Roll-2-Roll Technologies LLC announces revolutionary All-in-One 1DC Sensor Series

Press Release

STILLWATER, OK, April 30, 2025 —



Roll-2-Roll Technologies LLC announces the launch of its innovative 1DC Series of Roll-2-Roll® Sensors, setting a new standard for industrial sensing solutions. This groundbreaking all-in-one sensor combines advanced CMOS line scan technology with integrated processing power, eliminating the need for external controllers while maintaining exceptional precision across a wide range of applications and materials.

The 1DC Series represents a significant advancement in industrial sensing technology, building on Roll-2-Roll's patented light scattering and spatial filtering technology. The 1DC sensor works effectively with virtually any material - from clear films and paper to metals and composites - delivering unmatched precision and versatility in a single compact device.

Features and Benefits of 1DC Series Sensors

- Material Agnostic Performance: Functions flawlessly with clear, opaque, porous, nonwoven, metals, foils, and other materials
- Compact Construction: Easy installation in tight spaces with one-sided sensor design for simplified threading and reduced dust accumulation
- Integrated Light Source: Eliminates the need for external lighting equipment and fixtures

- High Precision: Hardware resolution as fine as 0.0635mm (0.0025in) with greater than 99.9% sensor accuracy
- Wide Sensing Range: Available in sizes from 96mm to 960mm
- Industrial-Grade Protection: IP67 rated (IP68 available on request) to withstand harsh industrial environments
- Universal Connectivity: Seamless integration via EtherNet/IP, PROFINET, EtherCAT, Modbus/TCP, and CC-Link IE Field Basic

Applications

- Edge Position Measurement
- Multiple Edge Position Measurement
- Center Position Measurement
- Line/Contrast Position Measurement
- Width Measurement
- Coating Width Measurement
- Multiple Strip Width Measurement
- Thread/String Counting
- Flag Detection
- Splice Detection
- Tear Detection

Industries

- Plastics & Film
- Paper & Converting
- Tissue and Towel
- Corrugated Board
- Battery Manufacturing
- Textile
- Nonwoven & Sanitary Products
- Flexible Packaging
- Tag and Label
- Tire & Rubber
- Metals & Foil

Options

1DC Linear Cameras are available with measurement ranges from 96 mm up to 960 mm. Light sources include: Infrared for mostly edge detection and high contrast applications, White Light (broadband) for visible contrast detection, and UV for fluorescent contrast applications. Additional LED light sources are available on request. Hardware camera resolution of 0.0635 mm (0.0025”). Higher firmware resolution of up to 0.015875 mm (0.000625”) available upon request.

Availability

1DC Linear Cameras are now available for ordering.

"The 1DC Series represents the future of industrial sensing," said Arvind Seshadri, President of Roll-2-Roll Technologies LLC. "By combining camera-like performance with sensor-like cost in an all-in-one package, we're giving manufacturers unprecedented capabilities without the complexity. The elimination of external controllers dramatically simplifies installation, reduces engineering time, and lowers the total cost of ownership while delivering superior precision across all materials."

Roll-2-Roll Technologies invites industry professionals to experience the capabilities of the 1DC Series firsthand at Converters Expo 2025 in Green Bay on May 21st, 2025. Attendees will have the opportunity to see live demonstrations and gain hands-on experience with this revolutionary sensor technology. For those unable to attend, online demonstrations can be scheduled by contacting the company through their website. For more information or to request a quote, please visit https://r2r.tech/request-quote or contact our sales team at sales@r2r.tech.

Roll-2-Roll Technologies LLC invites all converters and related industries to visit its website at https://r2.tech periodically to keep updated on new products and development, and its library of instructional papers and videos.

Roll-2-Roll Technologies LLC provides the most advanced and simple to use web positioning sensor technology for the converting industry and general automation. The nimble technical company, we are the disruptors of the web handling industry for the benefit of our customers.

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If you would like more information about this topic, please contact Pedro Velasco at 405-726-0731 or email at marketing@r2r.tech. Visit the company website at r2r.tech for additional resources, whitepapers and instructional videos.