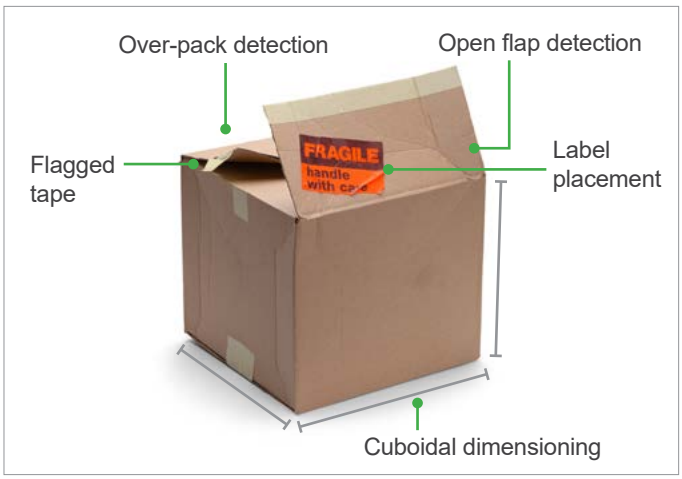
Fast, accurate, and intuitive dimensioning technology

The 3D-A1000 dimensioning system is a compact and industrial 3D + 2D motion-capable smart camera used for dimensioning both regular and irregularly-shaped items. Patented 3D technology combined with 2D inspection capabilities delivers precision at high speed. The 3D-A1000 provides reliable and effective results without any complicated setup or maintenance.

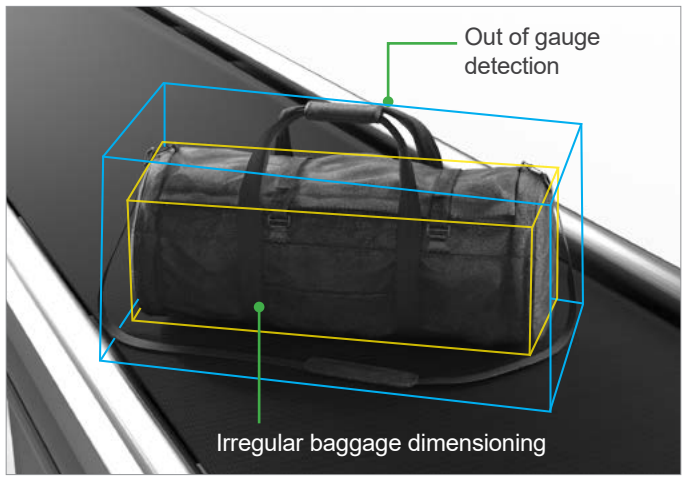
- **Estimate shipping costs**
- **Optimize storage density**
- **Track registered goods**
- **Sort products efficiently**
- **Recover lost revenue**
- **Eliminate manual dimensioning**



Distribution & Warehousing



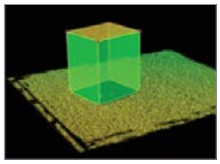
Airport Baggage Handling



3D + 2D technology provides functionality beyond dimensioning

Unlike conventional methods, the 3D-A1000 uses patented 3D symbolic light technology to freeze motion with a single image. This generates more accurate 3D point cloud data, eliminating the need for complex calibration and encoder integration. Embedded processing enables use of powerful Cognex vision tools to run additional 3D + 2D inspections.

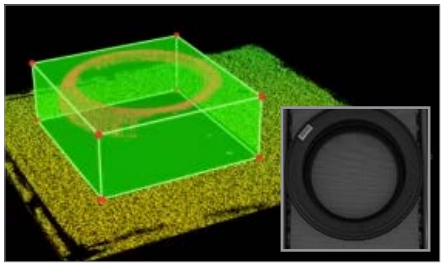
3D symbolic light



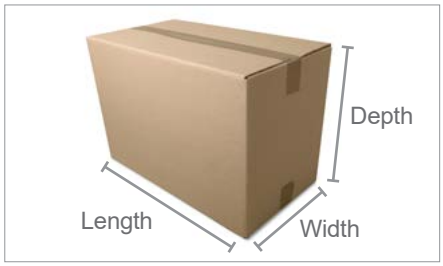
3D point cloud

2D image

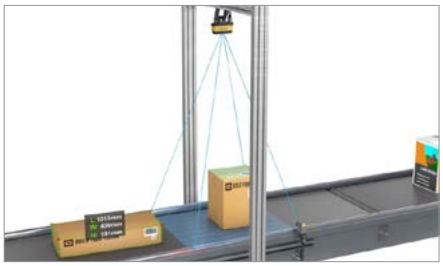
Plug and play factory-calibrated system



3D point cloud profile data, calibrated to 2D image data



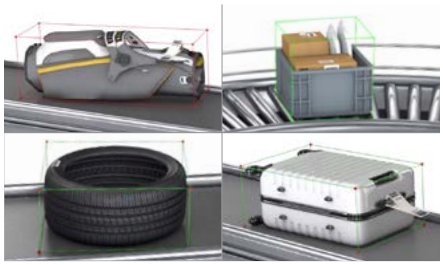
<5 mm (0.2") dimensional accuracy on cuboidal and irregular objects



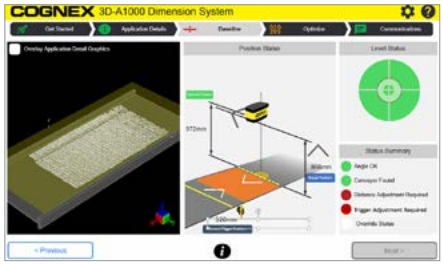
Instant in-motion snapshot technology (no encoder required)

Add powerful Cognex vision tools to run additional 3D + 2D inspections

Unaffected by uneven transitions, speed changes, or curved conveyance



Superior performance on difficult target surfaces



Application assistance and performance feedback

Seamless barcode tunnel integration with DataMan® Multi-Reader Sync™

Out of the box ready with easy integration and maintenance

The 3D-A1000 is factory calibrated and ready for system integration immediately. Unlike conventional systems that can take a skilled engineer 3 to 6 hours to install and calibrate, the 3D-A1000 can be installed by anyone in under 15 minutes, using an intuitive setup wizard.

Step 1. Connect without the hassle of software downloads and installation procedures.

Step 2. Intuitive wizard simulates the installation environment to assist with mounting and optimization.

Step 3. In under 15 minutes, the system is ready to run and auto-certify with performance analysis tools.

Step 4. Once installed, continued feedback provides statistical insight into production and processes for data-driven optimization.

3D-A1000

- Small footprint for easy integration
- Anyone can set up in **<15 minutes**
- Factory calibrated
- Automated verification

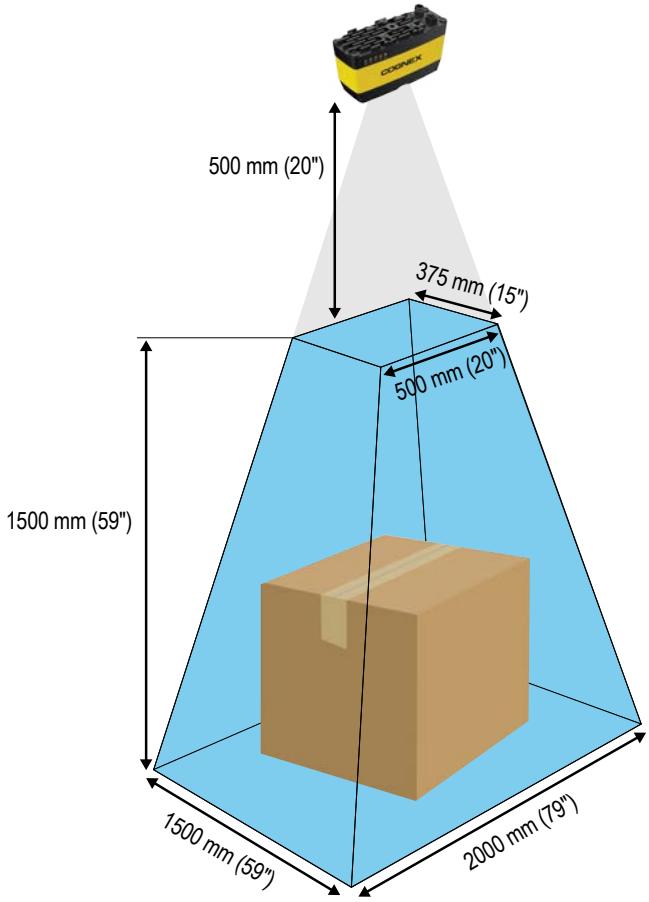
Conventional System

- Bulky installation
- Takes a skilled engineer **3–6 hours** to set up
- Requires complex calibration procedure
- Manual, unreliable testing

Powerful and compact turnkey system

SPECIFICATIONS

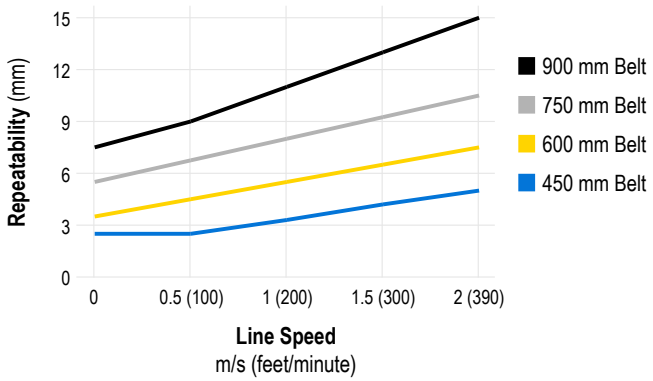
Technologies	3D Symbolic Light
Acquisition Rate	Up to 4 Hz (acquisition and on-board processing)
Trigger	Trigger input voltage limits: 24 VDC Input ON: >10 VDC (>6 mA) Input OFF: <2 VDC (<1.5 mA)
Power	Voltage: +24 VDC (22–26 VDC) Current: 5 A max
2D Vision	1280 x 960 resolution Modular external lighting & filter
Communication	GigE, TCP/IP, PROFINET, EtherNet/IP(TM), M/S
I/O	2 fixed inputs, 2 fixed outputs
Operating Temperature	0–40 °C (32–104 °F)
Storage Temperature	-10–60 °C (14–140 °F)
Operating Humidity	< 85% (non-condensing)
Weight	485 g (17.1 oz)
Protection	IP65
Certifications	CE, FCC, KCC, TUV SUD NRTL, RoHS



Belt Width	Min. Object (L x W x H)	Max. Object (L x W x H)	Typical Mounting Distance
450 mm (17.7 in)	25 x 25 x 10 mm (1.0 x 1.0 x 0.4 in)	550 x 400 x 400 mm (21.6 x 15.7 x 15.7 in)	1000 mm (39 in)
600 mm (23.6 in)	35 x 35 x 15 mm (1.4 x 1.4 x 0.6 in)	750 x 550 x 550 mm (29.5 x 21.6 x 21.6 in)	1350 mm (53 in)
750 mm (29.5 in)	45 x 45 x 20 mm (1.8 x 1.8 x 0.8 in)	900 x 650 x 650 mm (35.4 x 25.6 x 25.6 in)	1650 mm (65 in)
900 mm (35.4 in)	55 x 55 x 25 mm (2.1 x 2.1 x 1.0 in)	1100 x 800 x 800 mm (43.3 x 31.5 x 31.5 in)	2000 mm (78 in)

Longer objects can be accommodated by increasing mounting distance.

Repeatability vs Line Speed (by Belt Width)



Repeatability specifications valid for +/-3σ on cooperative cuboidal objects.

COGNEX

Companies around the world rely on Cognex vision and barcode reading solutions to optimize quality, drive down costs and control traceability.

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