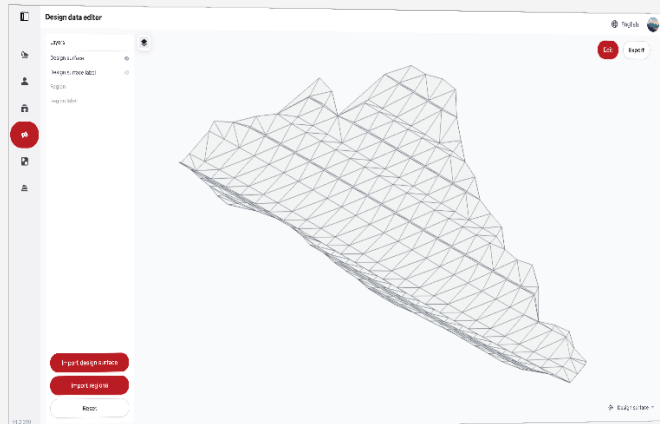


Why SOUTH EGS01?

2D-to-3D Model Conversion

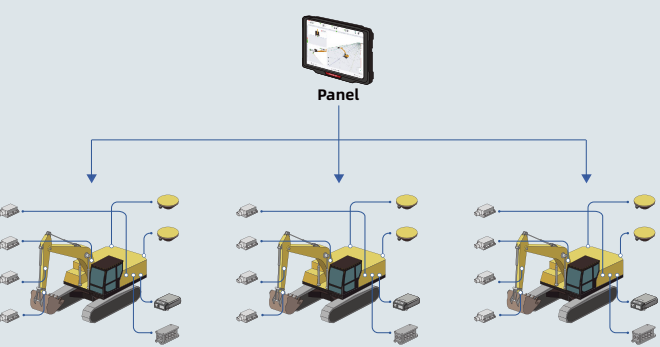
Lower the barrier to adoption and bring traditional projects into intelligent construction.



For projects that still rely on 2D drawings as primary deliverables, the cloud tool enables one-click conversion into 3D models—helping traditional workflows quickly transition to intelligent construction, especially for linear projects such as roads, trenches, and dredging.

Loom Kit

Designed for large contractors or leasing companies managing multiple excavators.



A portable control panel can be shared across multiple machines.

- Lower total investment across the fleet.
- Flexible deployment based on project needs.
- Maximized utilization of regular 3D Syste ms.

Fast Installation & Calibration

- Non-invasive magnetic mounting.
- Guided calibration workflow.
- Ready for operation within 1 hour.



Less downtime means saving money for customers and staying on schedule. The kit uses magnetic snap-on sensors, paired with a guided calibration app for rapid setup and calibration, ready for operation in one day. Factory setup or inventory setup are also available for new machines.

Industrial-grade Durability

Sealed steel enclosure, engineered for long-duration operation and harsh job-site conditions.



Built for demanding job sites, the SOUTH hardware is designed to withstand vibration, dust, mud, rain, and long working hours. Even in challenging environments such as underwater dredging and trenching projects, the system maintains stable and reliable performance.

Specification

GNSS Receiver	
Satellite Tracking	GPS: L1C/A, L2C, L2P(Y), L5 GLONASS: G1, G2 Galileo: E1, E5a, E5b BDS: B1I, B2I, B3I QZSS: L1C/A, L2C, L5 SBAS: L1C/A
GNSS Performance	Single Point Positioning (RMS): H. 1.5m; V. 2.5m DGPS (RMS): H. 0.4m; V. 0.8m RTK (RMS): H. 0.8cm+1ppm; V. 1.5cm+1ppm Heading Accuracy (RMS): 0.1°/1m baseline Time Accuracy (RMS): 20ns Speed Accuracy (RMS): 0.03m/s Vibration: 5g, 5-500 Hz, 15mm Shock: 60g, 6ms
Interfacing I/O	1x power supply, 1x RS-232 EIA standard, 1x CAN, 1x USB, 2x GNSS antenna TNC, 1x radio antenna TNC, 1x Micro SIM, 1x 4G antenna SMA Mechanical shock: GB/T 2423.5-2019 Random vibration: GB/T 2423.56-2023 Sine vibration: GB/T 2423.10-2019
Radio Datalink UHF	Rx inbuilt, 410-470 MHz (902-928 MHz for USA market as an option)
Radio Datalink Protocol	SOUTH, Farlink, TrimTalk, Satel, Hi-target, HUACE
CORS Ntrip Access	Accessible to local CORS setups via 4G telecom
Bluetooth	BT 4.2 standard
Wi-Fi	802.11b/g/n standard
Electrical	9-36V D/C high-voltage, protected with anti-reverse connection, overvoltage and overcurrent
IP Rating	IP 67
Working Temperature	-40°C ~ +75°C
Storage Temperature	-40°C ~ +85°C
Dimension	158x119x59 mm
Weight	750 g
IMU Sensor	
Type	Industrial-grade, 9-axis, body, boom, stick, and bucket one each for upper structure orientation, boom angle measurement, stick angle measurement, and bucket angle measurement respectively
Static Accuracy	Roll <0.4°, pitch <0.4° (RMSE), heading/yaw <0.8° (RMSE)
Gyroscope Bias Stability	X, Y axis: 5.5 °/h; Z axis: 5.0 °/h
Data Refresh Rate	800 Hz
IP Rating	IP 67
Shock (5ms)	200g
GNSS Antenna	
Signal Tracking	GPS L1/L2/L5, BDS B1/B2/B3, GLONASS L1/L2/L3, GALILEO E1/E5a/E5b/E6, QZSS L1/L2/L5/L6, IRNSS L5, SBAS L1/L5, L-Band
Nominal Impedance	50Ω
Polarization	RHCP
Axial Ratio	≤3dB
Horizontal Coverage	360°
Output SWR	≤2.0
Max. Gain	4.5dBi
Phase Center Stability	±2mm
Differential Tx Delay	≤5ns
IP Rating	IP 67
Smart I/O	
IP Rating	Ip67
Mechanical Shock	GB/T 2423.5-2019
Random Vibration	GB/T 2423.56-2023
Sine vibration	GB/T 2423.10-2019
Panel Display	
Type	10.1-inch industrial touch screen, sunlight readable
Wi-Fi	5.0
Bluetooth	5.0
IP Rating	IP 65
Random Vibration	GB/T 2423.56-2023 (typical 5-200 Hz, 3.0 g r.m.s.)
Mechanical Shock	GB/T 2423.5-2019 (typical half-sine wave, 200g, 5 ms)
Sine Vibration	GB/T 2423.10-2019 (typical 5-200 Hz, 1.5 mm or 5 g)
2nd-boom IMU Sensor (option, as a dual-boom kit)	
Type	Industrial-grade, 9-axis, for additional boom articulation
Static Accuracy	Roll <0.4°, pitch <0.4° (RMSE), heading/yaw <0.8° (RMSE)
Gyroscope Bias Stability	X, Y axis: 5.5 °/h; Z axis: 5.0 °/h
Data Refresh Rate	800 Hz
IP Rating	IP 67
Shock (5ms)	200g
Tilt IMU Sensor (option, as a tilt kit)	
Type	Industrial-grade, 9-axis, for tilt angle detection
Application	for tilt bucket, tilt coupler or tilt rotator coupler
Static Accuracy	Roll <0.4°, pitch <0.4° (RMSE), heading/yaw <0.8° (RMSE)
Gyroscope Bias Stability	X, Y axis: 5.5 °/h; Z axis: 5.0 °/h
Data Refresh Rate	800 Hz
IP Rating	IP 67
Shock (5ms)	200g
Protection Kits (option)	
IMU Protective Case	High-strength steel protective housing for IMU with impact resistance and dust protection
Protective Case Base Plate	Steel mounting plate for securing the protective housing at the designated installation position on the rocker arm
Hose Assembly	Industrial-grade protective hose for shielding the IMU signal harness from the rocker arm to the stick against pulling and abrasion
Connector Mounting Base	Steel mounting plate for securing the protective housing at the designated installation position on the rocker arm



SOUTH EGS01
3D Excavator Guidance System

DIG SMARTER.
DIG FASTER.
FINISH SOONER.

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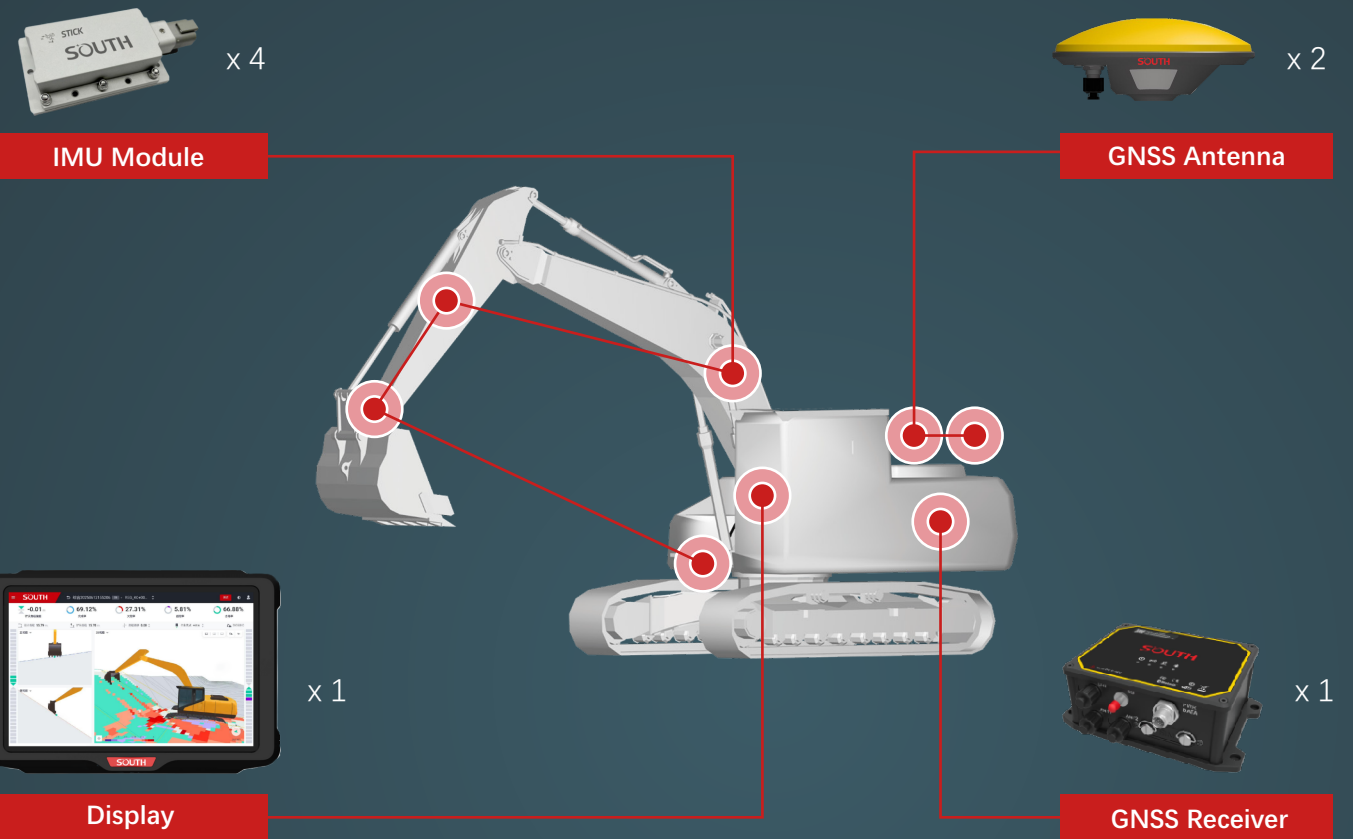


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What is SOUTH EGS01?

SOUTH EGS01 integrates high-precision GNSS and IMU sensing with advanced algorithms to track the excavator's spatial posture in real time. Based on design terrain data, it generates intuitive 3D visual guidance to help operators achieve high-precision excavation—efficiently, accurately, and safely.





Accuracy up to
3cm



Boost efficiency up to
30%



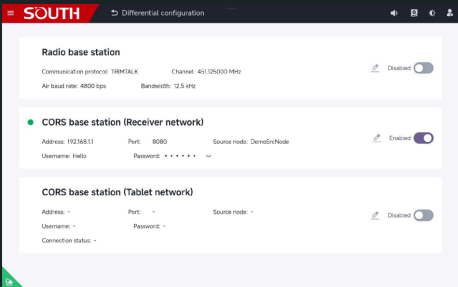
Cost savings up to
30%



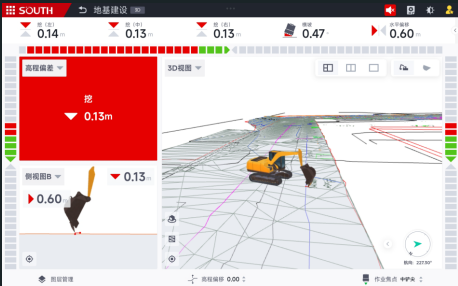
Enhanced safety
0 accident

How it Works

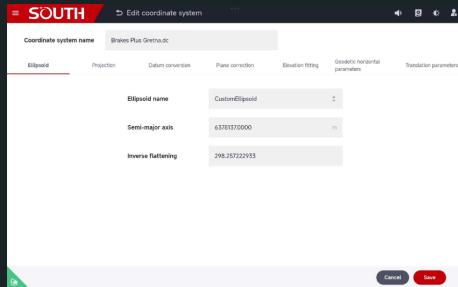
Simple to use.
Easy to get started.



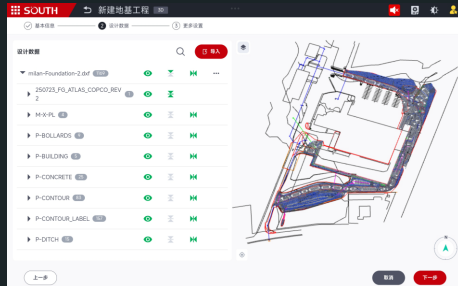
Set up a base station or connect to a CORS



Get real-time machine guidance during operation



Configure the coordinate system



Capture reference terrain points or import CAD models

Scalable 3D Solutions for Every Project Size

Choose the version that fits your needs and upgrade anytime as you grow.



Premium Version:
Designed for large projects with 3D model files, supporting 10+ ton machines

1**2****3**



Standard Version:
Small to medium projects, supporting 10+ ton machines

1**2**



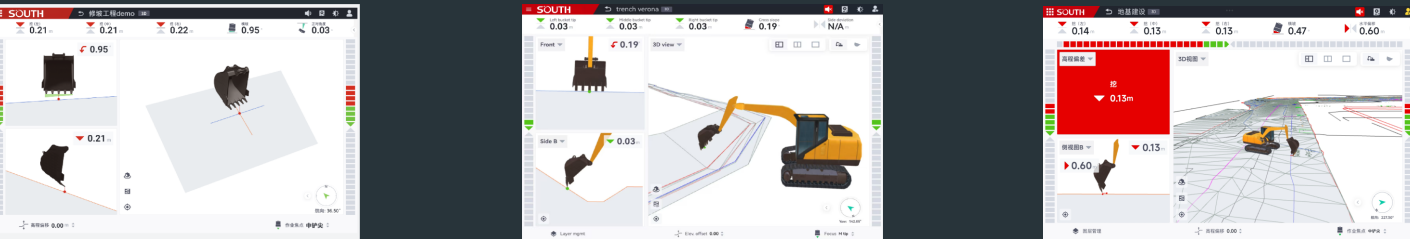
Lite Version:
Designed for machines under 10 tons (only bucket view)

1**2**

1 **3D Basic**
Collect essential reference points in the field and define simple parameters—such as slope ratio and slope height—to automatically generate basic 3D surfaces.

2 **3D Generic**
Capture coordinates of on-site reference points and generate 3D surfaces and guide lines directly from the collected geometry.

3 **3D Advanced**
Import complex 3D surface and line models from design files, supporting both DXF and LandXML formats.



Built for All Kinds of Job Sites and Machines

