

Mine Management Solutions

Leica Geosystems' next-generation Leica Jigsaw monitoring and GPS guidance solution unearths site productivity with a revolutionary product range for draglines; blast-hole drills; electric shovels; dozers; excavators; haul trucks; loaders and auxiliary assets.

State-of-the-art real-time analysis and reporting software gives users the tools that they need to stay on top by efficiently controlling resources and equipment. The result? Informed decision making, optimised productivity and unparalleled performance for maximum site output.

Backed up by a reliable global service and support network, Leica Geosystems Mining provides you with one, seamlessly integrated and efficient Mine Management Solution.

When it has to be right.

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ACTIVE customer care

Leica Geosystems is focused on providing you with low maintenance products that have competent back-up support, when you need it, 24/7 every day of the year.

- when it has to be right



Leica Jps Jigsaw Positioning System Powered by Locata

Jigsaw



Ground-Based High Precision GPS Guidance

Mine Management Solutions

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GPS

NETWORK OF SYNCHRONIZED DEVICES TRANSMITTING FROM KNOWN LOCATIONS
(USES SATELLITES)

Jps

NETWORK OF SYNCHRONIZED DEVICES TRANSMITTING FROM KNOWN LOCATIONS
(NO SATELLITES)

powered by



It's a game changer

"Jps Locata signals are seen as the equivalent of, but totally independent from, the satellite constellation."

Jigsaw

They said it couldn't be done. They were wrong.

Leica Geosystems, in partnership with Locata Corporation, can now offer the mining industry the world's first radiolocation technology which replicates a completely accurate positioning network system without any reliance on the traditionally used GPS signals from orbiting satellites.

The application of technologies based on GNSS positioning have revolutionised the mining industry, but as open cut mines go deeper, satellite masking around highwalls and in deep pits become a major issue. The solution? Leica Jps (powered by Locata).

Leica Jps, a GNSS augmentation product specifically designed for the mining industry, is fundamentally a new technology. Leica Jps creates a ground-based positioning network system that provides the same positioning accuracy that GNSS together with RTK corrections would normally provide - but without the signal drop-out.

Using a combination of fixed position and movable Jps stations (LocataLites), a Jps high precision positioning network is created exactly where and when you need it. Seamlessly complimenting or replacing traditional GPS at a local level, Leica Jps can be implemented anywhere.

As incredible as it may seem, the video-cassette sized LocataLite device is the local equivalent of a \$100-million GPS satellite!

Leica Geosystems can deploy LocataLites around the rim of a mine, in whatever configuration is needed to do the job. When they are turned on, the LocataLites self-configure into an autonomous positioning network. Within minutes you have your own local equivalent of a GPS constellation. The LocataLites can be trailer mounted for easy deployment as the mine changes shape or they can be permanently installed as part of the mine's infrastructure.

Incredible benefits...

- Fully customisable and scalable - make the Jps area as large or small as you need - add or remove LocataLites from a network at will.
- Interoperates with any WiFi network.
- Use independently or with your standard GNSS systems to supplement for signal drop outs in deep pits and against high walls.
- No additional correction network means no base stations, no atomic clocks, no data links, and no differential corrections. This means less room for error and drastically reduced infrastructure costs.

Groundbreaking technology...

- Jps LocataLite ground-based transmitters each transmit four positioning signals in the 2.4GHz ISM band to the receivers on-board the machines.
- Jps works in a similar way to GPS but you can MOVE your LocataLite at will to optimise your requirements and fill in any coverage holes.
- Jps requires no differential corrections, meaning no additional corrections network or base stations are required.
- The new Leica Jps receivers can receive all the new GNSS signals including GPS, Glonass, Galileo, Compass and Locata. The Leica Jigsaw rugged co-located antenna receives all these signals too.



"Leica Jigsaw can run your mine while Leica Jps ensures every operational asset has an accurate position at all times."

Jps

The world's first and only "local" GPS...

Jps LocataNet

- Monitor network health via reporting of the Jps LocataNet status in Jmineops, the Leica Jigsaw system support software
- Mission Planning Tool to provide customer advice on the placement of LocataLites
- Technician diagnostic tool

Jps LocataLite

- Solar powered and mobile
- Self surveying, contains RTK GPS receiver
- TimeLoc synchronisation technology
- Multiple signals transmitted for redundancy & to mitigate multipath in the pit
- Running within minutes of turning on

Jps Receiver

- One module contains two receivers
- Ethernet connection
- Separate module
- Co-located antenna receives both GNSS & Locata signals
- Support for external GNSS corrections

"Whenever GNSS coverage cannot be accurately obtained, Leica Jps provides that position. The operator experiences no interruption to operations."

- when it has to be right

