The GelSight Mini combined with the GelSightmini.com web application offers users the ability to have an AI touch experience using their Windows, MacOS or Linux computer.

GelSight Mini

The only superhuman resolution tactile sensor with digital 2D and 3D mapping

The GelSight Mini is the first commercially available tactile sensor with spatial resolution well beyond that of human touch. GelSight Mini delivers tremendous value to researchers and roboticists across a broad set of industries.

Ready for roboticists and Computer Vision makers

Unlike manual, mechanical, or optical measurement technologies, GelSight's patented elastomeric sensor technology conforms to the topography of any surface, providing instant 3D visualization and data output compatible with ROS/ROS2, and PyTouch. A frame grabber has been created and posted on the site from GitHub allowing users to build routines and train models with a simple workflow.

Versatile

Inspect and use for robotics handling of any material including reflective, transparent and translucent surfaces under any lighting conditions in any location.

Accurate

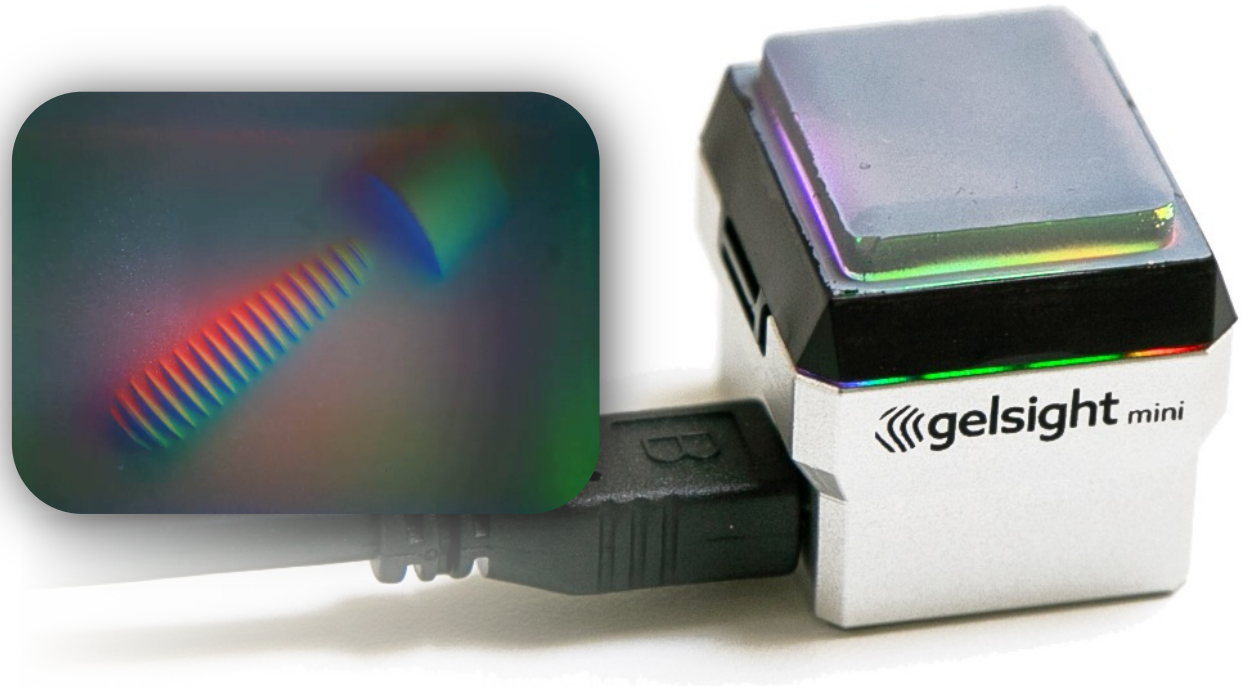
Provides extremely detailed, highly accurate and repeatable, micron-level surface data in three dimensions.

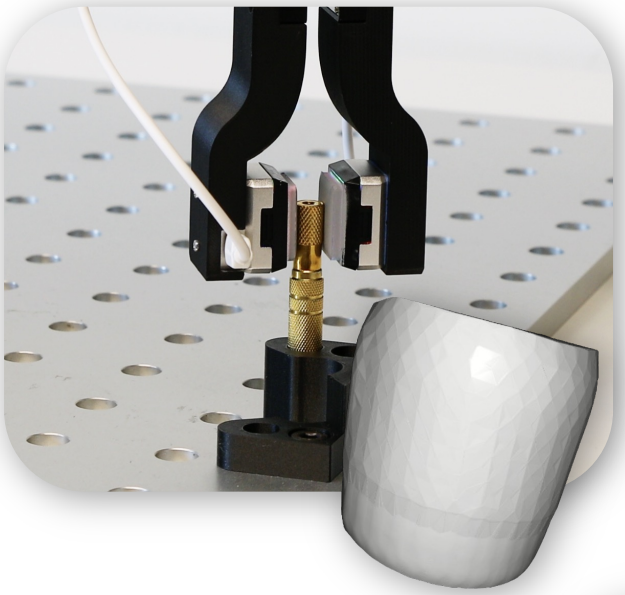
Fast

Provides live 2D and 3D visualization within seconds. Get to work within five minutes of taking the device out of the box.

Compact

Ergonomic, handheld and robot mountable.



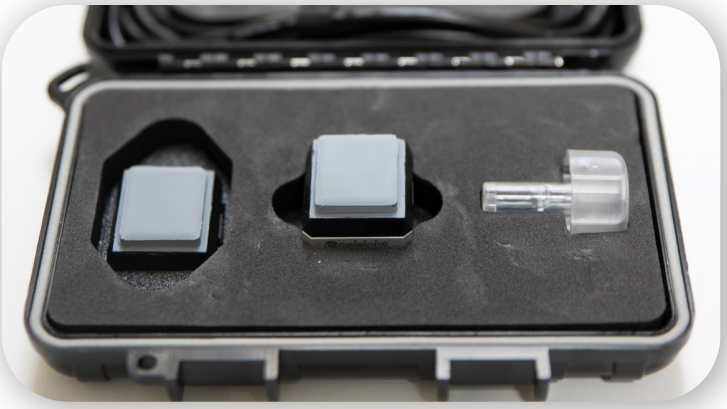


Measurement and Analysis Application

GelSight's patented elastomeric sensor conforms to the surface topography, revealing detailed features regardless of lighting conditions or reflectivity. Surface detail is displayed in real time.

Get to work within five minutes of taking the device out of the box

- GelSight Mini Device with silicone gel preinstalled and focus set.
- 2 meter USB Micro B to USB-C cable
- Focus accessory tool



Improve your robotics and touch research and workflows

Additive Manufacturing

Research

Robotics

3D Imaging & Modeling

GelSight, Inc.
gelsight.com

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Software and Application

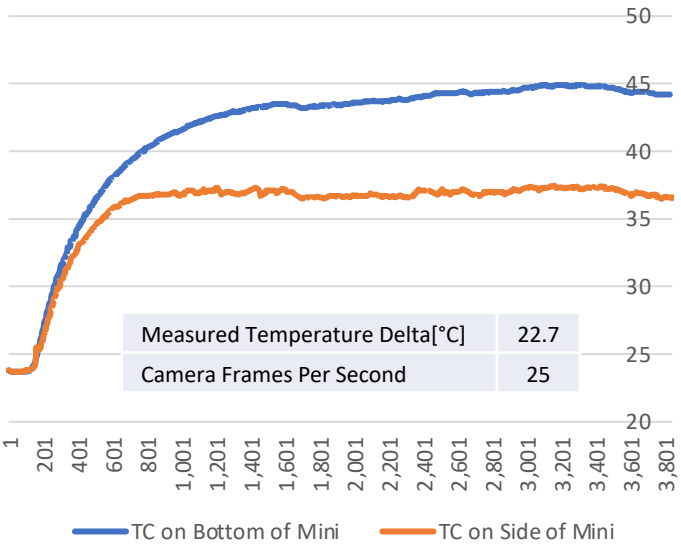
Web app with the following features:

- Capture button(s) on webapp
- Streamlined sharing of photos/videos to social media.
- Live view 2D image
- US coin identification (quarter, dime, nickel, penny)
- Metric thread pitch for the following fastener sizes/pitches: M3x0.5, M4x0.7, M5x0.8, M6x1.0
- Gel with markers for shear force estimation
- Cross-platform (Linux, Windows, Mac, ROS/ROS2) user interface capable of viewing video from the sensor and saving images. Supported versions:
    - Ubuntu 18, 20 and 22 – the LTS releases
    - ROS Noetic Ninjemys (latest ROS 1 LTS)
    - ROS Foxy Fitzroy (latest ROS 2 LTS)
- Support PyTouch, an open-source tactile library for robotics through web interface plug ins.
- Documented sample code for using the above routines.

Thermal Behavior

Below is a chart showing the heating of a GelSight Mini over time with full frame rate. This was a worst case test at a typical indoor temperature.

Case Temperature vs Time (°C vs Seconds)



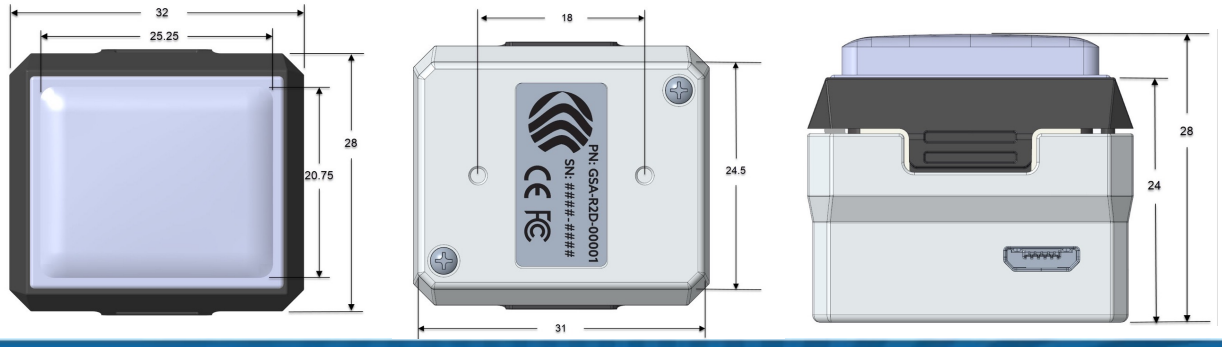
Specifications

Cartridge Replacement	Easily user replaceable cartridge that maintains position. Replacement does not require any tools/hardware.
Gel Thickness	4.25 mm +/- .20 mm
Gel Concentricity to Cartridge	< 0.5 mm
Gel Material & Coating	Lambertian Silicone Gel
Camera Resolution	8MP
Camera Frame Rate	25FPS
Illumination	RGB LEDs
Field of View	18.6(H) x 14.3(V) mm

Environmental Test Conditions

Preferred Operating Temperature	0-30°C
Storage Temperature	-25° up to +60°C
Humidity Rating	Up to 80% RH, non-condensing
Gel Durability	1000 Coin Presses

Dimensions (in mm)



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