

# R2 PLUS

## POWERFUL PERFORMANCES AT AFFORDABLE PRICES

The STONEX R2 plus is an upgraded version of STONEX R2 Total Station range.

The significant specification is the high-precision EDM measuring with millimeter accuracies while performing angular measurements in order of seconds of a degree.

The STONEX R2 Plus encompasses laser technology (class 3 laser with a wavelength between 650 and 690nm) for distance measurement and coding technology for optical angular measurements. The instrument design is characterized by its robust mechanical chassis, certified dustproof and water-proof (IP55) standards. The STONEX R2 Plus is built with high performance optics with a 30X magnification factor and illuminated reticle featuring superior sighting quality in any lighting condition.

The STONEX R2 Plus offers angular accuracies of 2"or 5", and 2mm + 2ppm accuracy on distance measurements. The instrument EDM features DR distance measurement range of 350 meters on 5" accuracy instrument, 500 meters on 2" accuracy instrument and a measurement range up to 5000/7000 meters with single prism.

The removable storage option of SD card allows greater flexibility to increase the storage capacity and downloading of data. The instrument is facilitated with a mini USB connector for upload and

**KEY FEATURES** 

downloads of data to the computer and other external devices.

The instrument can be supplied with an inbuilt laser plummet or an optical plummet.



Alphanumeric keyboard on both sides with high resolution LCD display and backlight and 8 lines of 24 characters

HEAS

#### **LONG RANGE**

350m or 500m on 2" and 5" accuracy instrument and a measurement range up to 5000/7000m with single prism

Laser technology (class 3 laser with a

wavelength between 650 and 690 nm)

for distance measurement

#### EASY DATA

Communication with the mini USB port to load/download data

#### POWERFUL

Laser technology (class 3 laser with a wavelength between 650 and 690nm) for distance measurement

#### **EASY READER**

Alphanumeric keyboard on both sides with high resolution LCD display and backlight and 8 lines of 24 characters.

#### CAPACITY

Large storage capacity with 128MB internal memory and up to 2GB SD card for external memory

### TECHNICAL FEATURES R2 PLUS



R2 Plus Models	Vat	
Plus 350	R2 -2"	R2 -5"
Plus 500	R2 -2"	R2 -5"

Angle measurement		
Reading system	Absolute encoder	
Display resolution	1" / 0.0002gon/0.005mil	
Angle Unit	360°(dms/d)-400gon/6400mil	
Accuracy	2" or 5"	
Telescope		
Magnification	30 x	
Field of view	1°30′	
Minimum focus	1.0 m	
Reticle	10 brightness levels adjustable	
Objective aperture	ф 45 mm	
Compensation		
System	Dual-axis-compensation	
Working range	± 3.0'	
<b>Distance Measurement Range</b>		
Without Prism	1.0 ~350 <sup>1</sup> m - 1.0 ~500 <sup>1</sup> m	
With Prism	$2.0 \sim 3000^2 2000^3 1500^4$ Class 1 up to 5000/7000 m Class 3	
With reflective sheet (60mm x 60mm)	1.0 ∼800 m	
With Mini Prism	2.0 ∼800 m	
Distance Measurement Accura	acy	
Without Prism	$\pm$ (3+2×10 <sup>-6</sup> D)mm/(2 $\sim$ 150) m $\pm$ (5+3×10 <sup>-6</sup> D)mm/(150 $\sim$ 300) m $\pm$ (10+5×10 <sup>-6</sup> D)mm/(300 $\sim$ 500) m	
With Prism	± (2+2x10 <sup>-6</sup> D) m	
With reflective sheet (60mm x 60mm)	± (3+2x10 <sup>-6</sup> D) m	
Distance Measurement		
Measuring time <sup>5</sup> (Tracking/Fast/Fine)	0.5 sec / 1.5 sec / 2.0 sec	
Distance Unit	m/ft/US ft	
Display Resolution	0.0001m/0.001ft/0.001ft	

Specifications	subject	to change	without notice
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1 Visibility about 20 km, back light less than 5000 lx, no haze, no direct sunlight.

No prism target: KODAK CAT NO.E1527795 (reflectivity: 90%, size: A4).

Laser plummet	COE CEO	
Laser type	635-650nm semiconductor laser	
Accuracy	1 mm at 1.5 m instrument height	
Laser spot	2.5 mm /1.5 m	
Level vial sensitivity		
Plate level	30 ("2mm)	
Circular level	8 ('/2mm)	
<b>Environmental conditions</b>		
Operating / Storage Temperature	-20° C; +50° C / -30° C; +70° C	
Protection to dust and water	IP55	
Weight		
Weight including battery and tribrach	5.5 Kg	
Battery		
Voltage/Capacity	7.4V / 3400mAh Li-ion battery	
Operating period with continuous angle measurement	36 hours	
Operating period with measurement every 30 seconds	9 hours (>1.000 measurements)	
Other specifications		
Display	Two sides, LCD, 240x128 dots	
Internal Memory	128 MB	
External Memory	2 GB SD card	
Interface	RS-232C / USB/ SD card	
Charger	110/220V, Charging time: about 4h	
Bluetooth	Available on R2 Plus 500 - 2"	
Sensor	Temperature/Pressure	







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 $<sup>^{2}</sup>$  Visibility about 40 km, sunny, no heat shimmer.

<sup>&</sup>lt;sup>3</sup> Visibility about 20 km, moderate sunlight, slight heat shimmer.

<sup>&</sup>lt;sup>4</sup> Visibility about 10 km, light haze, severe heat shimmer.

<sup>&</sup>lt;sup>5</sup> Best testing condition: indoors, target is far away about 10 m, prism or KODAK board.