

Artec 3D launches Artec Jet: a survey-grade mobile LiDAR scanner with SLAM for fast, autonomous, site-scale 3D mapping

by Artec



Deployable by hand, drone, or vehicle, Artec Jet offers unparalleled flexibility. Lightning-fast and ultra-versatile, the device captures huge areas with survey-grade accuracy, including those in GPS-denied environments beyond the reach of traditional 3D mapping technologies.

Artec Jet's industry-leading SLAM algorithms use captured LiDAR data for real-time positional tracking, mapping, and autonomous drone navigation. Indoors or outdoors, in the air or underground – even in complete darkness with zero connectivity and conditions considered too extreme for human exposure.

With the addition of Artec Jet, the Artec 3D ecosystem now has a solution for capturing accurate digital twins on any scale from entire sites to individual components. Artec's newly expanded product lineup is expected to find applications everywhere from AEC to mining, defense, industrial plants, oil & gas, and civil infrastructure, driving efficiency by cutting lead times and costs.

"With Artec Jet, we're entering an exciting new chapter," said Art Yukhin, President & CEO of Artec 3D. "Our mission has always been to make 3D scanning as fast, accurate,

and intuitive as possible. Artec Jet expands this approach into larger environments, empowering our customers to capture infrastructure with the same level of confidence and ease. This incredibly versatile device brings unprecedented speed, precision, and autonomy to reality capture at scale."

Precision mapping for any project need

Artec Jet combines high-density LiDAR sensors and industry-leading SLAM positioning to capture with an accuracy of ± 10 mm indoors and underground, while detecting small changes of just 5 mm, putting it among the best in mobile mapping. Users can improve global accuracy further with RTK accessories that enable GNSS-assisted georeferencing and reduce drift.

The device is also built to ensure that every scan counts. A dedicated companion app offers real time feedback and on-site verification. With

a 360° x 290° field of view, users get the full picture – and the addition of optional video cameras brings full color capture as well for maximum realism.

With seven deployment modes: handheld, backpack, drone, vehicle mount, protective cage, telescopic pole, and robotic integration, Artec Jet easily adapts to specific project needs. Each modality delivers consistent, survey-grade results thanks to the scanner's SLAM algorithms, which are robust enough to perform regardless of how it is deployed. The versatile nature of the device also makes it a single solution for any design challenge, capable of replacing an entire fleet of specialized equipment – including in demanding environments.

Built for tough working conditions, Artec Jet features IP65 dust and water protection, operates at temperatures of -10°C to 45°C, and weighs just 1.57 kg. So, whether you're capturing on-foot, with a vehicle, deploying underground, or attaching to a UAV for aerial capture, the system is quick, intuitive, and easy to use pretty much anywhere without requiring specialist training.



Completely autonomous 3D mapping

One of Artec Jet's most transformative features is its ability to scan fully autonomously onboard a drone, without any human input. Using



advanced SLAM algorithms and AI-powered navigation, the device independently plans its own flight paths, avoiding obstacles as small as 2 mm wires, while maintaining stable positioning and continuing to acquire reliable mapping data.

This enables safe entry into complex, hazardous, or confined environments like tunnels and unstable structures, where manual piloting would put personnel in harm's way. If battery levels drop below safe thresholds, the drone automatically returns to its launch point, ensuring both data integrity and operational safety – via full end-to-end autonomous workflows.

With high-density LiDAR, real-time localization, and autonomous flight control, Artec Jet makes remote scanning seamless and redefines what's possible in aerial reality capture. Teams can deploy quickly, achieve comprehensive datasets in a single flight, and leave confident that even the most inaccessible spaces have been documented accurately at scale, without risk.

Process large-scale data in Artec Twins

Alongside Artec Jet, Artec 3D is also introducing a brand new software. Purpose-built for large-scale 3D data, Artec Twins is a processing and visualization platform that powers the entire Artec Jet workflow, transforming raw point clouds into analysis-ready datasets.

Users can process, merge, georeference, visualize, and inspect massive scans efficiently, then export for next steps in industry-standard formats including .LAS, .LAZ, .PLY, .DXF, and .E57. Designed to handle complex projects with speed and stability, Artec Twins turns even the largest scans into usable datasets that yield practical, actionable insights.

In terms of scale, Artec Jet and Artec Twins complete the Artec 3D ecosystem. Professionals working on huge industrial projects spanning architecture, factories, public facilities, and more can now rely on Artec Jet for site-scale capture, Artec Ray II for large objects, and Artec Leo for component-level detail – all within one integrated hardware and software family. Artec Jet is the perfect solution for reality capture, digital twins, BIM, as-built documentation, volumetric measurement, change detection, condition assessment, and inspection across large-scale underground mining, construction, security, public safety, and infrastructure.



ABSTRACT

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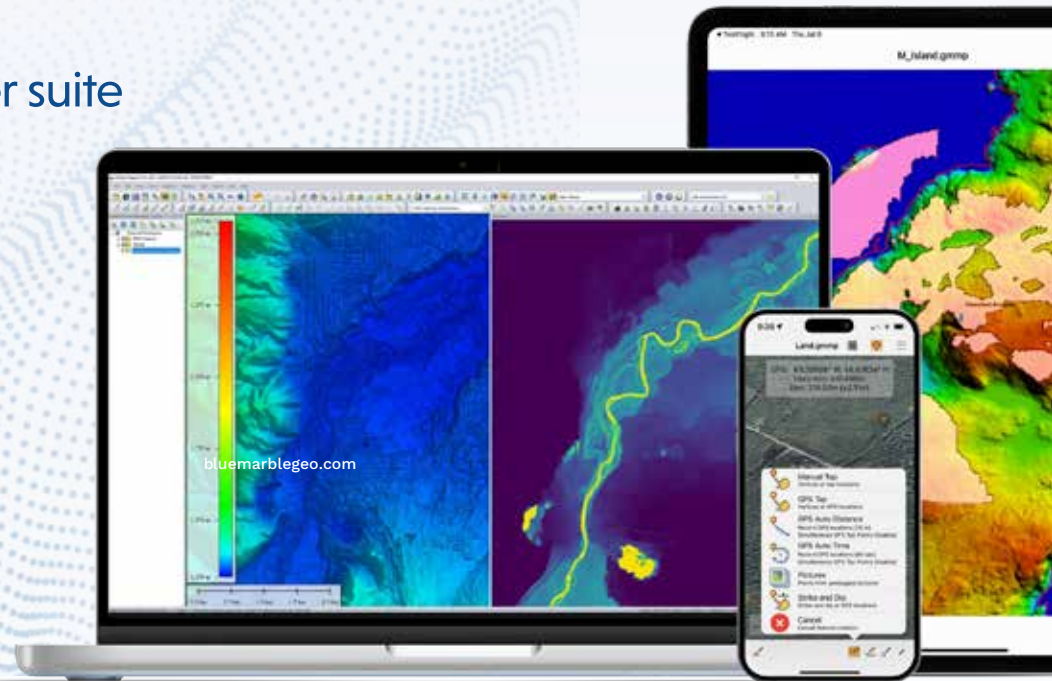
KEYWORDS

SURVEY; MOBILE LiDAR SCANNER; SLAM; AUTONOMOUS 3D MAPPING; SITE-SCALE; REALITY CAPTURE; BIM; INFRASTRUCTURE; INSPECTION

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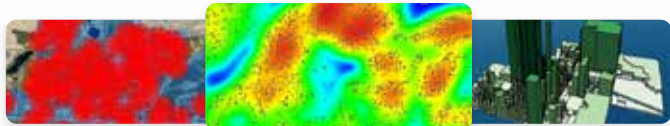
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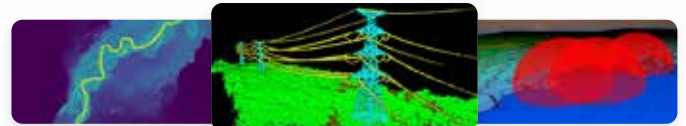
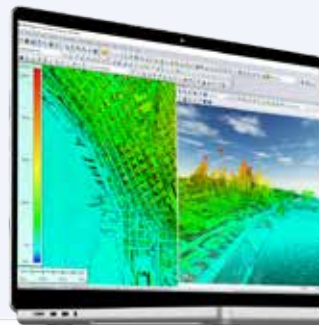
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