

# Trimble Ri

## Robotic Total Station



### Key Features

- Level Detection & Monitoring
- Built-in calibration
- Focusing Red Laser EDM
- Trimble Vision technology
- Upgradeable Instrument
- FieldLink Integration

### Total Performance

Expanded range and various zoom levels plus new side to side search pattern for quick-lock onto prism, saves time when searching for a target.

### Built for Construction

Trimble's most scalable, accurate and automated Robotic Total Station. Easy set-up for faster efficient positioning with minimal training required.

The Trimble Ri is part of the Trimble Portfolio of Building Construction products advancing mixed reality technology through data visualization in the field.

Leverage the XR10 with HoloLens 2, together with FieldLink MR, to view and measure with confidence and precision.



# Trimble Ri Robotic Total Station

## Performance

**Accuracy**  
 Angle Accuracy  
 (based on ISO 17123-3) **2" (0.6 mgon) / 3" (0.9 mgon)**

**Automatic level compensator**  
 Type **MEMS, dual-axis, self-leveling**  
 Accuracy **2" (0.6 mgon)**  
 Working Range **± 5 gon (± 4,5 °)**

**Distance measurement**  
 Accuracy to Reflectors (based on ISO 17123-4)  
 Standard **2 mm (0.007 ft) + 2 ppm**  
 Tracking **3 mm (0.01 ft)**  
 Accuracy Reflectorless Mode **2 mm (0.007 ft) + 2 ppm**  
 Range Reflector Mode<sup>2</sup>  
 Single Prism 50 mm **900 m (2953 ft)**  
 Single Prism 25 mm **400 m (1312 ft)**  
 Cat-Eye Reflector 85 mm **300 m (984 ft)**  
 Foil Reflector 60 mm **300 m (984 ft)**  
 Shortest possible range **1 m (3.3 ft)**  
 Range Reflectorless Mode<sup>2</sup>  
 Kodak White (90% reflective) **840 m (2756 ft) / 150 m (492 ft)**  
 Kodak Gray Card (18% reflective) **375 m (1230 ft) / 150 m (492ft)**  
 Shortest possible range **0.5 m (1.6 ft)**

**Robotic Tracking**  
 360° Cat-Eye Prism  
 Robotic Range **1,5 m (5 ft) ... 120 m (427 ft)**  
 360° Prism<sup>3</sup>  
 Robotic Range **1,5 m (5 ft) ... 400 m (985 ft)**

## EDM Specifications

**EDM Laser and Principle**  
 Light source **Laser Diode 660 nm**  
 Laser Class Safety  
 Reflector Mode **Laser Class 2**  
 Reflector-less Mode and Laser Pointer **Laser Class 2**

**EDM Beam divergence**  
 Divergence **adaptive to distance (focusable laser)**

## EDM Specifications cont'd

Diameter **< 10 mm @ 100 m (0.4 in/328 ft)**  
 Diameter **< 4 mm @ 40 m (0.16 in/131 ft)**

## General Specifications

**Telescope**  
 Lens System **Continuous focus**  
 Aperture **32 mm (1.3 in)**  
 Field of view **2 gon – 12 gon (1.8 deg – 11 deg)**  
 Focusing distance **0.5 m – Infinity (1.7 ft – Infinity)**  
 Crosshair **Digital, superimposed**  
 Tracklight built in **Red / Green Status LEDs**

**Camera**  
 Resolution of Stream **960 x 540 or 1920 x 1080**  
 Resolution of Still Image **1 - 7 m: 1920 x 1080 (2,1 MPx)  
 7 - 300 m: 2560 x 1440 (3,7 MPx)**

**Environmental**  
 Operating temperature **-20 °C to +50 °C (-4 °F to +122 °F)**  
 Storage temperature **-40 °C to +70 °C (-40°F to +158 °F)**  
 Dust and water proofing **IP55**

**Power Supply**  
 Internal battery **Li-Ion, 10.8 V / 6.5Ah**  
 Operating time **4.5 hours**

**Communications**  
 Wireless communication **WLAN, Dual 2.4GHz and 5GHz band,  
 IEEE 802.11 a/b/g/n/ac**

**Weight**  
 Instrument (Trimble Ri) **5,65 kg**  
 Internal battery (Trimble Ri) **0.37 kg**

**Dimensions**  
 Height x Width x Depth (Trimble Ri) **368mm x 184mm x 178mm**



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