Ruler
Gigabit 3D vision for tough environments

3D MACHINE VISION

SICK
Sensor Intelligence.
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
- **Laser class:** 2
- **Window material:** float glass, anti-reflective coated
- **3D profile resolution:** 1,536 px
- **Gray-scale resolution:** 1,536 px
- **Product family:** Ruler
- **Communication interface:** Ethernet, Serial
- **Enclosure rating:** IP65
- **Factory calibrated:** ✔
- **Internal lighting:** Red
- **Min. working distance:** ≥ 160 mm

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- **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
- **Laser class:** 2
- **Window material:** float glass, anti-reflective coated
- **3D profile resolution:** 1,536 px
- **Gray-scale resolution:** 1,536 px
- **Product family:** Ruler
- **Communication interface:** Ethernet, Serial
- **Enclosure rating:** IP65
- **Factory calibrated:** ✔
- **Internal lighting:** Red
- **Min. working distance:** ≥ 415 mm

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- **Sub product family:** Ruler E600 S
- **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
- **Laser class:** 2
- **Window material:** float glass, anti-reflective coated
- **3D profile resolution:** 1,536 px
- **Scatter resolution:** 1,536 px
- **Gray-scale resolution:** 1,536 px
- **Product family:** Ruler
- **Communication interface:** Ethernet, Serial
- **Enclosure rating:** IP65
- **Factory calibrated:** ✔
- **Internal lighting:** Red
- **Min. working distance:** ≥ 415 mm

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• **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
• **Laser class**: 3B
• **Window material**: float glass, anti-reflective coated
• **3D profile resolution**: 1,536 px
• **Gray-scale resolution**: 1,536 px
• **Product family**: Ruler
• **Communication interface**: Ethernet, Serial
• **Enclosure rating**: IP65
• **Factory calibrated**: ✔
• **Internal lighting**: Red
• **Min. working distance**: ≥ 415 mm

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• **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
• **Laser class**: 3B
• **Window material**: float glass, anti-reflective coated
• **3D profile resolution**: 1,536 px
• **Scatter resolution**: 1,536 px
• **Gray-scale resolution**: 1,536 px
• **Product family**: Ruler
• **Communication interface**: Ethernet, Serial
• **Enclosure rating**: IP65
• **Factory calibrated**: ✔
• **Internal lighting**: Red
• **Min. working distance**: ≥ 415 mm

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• **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
• **Laser class**: 3B
• **Window material**: float glass, anti-reflective coated
• **3D profile resolution**: 1,536 px
• **Gray-scale resolution**: 1,536 px
• **Product family**: Ruler
• **Communication interface**: Ethernet, Serial
• **Enclosure rating**: IP65
• **Factory calibrated**: ✔
• **Internal lighting**: Red
• **Min. working distance**: ≥ 415 mm

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• **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  
• **Laser class:** 3B  
• **Window material:** PMMA  
• **3D profile resolution:** 1,536 px  
• **Gray-scale resolution:** 1,536 px  
• **Product family:** Ruler  
• **Communication interface:** Ethernet, Serial  
• **Enclosure rating:** IP65  
• **Factory calibrated:** ✔  
• **Internal lighting:** Red  
• **Min. working distance:** ≥ 415 mm

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• **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  
• **Laser class:** 2  
• **Window material:** float glass, anti-reflective coated  
• **3D profile resolution:** 1,024 px  
• **Gray-scale resolution:** 1,024 px  
• **Product family:** Ruler  
• **Communication interface:** Ethernet, Serial  
• **Enclosure rating:** IP65  
• **Factory calibrated:** ✔  
• **Internal lighting:** Red  
• **Min. working distance:** ≥ 280 mm

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• **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  
• **Laser class:** 2  
• **Window material:** float glass, anti-reflective coated  
• **3D profile resolution:** 1,024 px  
• **Scatter resolution:** 1,024 px  
• **Gray-scale resolution:** 1,024 px  
• **Product family:** Ruler  
• **Communication interface:** Ethernet, Serial  
• **Enclosure rating:** IP65  
• **Factory calibrated:** ✔  
• **Internal lighting:** Red  
• **Min. working distance:** ≥ 280 mm

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Ruler | Ruler series
3D MACHINE VISION

• **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
• **Laser class:** 3B
• **Window material:** float glass, anti-reflective coated
• **3D profile resolution:** 1,024 px
• **Gray-scale resolution:** 1,024 px
• **Product family:** Ruler
• **Communication interface:** Ethernet, Serial
• **Enclosure rating:** IP65
• **Factory calibrated:** ✔
• **Internal lighting:** Red
• **Min. working distance:** ≥ 280 mm

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• **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
• **Laser class:** 3B
• **Window material:** float glass, anti-reflective coated
• **3D profile resolution:** 1,024 px
• **Scatter resolution:** 1,024 px
• **Gray-scale resolution:** 1,024 px
• **Product family:** Ruler
• **Communication interface:** Ethernet, Serial
• **Enclosure rating:** IP65
• **Factory calibrated:** ✔
• **Internal lighting:** Red
• **Min. working distance:** ≥ 280 mm

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• **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
• **Laser class:** 2
• **Window material:** float glass, anti-reflective coated
• **3D profile resolution:** 1,024 px
• **Gray-scale resolution:** 1,024 px
• **Product family:** Ruler
• **Communication interface:** Ethernet, Serial
• **Enclosure rating:** IP65
• **Factory calibrated:** ✔
• **Internal lighting:** Red
• **Min. working distance:** ≥ 280 mm

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- **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
- **Laser class:** 2
- **Window material:** float glass, anti-reflective coated
- **3D profile resolution:** 1,024 px
- **Scatter resolution:** 1,024 px
- **Gray-scale resolution:** 1,024 px
- **Product family:** Ruler
- **Communication interface:** Ethernet, Serial
- **Enclosure rating:** IP65
- **Factory calibrated:** ✔
- **Internal lighting:** Red
- **Min. working distance:** ≥ 280 mm

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- **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
- **Laser class:** 3B
- **Window material:** float glass, anti-reflective coated
- **3D profile resolution:** 1,024 px
- **Gray-scale resolution:** 1,024 px
- **Product family:** Ruler
- **Communication interface:** Ethernet, Serial
- **Enclosure rating:** IP65
- **Factory calibrated:** ✔
- **Internal lighting:** Red
- **Min. working distance:** ≥ 280 mm

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- **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
- **Laser class:** 3B
- **Window material:** float glass, anti-reflective coated
- **3D profile resolution:** 1,024 px
- **Scatter resolution:** 1,024 px
- **Gray-scale resolution:** 1,024 px
- **Product family:** Ruler
- **Communication interface:** Ethernet, Serial
- **Enclosure rating:** IP65
- **Factory calibrated:** ✔
- **Internal lighting:** Red
- **Min. working distance:** ≥ 280 mm

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• **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
• **Laser class:** 2
• **Window material:** PMMA
• **3D profile resolution:** 1,024 px
• **Gray-scale resolution:** 1,024 px
• **Product family:** Ruler
• **Communication interface:** Ethernet, Serial
• **Enclosure rating:** IP65
• **Factory calibrated:** ✔
• **Internal lighting:** Red
• **Min. working distance:** ≥ 280 mm

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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