PARTNERED PRODUCTS



SingularPad
Field Surveying Software

- Full Work Modes Support
- Various Survey & Stakeout Methods
- Bluetooth & Wi-Fi Connectivity
- Laser Surveying & Visual Targeting
- Real-time Visual AR Stakeout
- RTK Visual Photogrammetry
- Both GNSS receiver & Total Station Support

Point Survey | Point Stakeout | CAD Mapping | DSM Stakeout | Stake Road | Volume Calculation | Perimeter and Area | Localization | Survey Range Settings

SC300 DATA COLLECTOR



Android
Powered by Android **12 OS**

6 inch
6" sunlight-readable touch screen

IP67
IP67 & **1.5m** anti-drop

12h
7700mAh battery for **16h** operating

4G
4G/WiFi/Bluetooth communication

TF
4GB RAM + **64GB** ROM + **Extend TF**

Horus Visual & Laser GNSS Receiver

SATELLITES TRACKING

Channels	1408
BDS	B1I, B2I, B3I, B1C, B2a, B2b
GPS	L1C/A, L1C, L2C, L2P(Y), L5
GLONASS	G1, G2, G3
Galileo	E1, E5a, E5b, E6
QZSS	L1C/A, L1C, L2C, L5
NavIC	L5
SBAS	WAAS, EGNOS, SDCM, BDSBAS, GAGAN
L-Band	Support
Cold start	<30s
RTK Initialization Time	<5s(typical)
RTK initialization reliability	>99.9%
Re-acquisition	<1s

ACCURACY

Standalone	1.5m Horizontally 2.5m Vertically
DGPS	0.4m Horizontally 0.8m Vertically
Static Post-processing	2.5mm+0.5ppm Horizontally 5mm+0.5ppm Vertically
RTK	8mm+1ppm Horizontally 15mm+1ppm Vertically
PPP	5cm Horizontally 10cm Vertically
SBAS	< 1.0 m 3D RMS
Time Accuracy	20ns
Tilt Surveying	< ±2.5cm, within 60° Tilt Range
AR Stakeout	8mm+1ppm Horizontally 15mm+1ppm Vertically
Photogrammetry	2–5 cm @ 2–20 m range, typical
Laser tilt surveying	3 cm @ 10 m range, typical

DATA FORMAT

Data Output Format	- NMEA-0183 - RINEX 3.02/3.04 - Binary Format *.xyz
Data Update Rate	1～50Hz Selectable
Correction Data Format	- RTCM v3.3/3.2/3.1/3.0
Supported Protocols	Ntrip client, Ntrip Server, Ntrip Caster, TCP, UDP

COMMUNICATION

UHF Modem	- Working range: Up to 15km with optimal conditions[1] - Frequency range: 410-470MHz - Protocol: CSS,TRIMATLK,TRANSEOT, SATEL,TRIMMARK3, etc. - Channel spacing:25KHz - Transmit power:0.5W~2W selectable
Bluetooth	BT4.0 Dual Mode
NFC	Support NFC Connection
WiFi	802.11 a/b/g/n/ac
Interface	- 1 Type-C Interface for Data Transmission and Charging - 1 SMA Connector for UHF Antenna

HARDWARE

Platform	Quad-core 1.5GHz CPU, 2.0Tops NPU
Laser Sensor	- Class 3R, avoid direct eye exposure - Range: 50m
Camera	- Dual-camera with 2MP global shutter - Frame: 25 fps

USER INTERACTION

Front panel	- 3 LED indicators indicating satellite tracking, differential data transmission and power - 1 button for power on/off
WebUI	- Accessible via Wi-Fi - Support Configuration, Status Checking, Data Transfer, Data Storage and System Upgrade

ELECTRICAL

Power Consumption	> 3.5 W [2]
Battery	- 6600 mAh, up to 12 hours working time - Fast charge of 3.5 hours charging time

PHYSICAL

Size	Φ133 mm × 72 mm
Weight	720g
Storage	8 GB [3]
Housing Material	Magnesium-aluminum Alloy

ENVIRONMENTAL

Working Temperature	-30℃ to + 65℃
Storage Temperature	-55℃ to + 85℃
Humidity	100% Non-condensing
Waterproof & Dustproof	IP67
Drop	Designed to Survive a 2m Drop onto Concrete

1. The maximum UHF range reaches up to 15 km under optimal conditions with CSS protocol only; other protocols typically offer shorter ranges. Actual performance may vary with environmental conditions.
2. The power consumption varies with the different work modes.
3. Storage can be expanded to 32GB according to user demands.

All specifications are subject to change without notice.
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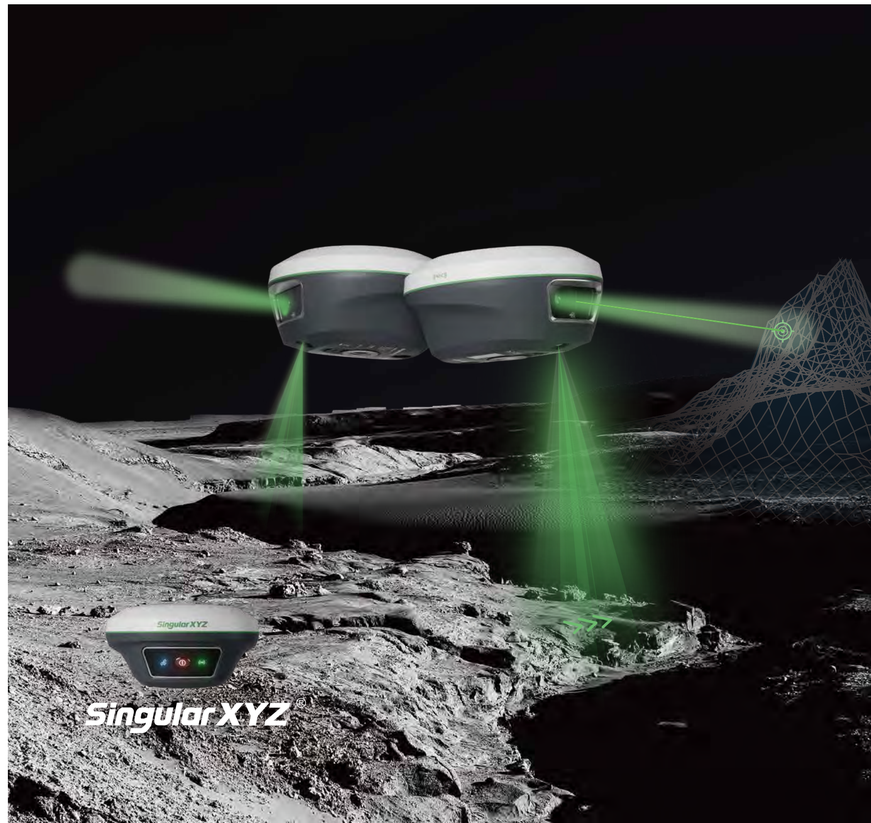
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Horus
VISUAL & LASER GNSS RECEIVER

SingularXYZ

Redefining Measurement With Vision



HORUS VISUAL & LASER GNSS RECEIVER

The Horus GNSS receiver combines strong GNSS engine, new-gen IMU, versatile work modes and leading-edge visual & laser technologies in a compact, rugged housing, bringing an efficient, precise and smart surveying experience for professionals.

By fusing dual cameras and a laser sensor, Horus enables immersive AR stakeout, non-contact laser surveying with visual aiming, and high-precision visual surveying—expanding the capabilities of traditional RTK surveying.

Full-Constellation
1408 channels track GPS, BDS, GLONASS, Galileo, QZSS, NavIC, and SBAS simultaneously, delivering centimeter-level accuracy.

Next-Gen IMU
New-generation IMU enhances reliability and integrates with pole surveying, AR stakeout, laser surveying, and visual surveying.

Enhanced UHF
Enhanced UHF reaches up to 15 km in optimal conditions, reducing the need for external radios.

Versatile Connectivity
Support Bluetooth/WiFi/NFC/USB connectivity, you can easily interact with Horus in various ways by different purpose.

12Hrs Battery Life
Built-in battery with 6600mAh large capacity support more than 12 hrs working time and only 3.5hrs charging time.

Web UI Access
Access via WiFi to configure work modes, download data, upgrade firmware, and check device status through a web interface.



SEE CLEARER, MEASURE FURTHER

Hard-to-Reach Points, Hazardous Areas, GNSS-Denied Zones - Measured with Ease

Non-Contact Laser Surveying

Precise Laser Surveying
Visible green laser delivering centimeter-level accuracy



Camera-Assisted Targeting
See clearly, aim precisely - no matter the distance



Precise Visual Surveying



HD Starlight-Grade Camera
Capture clear, detailed images anytime



Tap & Measure on SingularPad
Instant centimeter-level photogrammetry

INTUITIVE AR VISUAL STAKEOUT

Stake What You See, Boost Efficiency by Over 50%



• Front Camera
Long-Range Targeting with Precision Guidance



Auto-Switch Based on Distance
Always the Best View for Every Stakeout Point

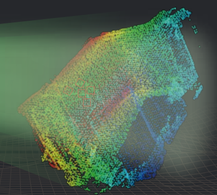
• Bottom Camera
Close-Range Stakeout with Immersive AR View

VISUAL DATA READY FOR 3D MODELING

From Visual Capture to Seamless Modeling



Integrated Camera For Visual Data Capture



Compatible With Leading 3D Modeling Software