Any Material, Anywhere™

GelSight® Modulus™

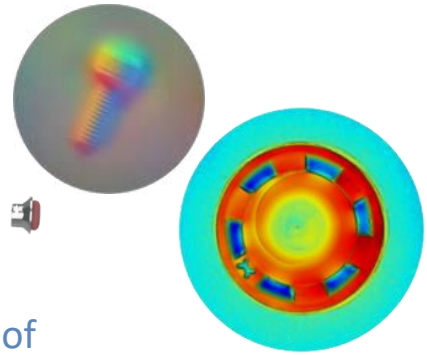
Unlock Previously Inaccessible Places with the GelSight Modulus

GelSight Modulus is a next-generation tactile sensing platform designed for engineers, inspectors, and innovators working in complex environments. Its modular, SLR-style design allows users to hot-swap lenses and cameras for precise inspection of everything from tight bores to open surfaces with unmatched flexibility and speed.

Designed for Access. Built for Accuracy.

Powered by GelSight Mobile Software 4.2, Modulus offers enhanced image stabilization, faster autoexposure, and intuitive analysis for repeatable operator-to-operator performance. New, more durable elastomeric gels improve usability and extend device life, while its compact 165g form factor makes it ideal for in-field and on-floor inspections.

Modulus replaces traditional, time-consuming methods like replicas and disassembly with instant, high-resolution 3D data. It delivers micron-level accuracy across any material, helping teams save time, reduce scrap, and inspect surfaces that were previously inaccessible.



Modular & Future-Proof

Like an SLR camera, Modulus features hot-swappable lenses and cameras, giving users the right tool for any inspection, from tight bores to broad surfaces, and allowing for future upgrades as needs evolve.

Micron-Level Accuracy

Delivers precise, repeatable 3D surface measurements, even inside bores, tubes, and other geometries traditional tools can't reach.

Instant, Quantifiable Data

Replace subjective visual inspections and time-consuming replica workflows with objective measurements and reports in seconds.

Inspect Any Material. Anywhere.

From shiny metals to translucent glass, Modulus accurately measures virtually any surface under any lighting conditions, whether in the lab, on the production line, or out in the field.

GelSight Modulus delivers advanced tactile sensing in a compact, modular platform. Interchangeable lenses adapt to specific inspection needs, enabling precise surface analysis in hard-to-reach areas such as bores, tubes, and angled surfaces.

Accelerate precision inspections across complex geometries

- **Modular Design:** Swap lenses for any task
- **Compact Access:** Inspect tight, complex areas
- **Future-Ready:** Expand with new lens options
- **Durable Gels:** Tougher, smoother, longer-lasting

Measurement and Analysis Applications

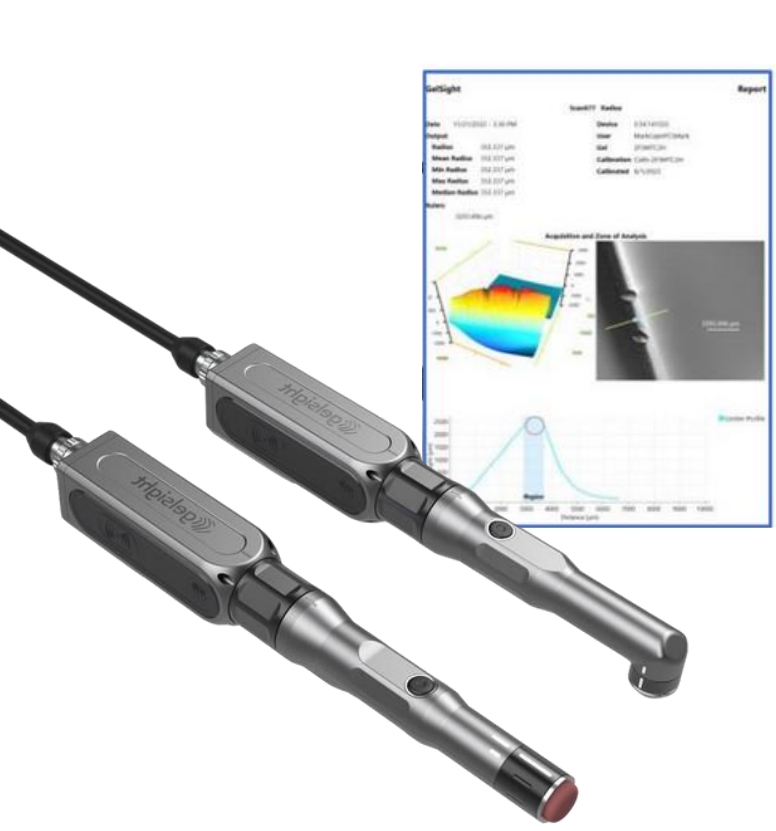
Modulus expands the boundaries of tactile sensing by delivering precise, repeatable, micron-level surface measurements in previously inaccessible locations — including bores, tubes, and tight geometries. Its lightweight, modular design, integrated mounting holes for robotic or fixture-based setups, and enhanced optics system bring new levels of flexibility to inspection workflows, enabling high-resolution surface characterization without the need for destructive testing or replicas.

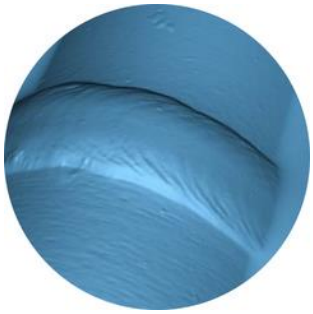
Powered by GelSight Mobile 4.2, Modulus supports a full suite of 2D and 3D analysis tools to characterize scratches, wear, corrosion, and surface finish with fast, quantifiable results. The software features enhanced image stabilization, 10-bit camera operation for improved exposure control, and operator-to-operator consistency for repeatable outcomes across teams and environments.

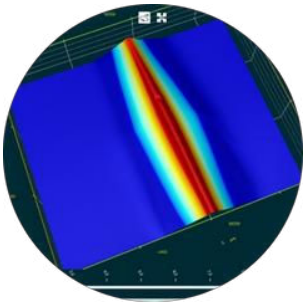
Modulus is fully compatible with BASE, CORE, and PRO software tiers:

- BASE delivers SEM-like surface imagery for field-ready visual inspection.
- CORE supports measurement of scratch depth, defect offset, and 3D data export for integration into digital workflows.
- PRO offers advanced surface roughness analysis, defect detection, and 3D geometry tools — ideal for R&D, QA, and NDT applications.

Together with Replica Transformation mode, Modulus allows users to perform in-situ, direct measurement of replicas — reducing delays and improving traceability by generating instant digital reports.







Modulus Condensed Specifications

Dimensions	27.8 mm × 32.5 mm × 206.2 mm	1.1" × 1.3" × 8.1"
Weight	165 g (with 16mm lens)	0.36 lbs
Field of View	6.8 mm × 5.6 mm	0.27" × 0.22"
Roughness (Ra)	0.5 µm ± 6%	19.7 µin ± 6%
x-y Accuracy	3 µm ± 0.3%	0.12 thou ± 0.3%
z Accuracy (1-50µm)	1 µm ± 4%	0.04 thou ± 4%
Operating System	Windows 11 and above	
Interface / Power	USB-C (10W, 5VDC, 2A)	
Data Export Format	PDF, STL, CSV, TMD, NM	

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