

AuroraNav

Astra 1

Mobile Visual RTK
Measure what you can't reach

Visual Survey
3D Reconstruction
Professional Precision
Long range LoRa Radio



A New Way to Measure What You Can't Reach



Photogrammetry

Measure hard-to-reach or remote points.
Geo-referenced 3D scanning.



Survey-Grade GNSS Performance

1408-channel survey-grade chip.
All constellations, multiple frequencies.
Up to 8mm horizontal accuracy.



AI-enhanced Reliability

AI based reliability control.
Fast and stable RTK fix in challenging environments.



Ultra-Compact. Field-Ready.

Only 60g.
Matchbox-sized design.
Built-in LoRa radio for operation without cellular network.



Capture

Images from safe locations



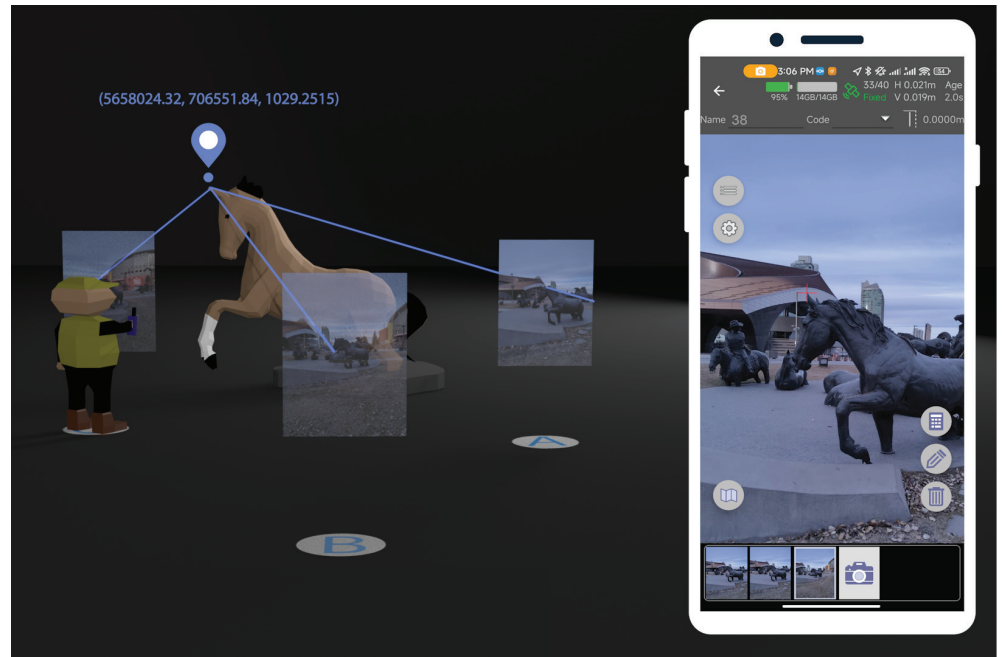
Select

Target point on photos



Solve

Centimeter-level coordinates instantly



Direct Photo-Based Measurement

Ideal for



Hard-to-reach



Unsafe



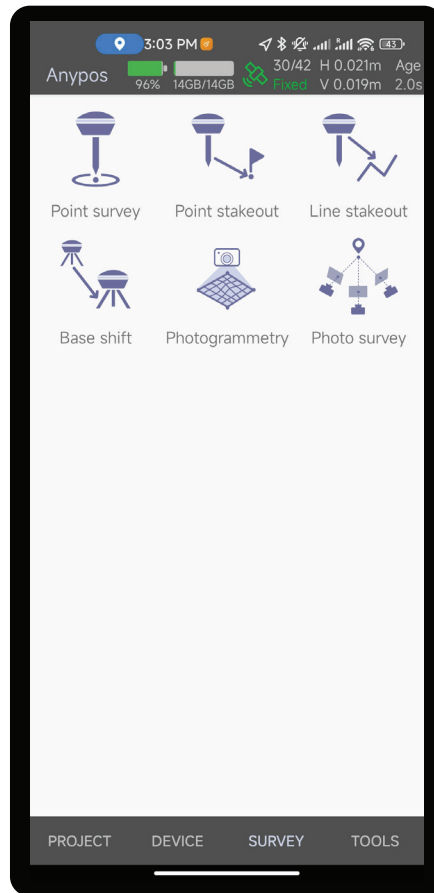
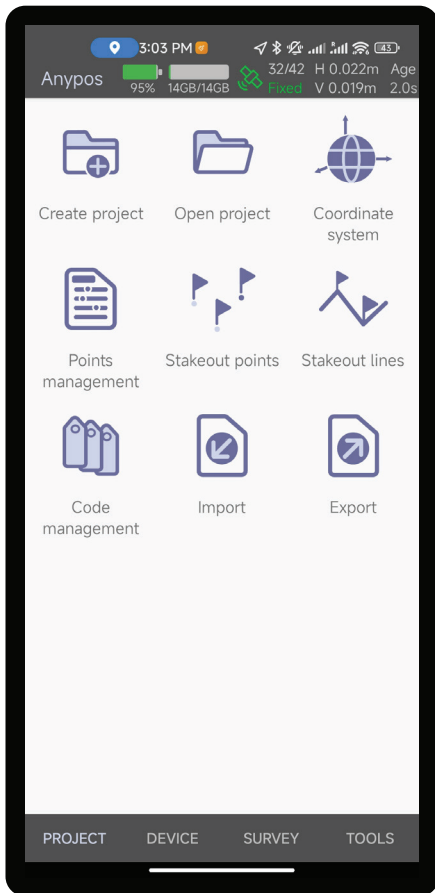
Elevated



GNSS-challenged

Anypos: Professional Survey APP

Anypos is a professional mobile survey app that brings surveying, photo survey, photogrammetry, and 3D scanning into one unified workflow.



From Photos to Georeferenced 3D Models

Specifications

GNSS Performance

Channels	1408 channels
Signal Tracked	GPS: L1C/A, L2C, L2P, L5 GLONASS: G1, G2 Galileo: E1, E5a, E5b, E6* Beidou: B1I, B2I, B3I, B1C, B2a, B2b* QZSS: L1, L2, L5 SBAS: L1C/A
Antenna gain	35±2dB
Cold Start	< 30 s
Initialization Time	< 5 s (typical)
Initialization Reliability	> 99.9%
Data Update Rate	10Hz
Differential Data	RTCM V3.X

Positioning Accuracy

Single Point Positioning	Horizontal: 1.5m Vertical: 2.5m
DGPS	Horizontal: 0.4m Vertical: 0.8m
RTK	Horizontal: 0.8cm+1ppm Vertical: 1.5cm+1ppm
Velocity Accuracy	0.03 m/s

Photogrammetry

Image sensor	From cellphone
Photo survey accuracy	<4cm (2-15m distance)

Radio

Power	150mW
Modulation	LoRa
Sensitivity	-120 dBm
Frequency	850Mhz-930Mhz
End-to-end encryption	Yes
Range	Up to 10KM (2m height, line-of-sight)
Other functions	Listen-before-talk Frequency occupation scan

Hardware

Dimensions	200mm * 53mm * 30mm
Weight	60g (cellphone rack excluded) 184g (cellphone rack included)

Environment

Operating temperature	-40 ~ 60 °C
Storage temperature	-40 ~ 70 °C
Water/dust proof	IP67
Shock proof	2m
Humidity	100%

System parameters

System	Low latency RTOS
Data record	DAT
USB	USB CDC-ACM

Power

Power consumption	5V 0.16A
Working time	Typical 8h(5000mAh battery cellphone with Anypos APP screen on)

Port

Type-C	Power & data transmission
SMA	GNSS antenna

*: support by specific firmware

Specifications are subject to change without notice.

Find more at www.aurorana.com

