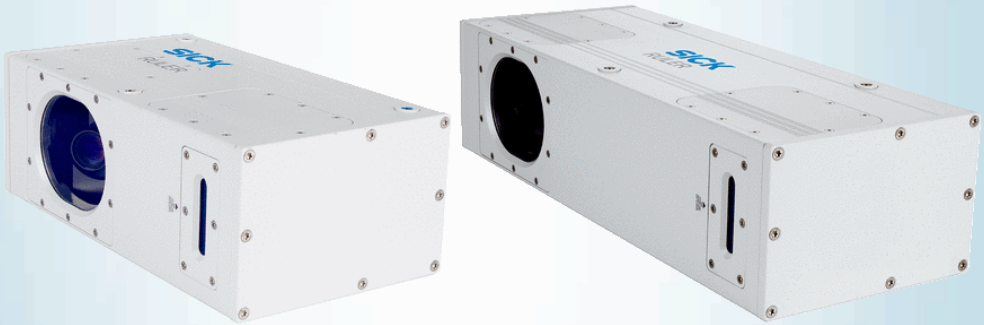
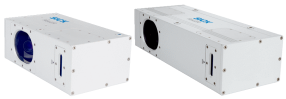
Product family overview



Ruler

Gigabit 3D vision for tough environments

SICK
Sensor Intelligence.



Technical data overview

Technology	3D triangulation
Scan/frame rate	10,000 3D profiles/s
Grayscale measurements	✓
Scatter measurement	– / ✓ (depending on type)
Factory calibrated	✓
Enclosure rating	IP65
Configuration software	Ranger Studio
Ethernet	✓, UDP/IP
Serial	✓, RS-422, Encoder

Product description

Ruler E is a perfect tool for in-line 3D-scanning applications. It is designed for the tough environments common to the timber and mining industries and will provide accurate 3D measurements at temperatures as low as –30 °C. Plus, the Gigabit Ethernet interface makes it suitable for remote operation over long cable distances. With its built-in light source and factory-calibrated 3D data, the camera instantly provides precise measured values to within a millimeter, making integration considerably easier. In addition to high-speed 3D measurements, the Ruler E camera also provides grayscale intensity and laser scatter measurements. These measurements reveal more about objects and, in turn, enable more precise and reliable decisions. With a choice of analysis tools, PC performance, and combining data from several Rulers, you can adapt the solution cost and performance to your specific requirements.

At a glance

- Factory-calibrated 3D measurements in millimeters at full production speed
- Highly accurate 3D measurements for widths from 100 mm up to 1.5 m
- Capture 3D, grayscale, and scatter simultaneously
- Easy to integrate without the need for external illumination
- Rugged housing for harsh environments and temperatures as low as –30 °C
- Remote operation over long cabling distances with Gigabit Ethernet

Your benefits

- High-speed measurement allows you to increase production throughput and still ensure product quality
- Accurate size and position measurement in 3D, regardless of an object's height or color, creating reliable solutions
- Simultaneously capturing 3D, scatter, and grayscale, allows for more reliable quality control and inspection
- Factory calibrated 3D with built-in lighting instantly provides results in millimeters, which makes integration easy
- Designed for tough industrial environments to ensure a long and problem-free life time

Ordering information

Other models and accessories ➜ www.sick.com/Ruler

- **Sub product family:** Ruler E150
- **Description:** Ruler E150 - 2M laser, up to 10 k profiles/second. Gigabit Ethernet interface 1,536 px x 512 px.
- **Working distance:** 160 mm ... 248 mm

Internal lighting	Laser class	Window material	3D profile resolution	Gray-scale resolution	Type	Part no.
Red, laser, Visible, 660 nm, ± 15 nm	2	Float glass, anti-reflective coated	1,536 px	1,536 px	Ruler-E4111	1044434

- **Sub product family:** Ruler E600
- **Description:** Ruler E600 HB - 3B laser, heating elements, up to 10 k profiles/second. Gigabit Ethernet interface 1,536 px x 512 px.
- **Working distance:** 415 mm ... 865 mm

Internal lighting	Laser class	Window material	3D profile resolution	Gray-scale resolution	Type	Part no.
Red, laser, Visible, 660 nm, ± 15 nm	3B	Float glass, anti-reflective coated	1,536 px	1,536 px	Ruler-E2221	1050303

- **Sub product family:** Ruler E600
- **Description:** Ruler E600 B - 3B laser, up to 10 k profiles/second. Gigabit Ethernet interface 1,536 px x 512 px.
- **Working distance:** 415 mm ... 865 mm
- **Internal lighting:** Red, laser, Visible, 660 nm, ± 15 nm
- **Laser class:** 3B
- **3D profile resolution:** 1,536 px
- **Gray-scale resolution:** 1,536 px

Window material	Type	Part no.
PMMA	Ruler-E2421	1096641
Float glass, anti-reflective coated	Ruler-E2121	1028042

- **Sub product family:** Ruler E600
- **Description:** Ruler E600 - 2M laser, up to 10 k profiles/second. Gigabit Ethernet interface 1,536 px x 512 px.
- **Working distance:** 415 mm ... 865 mm

Internal lighting	Laser class	Window material	3D profile resolution	Gray-scale resolution	Type	Part no.
Red, laser, Visible, 660 nm, ± 15 nm	2	Float glass, anti-reflective coated	1,536 px	1,536 px	Ruler-E2111	1029237

- **Sub product family:** Ruler E600
- **Description:** Ruler E600 S - 2M laser, scattered light measurements, up to 10 k profiles/second. Gigabit Ethernet interface 1,536 px x 512 px.
- **Working distance:** 415 mm ... 865 mm
- **Internal lighting:** Red, laser, Visible, 660 nm, ± 15 nm
- **Laser class:** 2

Window material	3D profile resolution	Scatter resolution	Gray-scale resolution	Type	Part no.
Float glass, anti-reflective coated	1,536 px	1,536 px	1,536 px	Ruler-E2112	1029238

- **Sub product family:** Ruler E600
- **Description:** Ruler E600 SB - 3B laser, scattered light measurements, up to 10 k profiles/second. Gigabit Ethernet interface 1,536 px x 512 px.
- **Working distance:** 415 mm ... 865 mm
- **Internal lighting:** Red, laser, Visible, 660 nm, ± 15 nm
- **Laser class:** 3B

Window material	3D profile resolution	Scatter resolution	Gray-scale resolution	Type	Part no.
Float glass, anti-reflective coated	1,536 px	1,536 px	1,536 px	Ruler-E2122	1029239

- **Sub product family:** Ruler E1200
- **Description:** Ruler E1200 H - 2M laser, heating elements, up to 10 k profiles/second. Gigabit Ethernet interface 1,024 px x 512 px.
- **Working distance:** 280 mm ... 1,280 mm
- **Internal lighting:** Red, laser, Visible, 660 nm, ± 15 nm
- **Laser class:** 2
- **3D profile resolution:** 1,024 px
- **Gray-scale resolution:** 1,024 px

Window material	Type	Part no.
PMMA	Ruler-E1511	1074639
Float glass, anti-reflective coated	Ruler-E1211	1029231

- **Sub product family:** Ruler E1200
- **Description:** Ruler E1200 - 2M laser, up to 10 k profiles/second. Gigabit Ethernet interface 1,024 px x 512 px.
- **Working distance:** 280 mm ... 1,280 mm

Internal lighting	Laser class	Window material	3D profile resolution	Gray-scale resolution	Type	Part no.
Red, laser, Visible, 660 nm, ± 15 nm	2	Float glass, anti-reflective coated	1,024 px	1,024 px	Ruler-E1111	1028041

- **Sub product family:** Ruler E1200
- **Description:** Ruler E1200 S - 2M laser, scattered light measurements, up to 10 k profiles/second. Gigabit Ethernet interface 1,024 px x 512 px.
- **Working distance:** 280 mm ... 1,280 mm
- **Internal lighting:** Red, laser, Visible, 660 nm, ± 15 nm
- **Laser class:** 2

Window material	3D profile resolution	Scatter resolution	Gray-scale resolution	Type	Part no.
Float glass, anti-reflective coated	1,024 px	1,024 px	1,024 px	Ruler-E1112	1029230

- **Sub product family:** Ruler E1200
- **Description:** Ruler E1200 B - 3B laser, up to 10 k profiles/second. Gigabit Ethernet interface 1,024 px x 512 px.
- **Working distance:** 280 mm ... 1,280 mm

Internal lighting	Laser class	Window material	3D profile resolution	Gray-scale resolution	Type	Part no.
Red, laser, Visible, 660 nm, ± 15 nm	3B	Float glass, anti-reflective coated	1,024 px	1,024 px	Ruler-E1121	1029233

- **Sub product family:** Ruler E1200
- **Description:** Ruler E1200 SB - 3B laser, scattered light measurements, up to 10 k profiles/second. Gigabit Ethernet interface 1,024 px x 512 px.
- **Working distance:** 280 mm ... 1,280 mm
- **Internal lighting:** Red, laser, Visible, 660 nm, ± 15 nm
- **Laser class:** 3B

Window material	3D profile resolution	Scatter resolution	Gray-scale resolution	Type	Part no.
Float glass, anti-reflective coated	1,024 px	1,024 px	1,024 px	Ruler-E1122	1029234

- **Sub product family:** Ruler E1200
- **Description:** Ruler E1200 SH - 2M laser, scattered light measurements, up to 10 k profiles/second. Gigabit Ethernet interface 1,024 px x 512 px.
- **Working distance:** 280 mm ... 1,280 mm
- **Internal lighting:** Red, laser, Visible, 660 nm, ± 15 nm
- **Laser class:** 2

Window material	3D profile resolution	Scatter resolution	Gray-scale resolution	Type	Part no.
Float glass, anti-reflective coated	1,024 px	1,024 px	1,024 px	Ruler-E1212	1029232

- **Sub product family:** Ruler E1200
- **Description:** Ruler E1200 HB - 3B laser, heating elements, up to 10 k profiles/second. Gigabit Ethernet interface 1,024 px x 512 px.
- **Working distance:** 280 mm ... 1,280 mm

Internal lighting	Laser class	Window material	3D profile resolution	Gray-scale resolution	Type	Part no.
Red, laser, Visible, 660 nm, ± 15 nm	3B	Float glass, anti-reflective coated	1,024 px	1,024 px	Ruler-E1221	1029235

- **Sub product family:** Ruler E1200
- **Description:** Ruler E1200 SHB - 3B laser, scattered light measurements, up to 10 k profiles/second. Gigabit Ethernet interface 1,024 px x 512 px.
- **Working distance:** 280 mm ... 1,280 mm
- **Internal lighting:** Red, laser, Visible, 660 nm, ± 15 nm
- **Laser class:** 3B

Window material	3D profile resolution	Scatter resolution	Gray-scale resolution	Type	Part no.
Float glass, anti-reflective coated	1,024 px	1,024 px	1,024 px	Ruler-E1222	1029236

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com

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