



Trimble Ri

Robotic total station



Key features

- Level detection & monitoring
- Built-in calibration
- Focusing red laser EDM
- Trimble® VISION™ technology
- Upgradeable instrument
- Trimble 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. With self-calibration and level detection built-in, easily set-up for faster, efficient positioning with minimal training required.

The Trimble Ri is equipped with Trimble VISION technology, allowing you to perform layout tasks with one person, saving both time and money. Additionally, FieldLink integration means you can use the same software for both scanning and layout, providing a seamless upgrade path to scale your business from job to job and site to site.

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SYSTEM OVERVIEW

Trimble Ri - robotic total station The Trimble Ri robotic total station is offered in three configurations—**Essential, Standard, and Plus.**

PERFORMANCE

ACCURACY

Angular accuracy (based on ISO 17123-3) **Essential:** 5" (1.5 mgon) **Standard:** 3" (1.5 mgon) **Plus:** 2" (0.6 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	Essential	Standard	Plus
Single Prism 50 mm	150 m (492 ft)	900 m (2,953 ft)	900 m (2,953 ft)
Single Prism 25 mm	150 m (492 ft)	400 m (1,312 ft)	400 m (1,312 ft)
Cat-Eye Reflector 85 mm	150 m (492 ft)	300 m (984 ft)	300 m (984 ft)
Foil Reflector 60 mm	150 m (492 ft)	300 m (984 ft)	300 m (984 ft)
Shortest possible range	1 m (3.3 ft)	1 m (3.3 ft)	1 m (3.3 ft)
Range Reflectorless Mode	Essential	Standard	Plus
Kodak White (90% reflective)	100 m (328 ft)	150 m (492 ft)	840 m (2,756 ft)
Kodak Gray Card (18% reflective)	100 m (328 ft)	150 m (492 ft)	375 m (1,230 ft)
Shortest possible range	0.5 m (1.6 ft)	0.5 m (1.6 ft)	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	Robotic range	1.5 m (5 ft) ... 400 m (985 ft)

EDM SPECIFICATIONS

EDM LASER AND PRINCIPLE

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

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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 × 540 or 1920 × 1080
Resolution of still image	1 - 7 m: 1920 × 1080 (2.1 MPx) 7 - 300 m: 2560 × 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 2.4 GHz and 5 GHz band, IEEE 802.11 a/b/g/n/ac
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WEIGHT

Instrument	5.65 kg
Internal battery	0.37 kg

DIMENSIONS

Height × width × depth	368 mm × 184 mm × 178 mm
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**Trimble Building Construction
Field Solutions**
10368 Westmoor Drive
Westminster CO 80021
USA