Your Partner in Precision

Singular XYZ®

ORION

ORION GNSS ROVER WITH AR LASER

VISUAL + LASER. ACCURACY WITHOUT LIMITS.

The ORION GNSS Rover integrates advanced GNSS, visual positioning, IMU tilt compensation, and laser measurement technologies to deliver unmatched accuracy, safety, and efficiency in any environment.



AR VISUAL STAKEOUT
Augmented reality guides you to the exact point.

10M LASER MEASUREMENT
Measure points, distances and hard-to-reach places with built-in laser.

60° IMU TILT COMPENSATION
Work at any angle up to 60° without leveling the pole.

VISUAL SURVEYING
Real-time photo overlay for intuitive and efficient data collection.

NON-CONTACT SURVEYING
Collect safe, accurate data without physically touching the target.

GNSS + VISION + LASER FUSION
Deep fusion technology delivers centimeter-level accuracy in challenging environments.

SMARTER MEASUREMENTS. BETTER DECISIONS. ORION

KEY FEATURES

1408 CHANNELS
Track all major constellations for reliable, consistent performance.

10m LASER RANGE
Measure points up to 10 m with high precision.

VISUAL SURVEYING
Photo overlay and AR visualisation for confident data collection.

60° IMU TILT COMPENSATION
Measure accurately up to 60° tilt without leveling.

NON-CONTACT LASER SURVEYING
Collect data safely without touching the target.

IP67 PROTECTION
Dustproof & waterproof for reliable performance in harsh environments.

TECHNICAL SPECIFICATIONS

Category	Item	Specification
SATELLITES TRACKING	1. Channels	1408
	2. GPS	L1C/A, L1C, L2P, L2C, L5
	3. BDS	B1I, B2I, B3I, B1C, B2a, B2b
	4. GLONASS	G1, G2, G3
	5. Galileo	E1, E5a, E5b, E6
	6. QZSS	L1C/A, L1C, L2C, L5
	7. NavIC	L5
	8. SBAS	WAAS, EGNOS, MSAS, GAGAN, SDCM
	9. L-band	Support
LASER MEASUREMENT	1. Range	0.05 ~ 10 m
	2. Accuracy	± (2 cm + 1 ppm)
	3. Laser Class	Class 1 (eye safe)
	4. Wavelength	905 nm
IMU	1. Tilt Angle	0° – 60°
	2. Tilt Accuracy	2.5 cm (within 30° tilt)
	3. Compensation	IMU-based tilt compensation
ACCURACY	1. Horizontal	8 mm + 1 ppm RMS
	2. Vertical	15 mm + 1 ppm RMS
	3. Static Horizontal	1.5 mm + 0.5 ppm RMS
	4. Static Vertical	3 mm + 0.5 ppm RMS
	5. Time Accuracy	20 ns
	6. Initialization Time	< 10 s
	7. Reliability	> 99.9%
PHYSICAL	1. Size	Φ107 mm × 58.7 mm
	2. Weight	547 g (incl. battery)
	3. Housing Material	Magnesium-aluminium alloy
	4. Storage	8 GB
	5. Indicators	4 LEDs (satellite, data link, laser, power)
	6. Buttons	1 Power Button
ELECTRICAL & ENVIRONMENTAL	1. Input Voltage	DC 9 ~ 28 V
	2. Power Consumption	< 2 W (Typical)
	3. Battery	7.2 V (min), 6800 mAh
	4. Battery Life	> 15 hours (Base/Rover)
	5. Operating Temperature	-20°C to +50°C
	6. Storage Temperature	-40°C to +80°C
	7. Water & Dust Proof	IP67
	8. Drop	Survives 1.5 m pole drop
COMMUNICATION	1. UHF Radio	Tx: 1 W (410–470 MHz)
	2. Bluetooth	BT 4.0 Dual mode
	3. WiFi	802.11 a/b/g/n/ac
	4. NFC	Support NFC
	5. Network	4GLTE (Optional)

COMPLETE SCANNING PACKAGE

EVERYTHING YOU NEED TO CAPTURE REALITY - RIGHT OUT OF THE BOX.



ORION GNSS Rover | Carry Case | Field Data Collector SC300 | Data Collector Bracket | Range Pole 2.2M Corbon Fibre | Singular Pad Software

COMPLETE PACKAGE PRICE

R54,995 EXCL. VAT

PROFESSIONAL PERFORMANCE. EXCEPTIONAL VALUE.

ADVANCED SURVEYING SIMPLIFIED

LOCAL TRAINING
- HANDS-ON TRAINING FOR YOUR TEAM

CALIBRATION SUPPORT
- KEEP YOUR EQUIPMENT PERFORMING AT ITS BEST

LOCAL SUPPORT
- FAST, RELIABLE SUPPORT WHEN YOU NEED IT

WARRANTY
- 12 MONTHS WARRANTY





CONSTRUCTION SURVEYING
Site layout, stakeout, as-built surveys, and construction verification.

TOPOGRAPHIC SURVEYING
Fast, precise terrain mapping using GNSS, laser & visual positioning.

BIM & DIGITAL TWIN CREATION
Capture real assets, integrate data into smart 3D models.

UTILITY MAPPING
Safely measure inaccessible assets and underground utilities.

CLE CAPE LABORATORY EQUIPMENT

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