



**PERFORMANCE**  
**SIMPLICITY**  
**VALUE**

Precision and Reliability at an affordable Price



**EXCAVATOR SOLUTIONS**



# UNPRECEDENTED VALUE IN MACHINE GUIDANCE

## GradeMetrix® Excavator Site Control & Guidance Positioning System

GradeMetrix® Excavator is packed with industry leading technology. It is easy to use and delivered at an affordable price. The system can be installed and calibrated in less than 8 hours.

From compact excavators to large civil or mining machines, all are covered by the mastless VR500 all-in-one Vector or VR1000 Dual Antenna solutions.

The GradeMetrix® system is designed to fit seamlessly into your

existing site infrastructure using all the same design file formats and base station corrections. To ensure your peace of mind, all major components are covered by our best-in-class 3-year warranty.

New and experienced operators can dramatically increase accuracy, efficiency, and dependability with GradeMetrix®, resulting in significant ROI in your operations right away.



## GradeMetrix® Key Features

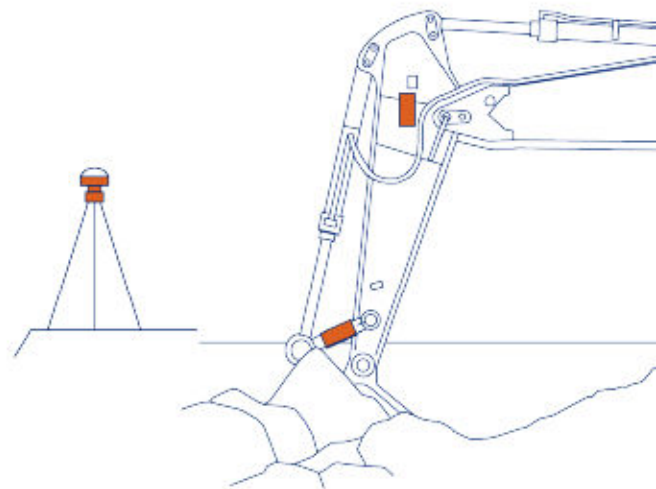
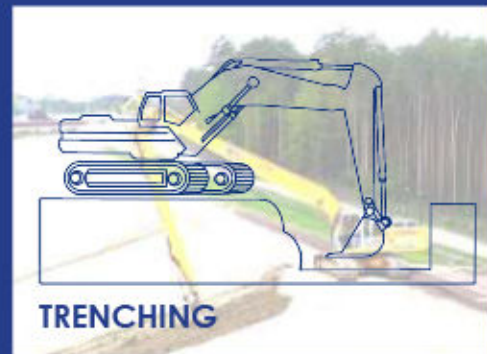
- Access to all GNSS satellite constellations for maximum accuracy and maximum coverage in difficult environments; including GPS, GNSS, GLONASS, BeiDou, Galileo, and QZSS.
- GNSS receiver supports industry standard RTCM3.x, ROX, CMR, and CMR+ RTK formats
- 2D, 2.5D, 3D operation modes all standard. Operators can create trenches, slopes and layers to match existing or a required height, and create all on site from the cab within seconds.
- Supports tilt bucket and laser receiver as standard.
- Simplified User Interface with multiple views including plan view, profile view, cross-section view and more.
- Supports DTMs or 3D linework
- Supports industry standard file formats including: dwg, dxf, LandXML.
- Easily locate lines and points yourself, checking work depths as you go.
- Map projections or localized coordinate systems allow simple site coordination to existing coordinate systems or creation at new sites.
- Operators visualize the site in real time, eliminating delays and enabling fast, efficient completion of all sitework.

## APPLICATION EXAMPLES

### ROAD CONSTRUCTION



### DIKE CONSTRUCTION



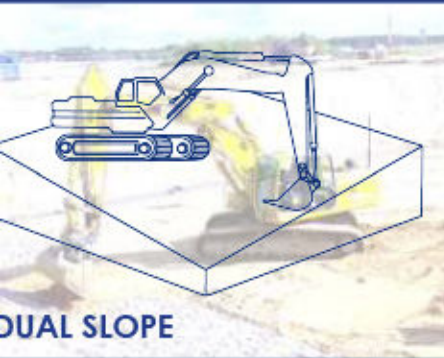
## Your Benefits At A Glance

- **RIGHT FIRST TIME** – Less passes - Work faster - Reduced cost
- **MATERIAL SAVINGS** – Optimize remove/replace - Increase efficiency
- **REDUCED SURVEY COST** – Less site preparation - Less personnel
- **IMPROVED SAFETY** – Less personnel around machines
- **3-YEAR WARRANTY** – Best in class warranty
- **EASILY ADAPTABLE** – Primary components can be modified

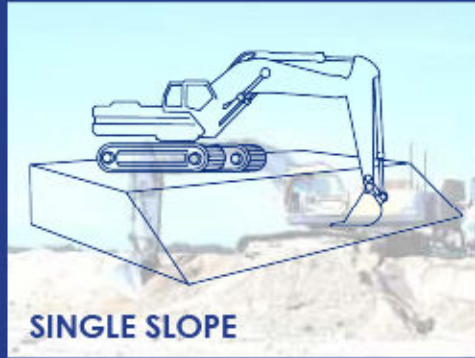


# LES

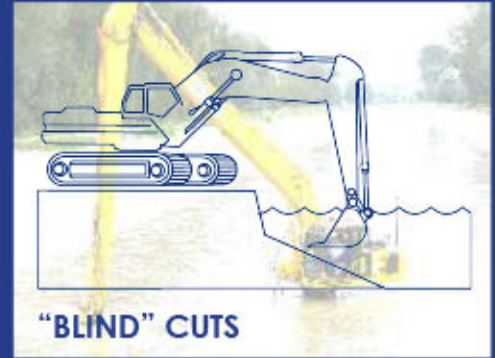
## WATER RETENTION BASIN



## EMBANKMENT WORK



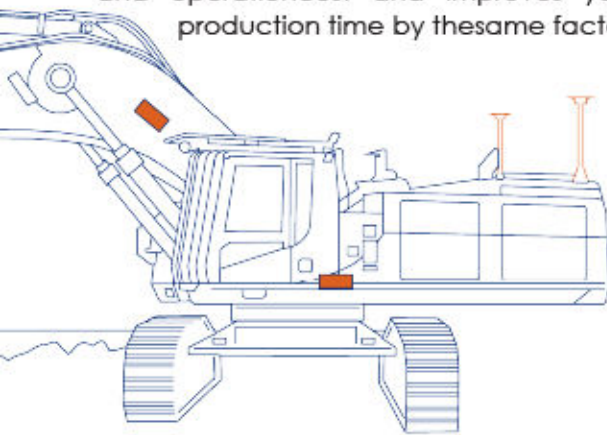
## CANAL REDEVELOPMENT



### Cost Savings - Embankment Overcut

If a batter is overcut by 0.5m over 500m length, the overcut would total 2,500m<sup>3</sup>. Additional excavator time could be as much as 25h and 166 truckloads would be needed at 15m<sup>3</sup> per truck. The total cost would be more than the cost of the guidance system to prevent it.

A GNSS guidance system saves you between 30-50% in material cost, staff cost, and operation cost and improves your production time by the same factor.



### 2.5D - Use GNSS at Every Site

The embedded 2.5D function in GradeMetrix<sup>®</sup> allows you to use the GNSS Guidance Technology for a vast array of simple and useful applications without the need for complex 3D files from a land surveyor.

Using only a few keystrokes, you can easily create simple layers, single or dual slopes, ramps, and even roads: using your GNSS as a reference.

Also, using the optional Hemisphere C631 base station, you can provide your own RTK corrections to your excavator.

In addition to the 3D model benefits, the 2.5D functionality will significantly speed up your work cycles and dramatically reduce your ROI time.



### Ruggedized Hardware

Hemisphere's GradeMetrix<sup>®</sup> Excavator solution is powered by hardware components that have undergone extensive shock, vibration, and environmental testing to withstand the harshest job site conditions.

The system is designed in a unique format centered around the VR1000 GNSS RTK receiver. The VR1000, with its integrated UHF radio and GNSS receiver requires a single cable connection to the IronOne display resulting in the most simplified installation and calibration procedure on the market, and is the result of multiple decades of experience merging GNSS technology with precision applications.

All the GradeMetrix<sup>®</sup> system key components are covered by an industry leading 3-year warranty. You can have peace of mind and confidence that your GradeMetrix<sup>®</sup> Excavator solution will provide superior results and performance for the long term.

Reduced operator skill requirement - Reduced fuel costs  
 Improve transportation cost - Control soil disposal cost  
 Less checking - Less rework - Less stake replacement  
 Operator stays in machine

Moved easily and quickly between machines



# PERFORMANCE - SIMPLICITY - VALUE



## IRONONE Rugged Display

- 8" (1280 x 720 resolution) Touchscreen
- Microsoft Windows™ operating system
- Sunlight Viewable display
- Easy and intuitive user interface
- Handles large 3D DTM project files
- Wi-Fi, Bluetooth, and ethernet support
- Integrated cellular modem for Ntrip corrections or remote/data support
- IP67 rating



## VR1000 GNSS Heading Receiver

- Multi-frequency, Multi-GNSS GPS/GLONASS/BeiDou/Galileo/QZSS capable
- Integrated 400 MHz UHF Radio
- Powerful WebUI with ethernet, CAN, serial, Bluetooth and Wi-Fi connections
- IP69K and MIL-STD-810G
- Rugged GNSS antenna array
- Hemisphere GNSS Athena® RTK engine
- Supports Hemisphere GNSS Atlas® L-band Correction Service



## VR500 GNSS RTK Smart Antenna

- Mastless position and heading RTK Smart Antenna for compact excavators
- Multi-frequency, Multi-GNSS GPS/GLONASS/BeiDou/Galileo/QZSS capable
- Integrated 400 MHz UHF radio
- Powerful WebUI, ethernet, CAN, serial, Bluetooth and Wi-Fi
- IP69K and MIL-STD-810G
- Hemisphere GNSS Athena® RTK engine
- Supports Hemisphere GNSS Atlas® L-band Correction Service

**How much could you be saving with a Hemisphere GNSS Solution?**  
Contact us now for information and to arrange a free trial.

**START SAVING IMMEDIATELY!!**

## Your local dealer



## Also of interest

### SiteMetrix® Solutions



### GradeMetrix® Dozer



## PRECISION INTEGRATION

Hemisphere GNSS, Inc. is an innovative high-tech company that designs and manufactures positioning and heading products, services, and technology for use in agriculture, construction and mining, marine, OEM, and L-band correction services markets. PN: 875-0482-10

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