

Backpack RTK

emesent dron-e

Fast, accurate, repeatable results without the need for GCPs.



Emesent's Backpack RTK automates georeferencing and drift-correction for backpack-based scans to deliver fast, accurate and precise scans — without the need to lay out and georeference ground control points.

Intelligently leveraging both RTK and SLAM to optimize results, Backpack RTK ensures the most reliable, robust point cloud. Combine with 360 colorization to add a new level of reality and extract 360 degree images for additional context.

- Automated georeferencing and drift correction
- Accurate scanning without GCPs
- Leverage the best of RTK and SLAM to optimize results
- Accurate results in large, low feature environments and for long, linear assets
- Monitor RTK quality in real-time in Commander
- Seamless outdoor to indoor scanning
- Higher quality results for repeat scans and change detection

Streamline your survey missions

Automated georeferencing and drift correction

Your clients require georeferenced deliverables, but setting out control points is time consuming. Manually georeferencing and aligning scans is labor intensive and introduces the potential for error. Backpack RTK addresses these challenges, reducing or eliminating the need for GCPs while increasing accuracy and accelerating time from scan to insight. Data is automatically georeferenced as you scan and corrected at the click of a button in Emesent Aura post processing. RTK quality can be monitored in real time via the Commander app to provide confidence in the outputs that will be achieved.

Combines RTK and SLAM to optimize results

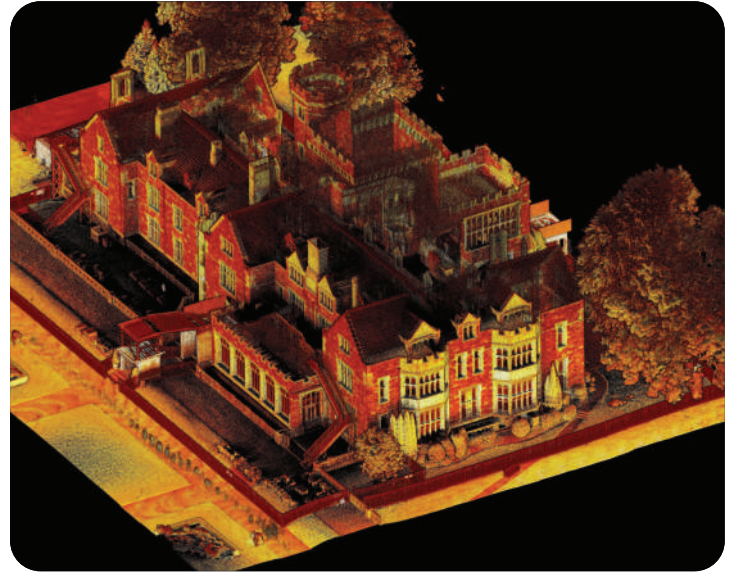
Hovermap Backpack RTK ensures the most reliable and robust point cloud by seamlessly leveraging the optimal combination between RTK and SLAM. During processing, Emesent Aura intelligently selects either RTK or SLAM reference data depending on which has the best position quality to deliver the highest quality results. Aura will choose RTK when corrections are favorable, and will automatically switch to SLAM when they are not.

SLAM in more places

Backpack RTK enhances the capabilities of SLAM-based mapping to provide a more accurate solution in environments traditionally more challenging for SLAM, such as large areas with few features or long linear assets. Ease of consistent repeatability from geolocation also gives higher quality results for repeat scans and change detection over the same course.

Seamless outdoor to indoor scanning

For use cases where speed and ease of capture is more important than accuracy, Emesent Backpack RTK allows georeferencing in GPS-denied environments. Start a scan outdoors using RTK and then seamlessly transition to SLAM capture indoors during the same scan — without requiring indoor set up of control points. This method of capture is also beneficial in forestry applications, construction progress tracking, and any project where small areas of the site have limited or no GPS.



Enhanced visual context

To provide more context for stakeholders or uncover further insights it's faster and easier than ever to add context to your Backpack RTK scans with Emesent's 360 degree colorization. The same scan can be used to extract 360 images, streamlining your workflow.

Easy operation

The lightweight and intuitive set up means you can be up and scanning in minutes. The backpack itself is robustly and ergonomically designed. Everything you need fits inside, allowing easy transportation including use as carry on luggage.

“Set up was easy and RTK connection was almost immediate. The backpack is designed for heavy lifting and the field crews love the fact the Emlid fits inside, giving them one less item to carry”

Scott Harrigan, President and Chief Pilot - Harkin Aerial

Backpack RTK is ideal for:

- 3D modelling for as-builts or Scan to BIM
- Forestry plantation mapping
- Tunnels, sewers and culverts
- Small area topographic surveys
- 3D scanning of areas which are difficult to access via drone or vehicle

Take a deep dive into Emesent products in the Emesent Academy.

Log in to the customer portal to gain access at www.emesent.com

Scan to learn more about Backpack RTK

