



## TACTILE GLOVE

# G1

*High-Density Fabric Pressure Sensing for Robotic and Human Hands*

---



*The Robotics Center G1 is a textile-based tactile glove engineered to capture the complete contact state of a manipulating hand — grip force, finger flexion, and palm pressure distribution — at sub-millisecond response time. Lightweight, breathable, and built on proven automotive-grade sensing materials.*

## At a Glance

<p><b>162</b></p> <p>pressure sensing points per hand</p>	<p><b>35.4 g</b></p> <p>net weight per glove</p>	<p><b>&lt; 0.2 ms</b></p> <p>sensor response time</p>
<p><b>4 × 6 mm</b></p> <p>sensing resolution</p>	<p><b>200 K</b></p> <p>cycle durability at 3 MPa</p>	<p><b>120 Hz</b></p> <p>IMU sample rate</p>

## What It Does

The G1 places 162 fabric pressure sensors densely across the fingers and palm of a single glove. Each sensor reports pressure continuously; dedicated sensors on each finger additionally report bending degree. An integrated 6-axis IMU captures hand pose and motion at 120 Hz. All streams are timestamp-aligned and transmitted over Bluetooth or USB serial to a host computer.

The result is a complete, real-time picture of how a hand is holding an object — the exact signal needed to train manipulation policies, monitor robotic grasp safety, and build contact-aware robotics applications.

## Who It's For

- **Researchers** — Robotics research labs training imitation learning and VLA policies that need tactile feedback to complement vision.
- **Data collection** — Teams collecting human demonstration data at scale for manipulation foundation models.
- **Industry** — Humanoid and service robotics companies adding closed-loop tactile sensing to their end-effectors.
- **Biomechanics** — Medical and rehabilitation applications where continuous, calibration-free grip-force monitoring matters.