



**PRECISE E2**  
**Enjoy a**  
**PRECISE,**  
**RELIABLE,**  
**and EASY**  
**experience!**

*Dig Precisely. Work Independently. Finish with Confidence.*

Super-high Fix Rate  
**99.9%**

**M** MATRIX  
Enhanced by  
the MATRIX ALGORITHM

Think **PRECISE!**

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# PRECISE E2

**Dig Precisely. Work Independently.  
Finish with Confidence.**

Precision guidance for excavator operators who want to work faster, smarter, and with full confidence – no matter the machine or the mission.

Traditional excavation relies heavily on operator intuition. Without visual tools or data, it's difficult to know exactly where to dig, how deep to go, or whether the work meets design specs. This leads to frequent rework, wasted fuel, and uneven quality.

An excavator guidance system changes that.

It uses GNSS and onboard sensors to continuously monitor the position, depth, and angle of the excavator's bucket. This real-time information is shown clearly on a screen inside the cab, enabling the operator to work with greater accuracy and confidence.

With no surveyors or manual layout needed, the operator can work faster, more precisely, and more independently even in poor visibility or challenging terrain. The result is a smarter, more efficient workflow that delivers:

- **Live position awareness**  
Know exactly where the bucket is
- **Precision control**  
Hit target depth and slope every time
- **One-man operation**  
Work without staking, measuring, or supervision
- **Better quality and lower cost**  
Less rework, less fuel, more productivity

PRECISE E2 brings all of this into one powerful, easy-to-use system.

## Precision That Matters

Dig with centimeter-level accuracy, every time.

### Centimeter-Level Precision

$\pm 1.5$  cm horizontal.  $\pm 3$  cm vertical.

Ideal for slope trimming, channel clearing, and fine grading – deliver consistent results and reduce costly rework.

### Integrated GNSS + IMU

Real-time tracking of bucket depth, angle, and position.

Combines RTK positioning and inertial sensing to provide live feedback, even during movement or in blind spots.

### Reference-Based Operation

Set your benchmark. Dig with control.

All measurements are calculated from a defined RTK reference point ensuring repeatable, accurate execution.





## Faster Jobs, Fewer Errors

Start quickly. Finish faster. Avoid rework.

## Quick Setup & Operation

Easy installation and calibration-no specialized equipment required.

Modular hardware and guided calibration make the system ready to use in minutes, even for first-time users.

## First-Pass Accuracy

Get it right the first time.

Visual depth and tilt indicators help avoid trial-and-error digging, cutting down job duration and fuel use.

## One-Man Excavation

No layout crew needed.

Operators can dig independently without surveyors or external guides increasing efficiency and reducing labor.





## Control in All Conditions

Work confidently – rain, fog, night, or sun.

### All-Weather Durability

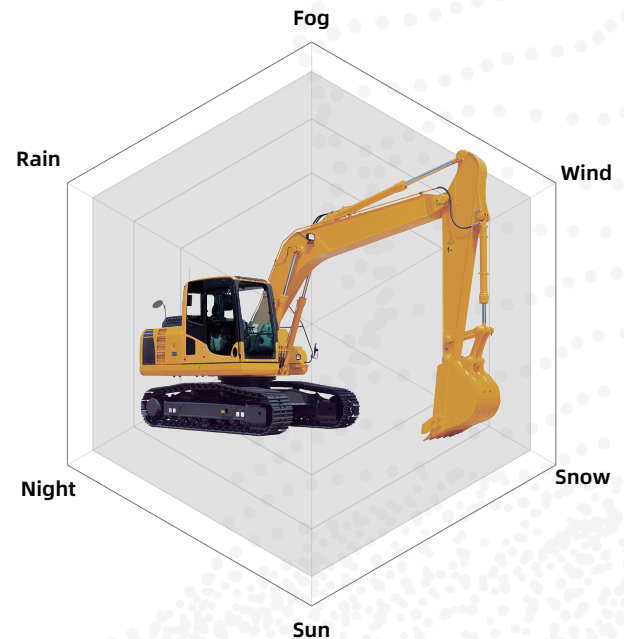
IP67 hardware. -30°C to +75°C operation.

Built for harsh environments – from tunnels to wet sites, freezing mornings to scorching afternoons.

### High-Brightness Touchscreen

Readable in sunlight. Rugged for the field.

10.1" glove-friendly LCD with IP66 protection – easy to use, day or night.



### Multi-Mode Support

Trenching, slope work, grading – all supported.

Switch between work modes to meet different excavation requirements with one system.

## Stay Connected, Stay Productive

Strong signal. Smooth data. Easy updates.

### All-Constellation GNSS

BDS, GPS, GLONASS, Galileo, QZSS, NAVIC – all included.

Multi-frequency, 1590-channel tracking ensures stable fixes even in obstructed areas.

### Built-In 4G & Radio

Always connected – online or offline.

Supports dual SIM cellular and UHF radio (0.5W-2W), enabling remote or local communications without extra modules.

### Wireless Tools & Updates

Wi-Fi/Bluetooth pairing + optional OTA.

Connect to mobile devices for diagnostics or future updates.





## Fit for Your Fleet

Adaptable to your excavator, project, and team.

### Compatible with Major Brands

Works with CAT, Komatsu, Hyundai, and others.

Mounts on most mainstream excavators – large or compact.



**KOMATSU**

**HYUNDAI**  
HEAVY INDUSTRIES



### Modular & Compact

Quick to install. Easy to maintain.

Designed for minimal cab intrusion, simplified wiring, and fast field replacement.

### Simple & Focused

Purpose-built for precise depth and tilt guidance  
no unnecessary complexity.

No clutter, no distractions just the core tools operators  
need to dig accurately and efficiently.

# Technical Specifications

## Communication Configuration

4G	Dual SIM cards, full-network compatibility.
Radio	Adjustable power (0.5 W, 1 W, 2 W); Frequency range: 410 MHz-470 MHz, step 12.5 Hz; Air baud rate: 19.2 kbps, 9.6 kbps.
Bluetooth	BT4.2, BR/EDR + BLE.
Wi-Fi	IEEE 802.11.

## Display and Control Terminal

Size	10.1-inch LCD screen.
CPU	Octa-core.
Storage	2 GB RAM, 16 GB ROM.
Resolution	1280 × 720.
Battery	N/A.

## System Accuracy

Horizontal accuracy	±1.5 cm.
Elevation accuracy	±3 cm.
Heading angle	0.15°/R (R is the baseline length of dual antennas).
Pitch/roll angle	0.25°/R (R is the baseline length of dual antennas).
Bucket dynamic attitude accuracy	0.2°.

## Satellite Systems

BDS	B1I, B2I, B3I, B2b*.
GPS	L1C/A, L2P, L2C.
GLONASS	G1, G2.
Galileo	E1, E5b.
QZSS	L1C/A, L2C.
SBAS	L1C/A.

## Environmental Characteristics

Operating temperature	-30°C to +75°C.
Storage temperature	-40°C to +85°C.
Protection rating	IP67.
Power supply	DC 6V-36V.





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