

Closing the Gap in Drone-based NDT



Next-Gen UTM Payload integrated on the Scout 137 Drone System - spot cleaning and UT Measurement in one operation.

The reality of UTM in confined spaces

In the early days of confined-space drone inspection, the drone handled the visual inspection while NDT technicians still had to enter the asset to get UT measurements. That meant climbing, rigging scaffolding, or working from ropes in hazardous, exhausting conditions.

The first-generation UTM Payload changed the situation, but quite often manual spot preparation was required before measurements could be taken. A UTM drone without efficient cleaning tools only partially completed the UTM scope.

Spot cleaning and UTM in one operation

The Next-Gen UTM Payload from ScoutDI changes this by combining spot cleaning and measurement in a single, integrated tool.

In the docking phase, the built-in zoom camera and the payload's Class 2 laser assist probe placement, ensuring accurate alignment even in hard-to-reach areas. The probe attaches magnetically for secure contact, with a one-click "Smart Release" function for safe drone detachment.

The Next-Gen UTM Payload was designed with direct input from NDT specialists. Every detail from brush mounting to probe alignment was tested for real-world usability, to let you work more safely, more efficiently, and get better data.

With this integrated design, you avoid switching tools mid-job and having to return the drone, carrying a one-trick UTM tool to the same spot later. You get more measurements per session and broader coverage for each job.

- **Integrated Spot Preparation Module** w/motorized brush
- **Interchangeable brush heads** adapt to dust, rust, coatings or paint
- **Exact-point measurement**, probe rotates back to same spot



- **Large couplant capacity:** several dozens UTM readings per session
- **Unlimited flight time:** tethered power means no battery swaps
- **Continuous workflow:** measure at your own pace

The Next-Gen UTM Payload features several innovations to support continuous, high-volume inspections.

It also makes drone-based NDT viable for a wider range of assignments, with higher completion percentages per inspection.

Advantages of integration

With this integrated design, you avoid switching tools mid-job and having to return the drone, carrying a one-trick UTM tool to the same spot later. You get more measurements per session and broader coverage for each job.

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Advantages of unlimited flight-time

UTM work by its nature takes time. With anti-collision sensors switched off for surface contact, you want to focus on careful, safe manoeuvring and not on racing the battery clock.

Because the Scout 137 is tethered, power is continuously available and there's no need for battery changes. You can keep working until the couplant gel reservoir needs refilling. This allows you to work at your own pace, focusing on quality and safety.

Tethered power also allows you to plan the job out of efficiency considerations or according to how you want to organize the data, since the battery-related constraints and stress don't exist.

When doing UTM by rope access, measurements would be planned along vertical rope lengths, aka drops. A tether-powered UTM drone allows similar considerations.

For example, when doing dense sampling over large areas, working in quadrants/grid patterns minimizes unnecessary transport and allows systematic, visual organization of the sample points.

For strategic single point samples, you can focus on positioning accuracy and the safest path. The liberty to make such considerations changes your workday completely.

It becomes easier to manage your time, gauge and predict progress and generally keep the on-site activity organized. This in turn improves efficiency and flexibility.



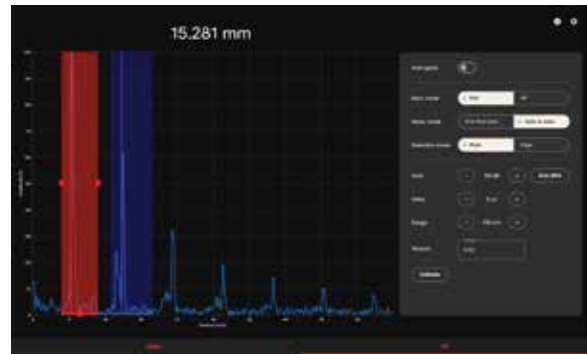
Thornetix dual-crystal probe – high precision and flexible frequency options.

Integrated Thornetix Talisman™ dual-crystal UT module

The UTM Payload integrates the Talisman high-speed multi-channel embedded ultrasound module, with three dual-crystal probes included:

- 7.5MHz, high resolution, thin materials and smaller diameters
- 5MHz, multi-application
- 2.25MHz, thick, course materials with rougher surface conditions

Beyond the probes provided, the system supports a wide variety of probes including single, twin, delay line, and high temperature, giving flexibility to choose the probe best suited for a wide variation of inspection scenarios. Contact us for more options. Via the field-ready tablet software, the NDT tech can change all of the UT parameters live during the inspection and take advantage of the built-in measurement tools, without having to land the drone.



Complete UTM control live during flight via the tablet app.



Three dual-crystal probes are included with the UTM Payload. Additional probe types are available for specialized applications.



The UTM Payload comes with a selection of brushes for different purposes.

Spot preparation tools included

The Next-Gen UTM Payload comes with a selection of brushes made of different materials and filament thicknesses:

- Steel and Stainless steel
- 2x Silicon carbide
- 2x Nylon

Brush heads are easily swappable, making tool changes quick when moving between different surface types.

Closing the Gap

The Next-Gen UTM Payload closes the gap in drone-based NDT by combining spot cleaning, couplant feed, and ultrasonic measurement in one integrated tool.

Built with input from field inspectors, it delivers more coverage per job, greater safety, and higher-quality data – all without the stress of battery limits.

Together with interchangeable probes and flexible planning enabled by tethered operation, it makes reliable, efficient drone-based UTM a practical reality.

Funnelling all your inspection data into the Scout Portal, you gain visualization, analysis and collaboration to maximise its value.

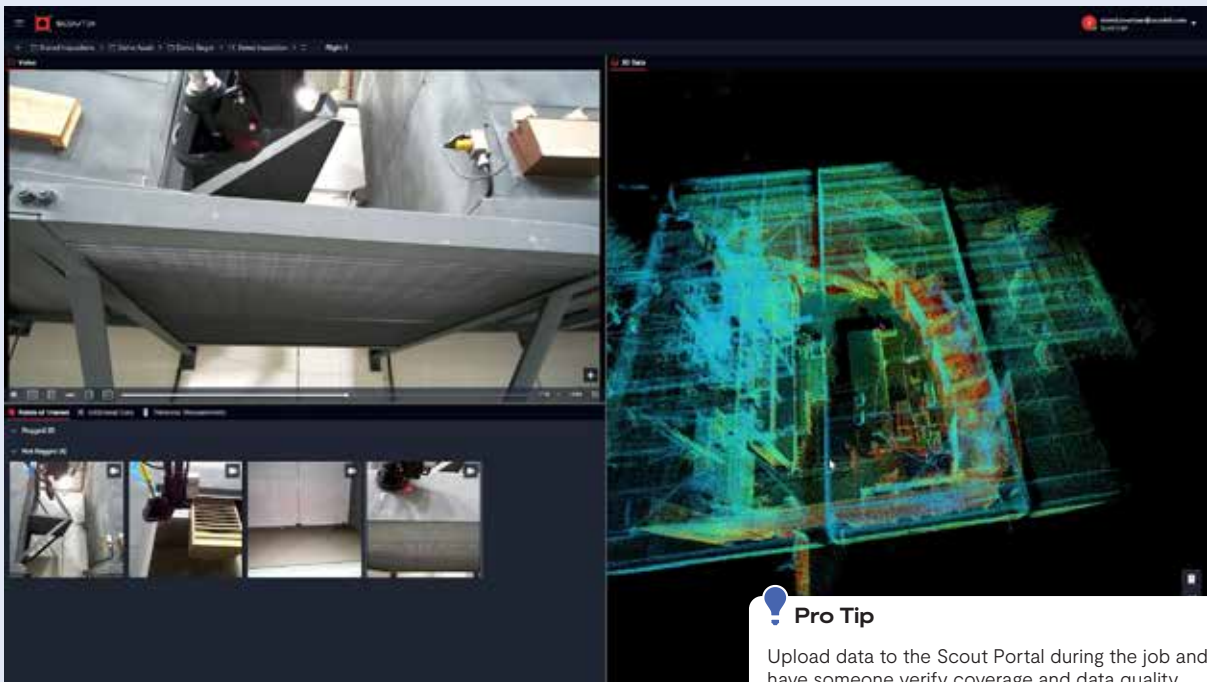
Each system is factory tested and calibrated to ISO16831 / EN15317 standards for compliance and traceability, with field simplified calibration tools for ease of use.

Sounds interesting?

Contact us for more information!

Scout Portal: Your data turned into insights

The Scout Portal, our cloud-based inspection data management solution, transforms raw inspection data into actionable insights –whether streaming live or reviewing an inspection. Track flight paths and analyse your data with all visual POI and UTM in an interactive 3D point cloud visualization, easily share and collaborate to maximize the value of your data acquisition efforts.



Reviewing an inspection in the Scout Portal with 4K video stream, interactive 3D point cloud, POI and UT Measurements at your fingertips.

Pro Tip

Upload data to the Scout Portal during the job and have someone verify coverage and data quality immediately. Reopening an asset can take lots of time and paperwork to do after "signing off". A little data 'preassessment' may save lots of unnecessary work and even avoid site revisits.

Contact us

Don't hesitate to contact us to discuss your use case. Reach out to ScoutDI headquarters directly or scan the QR code to find your nearest distributor.

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