Litchi

The T1 Series

Redefining Industry Limits | Ultra-High Precision | Ultra-Low Latency



Exact. Sleek. Responsive

Hand Motion Ddata Collection Gloves

Category	Litchi Lab T1 Lite Lightweight Motion Capture Glove	Litchi Lab T1 High-Precision Motion Capture Glove	Litchi Lab T1 Pro IMU + Tactile Sensing Full-Function Glove
Product Overview			
Key Differentiators	Hand pose, spatial motion, and bimanual motion synchronization	Hand pose, spatial motion, and bimanual motion synchronization	Hand pose + pressure/tactile sensing + contact and force interaction
Motion Capture Accuracy			
IMU Configuration	7 IMU	11 IMU	11 IMU
IMU Algorithm	6-axis sensor fusion	6-axis sensor fusion	6-axis sensor fusion
Sampling & Output	Raw IMU: 1000 Hz Orientation estimation: 500 Hz	Raw IMU: 1000 Hz Orientation estimation: 500 Hz	Raw IMU: 1000 Hz · Orientation: 500 Hz Tactile: 200 Hz · Upgradeable to 400 Hz
Static Orientation Accuracy (Roll/Pitch)	⩽ 0.05°	⩽ 0.05°	⩽ 0.05°
Motion Capture Method	7-IMU orientation tracking	11-IMU orientation tracking	11-IMU orientation tracking
Tactile Sensing			
Tactile Sensing	—	—	Full-palm flexible tactile sensor array
Tactile Sensing Capacity	—	—	368 sensing points (standard) · Upgradeable to 600 points
Sensing Point Density	—	—	9 points/cm²
Minimum Activation Force	—	—	30 g
Maximum Force Range per Sensing Point	—	—	1500 g
Repeatability / Consistency	—	—	±15% FS
Communication & Synchronization			
Data Transmission	Wireless	Wireless	Wireless
Transmission Latency	2 ms	2 ms	2 ms
End-to-End Synchronization Error	< 1 ms	< 1 ms	< 1 ms
Wireless PHY Data Rate	6.8 Mbps	6.8 Mbps	6.8 Mbps
Left/Right Hand Synchronization Accuracy	—	—	Microsecond-level
Applications			
Target Applications	Teleoperation, gesture capture, and imitation learning	Teleoperation, high-precision gesture capture, and imitation learning	Dexterous manipulation training, embodied AI datasets, and motion-force analysis
Environmental Compatibility			
Magnetic Interference Rejection	—	—	Supported (magnetometer-free / reduced magnetometer weighting)
Robot Environment Compatibility	Stable data capture near motors and high-current wiring	Stable data capture near motors and high-current wiring	Stable data capture near motors and high-current wiring
Wireless Output Rate (All Data Channels)	100 Hz	100 Hz	100 Hz
Product Positioning	IMU-only lightweight motion capture	IMU-only high-precision motion capture	Full-featured IMU + tactile sensing
Selection Guide			
Recommended Applications	Teleoperation Gesture capture Imitation learning	Teleoperation High-precision gesture capture Imitation learning	Dexterous manipulation training Embodied AI datasets Motion-force analysis

Note: IMU = Inertial Measurement Unit · Tactile sensing points use a flexible pressure-sensor array · Data based on internal laboratory testing

Ego Data Collection Device

Parameter	Specification / Function Description	Notes
Hardware Specifications		
Data Captured	4 × RGB + depth, IMU, and audio	
Typical Use	High-precision close-range manipulation within 1.5 m	
Product Weight	< 400 g	
Product Architecture	4 × wide-angle RGB surround cameras + 1 × structured-light stereo depth camera	Hybrid architecture
Depth Module		
Resolution & Frame Rate	1280 × 800@30fps Y16 848 × 480@30fps Y16 640 × 480@30fps Y16	
Field of View (FOV)	HFOV: 90° / VFOV: 65°	
Spatial Accuracy	< 0.5% @ 1m	
RGB Module (per camera)		
Viewing Angle	30° downward tilt	
Resolution & Frame Rate	1920 × 1200@30fps (Max) · 1600 × 1200@30fps	
Shutter Type	Global Shutter	
Field of View (FOV)	H 165° / V 130°	
Video Encoding	H.264 / H.265	
IMU		
IMU Model	DCM630 9-axis	
IMU Sampling Rate	500 Hz	
Synchronization Accuracy		
IMU-to-Image Synchronization	< 1 ms	
External Trigger	External trigger signal supported	
Audio		
Microphones	4 microphones	
Speaker	1 W, 8 Ω speaker	

EgoDepth uses a hybrid architecture combining 3 × wide-angle RGB surround cameras with 1 × structured-light stereo depth camera to enable high-quality depth data collection.