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R40 Android Total Station

Total Station
with Android
on board

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suite cube

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R40 Total Station with Android on board

R40 is a mechanical total station featuring Android 11 Operating System and equipped with Cube-a software on board. Designed for accuracy and efficiency, it is available in two versions with 1"/2" angular accuracy, and features accuracy on distance measurements of 2mm + 2ppm in prism mode and 3mm + 2ppm without prism. The possibility to measure up to 5000m with prism and 1000m in reflectorless mode makes it a versatile instrument for various surveying tasks.

Equipped with 4GB RAM and 64GB ROM, it supports efficient data processing and storage. With built-in GSM connectivity, the R40 allows the user to stay connected in the field, sending and receiving data or accessing remote support. R40 is characterized by Cube-a onboard application, that can integrate and manage GNSS survey data and total station information for streamlined data management.

Bluetooth supports easy data transfer between the station and other devices, while dual 5.5-inch TFT LCD screens provide clear visibility in any lighting. The intuitive 13-key keypad ensures quick access to essential functions, making fieldwork easier than ever.

ANGLES AND EDM

R40 is available with an angle accuracy of 1"/2". It offers precision measurements of 2mm + 2ppm in prism mode and 3mm + 2ppm in reflectorless mode. This instrument is capable of measuring distances up to 5000m with a prism and 1000m in reflectorless mode.

PERFORMANCE

The total station features 4GB of RAM and 64GB of ROM, providing ample memory for efficient data processing and storage. R40 is equipped with a GSM module able to guarantee connectivity right in the field and transfer data between the field to the office in a very fast and simple way.

ANDROID AND CUBE-A

R40, with Android 11 operating system and pre-installed with the Cube-a software, facilitates the integration of data from GNSS surveys and total stations. Bluetooth simplifies communication and data exchange between the station and the GNSS controller.

DISPLAY AND KEYBOARD

R40 mounts two high-quality 5.5-inch TFT LCD screens boasting a resolution of 720 x 1280 pixels. In addition, the total station is equipped with an intuitive 13-key keypad, designed for efficient operation and quick access to essential functions, and a trigger key to start the measurement.

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STONEX SURVEYING SYSTEMS

cube·a

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ONBOARD SOFTWARE

The Cube-a software, pre-installed on the R40 Android total station, offers a wide range of features designed to enhance the efficiency and precision of surveying tasks. Notable capabilities include direct I/O support for total stations and Bluetooth connectivity for GNSS receivers, allowing seamless integration of data from multiple sources.

INTEGRATED CAD

During both the survey and staking phases, Cube-a enables operators to work in a simple, intuitive manner, enriching field data with overlays from Google Maps or user-imported cartography. With a powerful built-in CAD system, Cube-a allows operators to complete point measurements directly in the field by adding graphic elements, producing a fully detailed restitution that's ready for immediate use.

EASY DATA TRANSFER

Cube-a also supports efficient data exchange between the total station and a remote controller. This transfer can be done via Bluetooth or Wi-Fi, eliminating the need for cables and simplifying the workflow. Thanks to its advanced features and user-friendly interface, the R40 Android total station is a powerful tool for any surveying project.

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R40 TECHNICAL FEATURES

ANGLE MEASUREMENT

Accuracy[1]	1″ / 2″
Reading system	Absolute encoder
Angle Units	DEG 360° / GON 400 MIL 6.400
Display resolution	0.1″

TELESCOPE

Magnification / Field of view	30x / 1°30′
Tube length	160mm
Minimum focus distance	1.7m (5.6ft)
Reticle illumination	Adjustable
Objective aperture	Ø 44mm
Laser pointer	Red light, coaxial

TILT SENSOR

Type	Optoelectronic, dual axis
Compensation range/accuracy	± 4.0′/3″

DISTANCE MEASUREMENT RANGE[2]

Prism mode[3]	5000m
Reflective sheet (6cm x 6cm)[3]	800m
Reflectorless[4]	1000m

DISTANCE MEASUREMENT ACCURACY[5]

Prism	2mm + 2ppm
Reflective sheet (6cm x 6cm)	2mm + 2ppm
Reflectorless	3mm + 2ppm

MEASUREMENT TIME

Prism (Track/Fast/Standard)	0.3 / 0.5 / 0.8sec
Reflectorless	≥ 0.3sec

DISTANCE MEASUREMENT

Distance Units	m / US-ft / INT-ft / ft-in$\frac{1}{16}$
Display Resolution	0.001m / 0.01ft

LASER PLUMMET

Carrier wave	635nm
Accuracy	± 1.5mm @ 1.5m
Spot	2.5mm @ 1.5m

LEVEL VIAL SENSITIVITY

Plate level	30″ / 2mm
Circular level	8′ / 2mm

ENVIRONMENTAL CONDITIONS

Operating Temperature	-20°C +50°C (-4°F +122°F)
Storage Temperature	-30°C +60°C (-22°F +140°F)
Waterproof/Dustproof	IP55

PHYSICAL SPECIFICATION

Dimensions	365 x 195 x 169mm
Weight including battery and tribrach	5.9Kg

POWER

Battery Voltage/Capacity/Type	7.4V / 2600mAh / Li-ion
Operating time	5 hours[6]
Battery charger	100 / 240V, charging time 3h

OTHER SPECIFICATIONS

Display	5.5-inch, TFT LCD screen 720 x 1280 px (2 displays)
Keyboard	13 keys
CPU	MT6762
OS	Android 11
Memory	RAM 4GB, ROM 64GB
Interface	USB Type-C (OTG) Bluetooth WLAN Micro SIM TF Card
GSM	4G
Trigger Key	Yes

ON BOARD FIELD APPLICATION PROGRAMS

Cube-a GPS-TS

1 Standard deviation based on ISO 17123-3
2 Good condition: no haze, visibility about 40km, no heat shimmer, breeze.
Under optimal conditions on Kodak Grey Card (90% reflective)
3 Class 1
4 Class 3R
5 Standard deviation based on ISO 17123-4
6 Battery duration depends also on display brightness

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