MANUS™

PRODUCT PORTFOLIO 2026

Where Human Motion
Becomes Machine Skill.

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METAGLOVES **PRO**

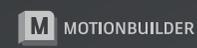### MILLIMETER-LEVEL PRECISION & FULL HAND CAPTURE

The Metagloves Pro deliver millimeter-level accuracy with no occlusion, no drift, and seamless calibration. Capturing 25 degrees of freedom (DOF), these gloves provide a complete, true-to-life digital representation of the human hand, tracking every joint and micro-movement with precision. This extensive capture capability generates the high-quality, detailed datasets essential for robotics training, embodied AI research, and motion science applications.

INSTANT SETUP & SEAMLESS INTEGRATION

Setup takes seconds. Persistent calibration profiles eliminate the need to recalibrate between takes, users, or battery swaps, allowing for smooth integration into existing tools, software, and production pipelines. Every gesture is captured exactly as it happens, providing reliable, consistent input that accelerates development cycles and research workflows.

ENGINEERED FOR CONTINUOUS PROFESSIONAL USE

Engineered for 24/7 operation with durable materials and long-lasting comfort. Features include hot-swappable interchangeable batteries, a detachable Top Module for multi-user shifts, and optional external USB-C power, ensuring uninterrupted performance in demanding professional environments.
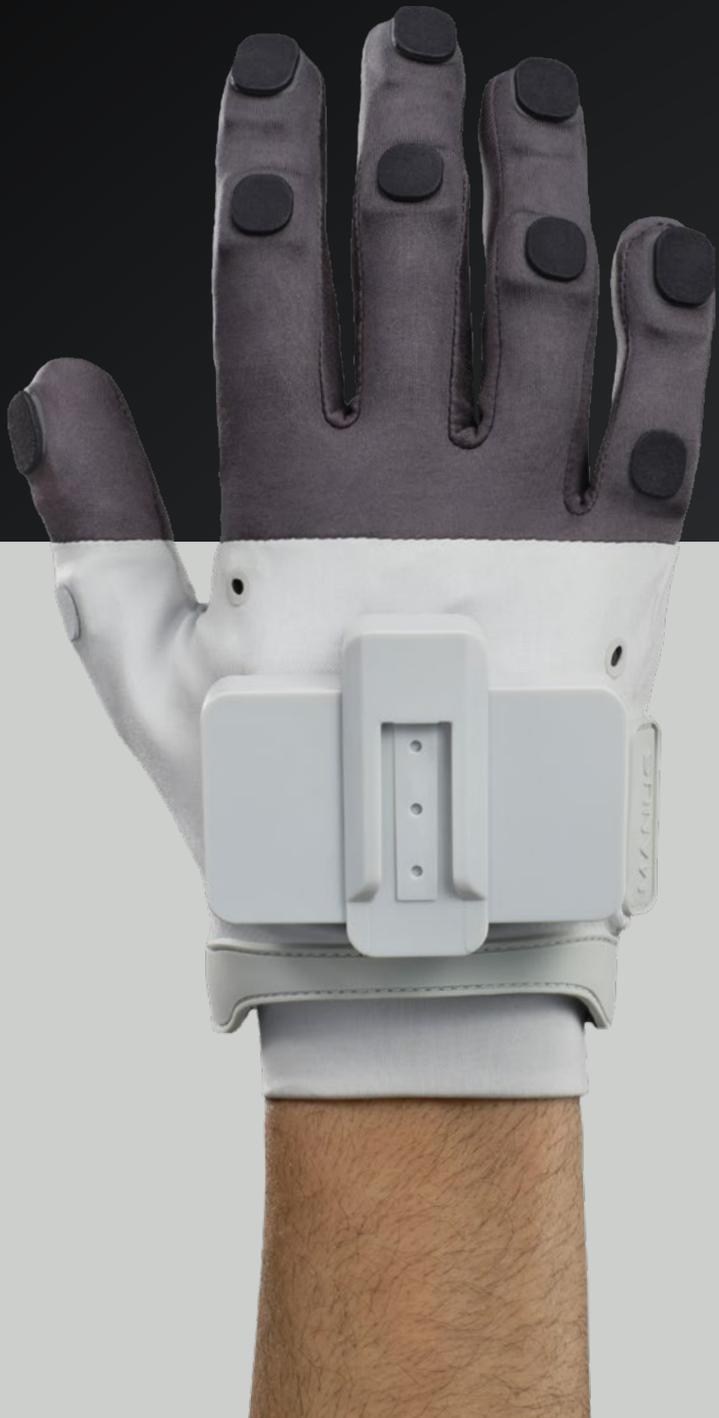
UNREAL ENGINE	Unity	M MOTIONBUILDER	MOTION ANALYSIS
XSENS	OptiTrack	QUALISYS	VICON
NOKOV	FZMotion	STEAM VR	IC.IDO
NORAXON	.CSV Export	.FBX Export	ROS2

HARDWARE SPECS

Signal latency	≤ 7.5 ms
Finger sensor type	Absolute position, 3 axis rotation
Sensor sample rate	120Hz
Battery duration	up to 3 hours (swappable)
Charging time	2 hours USB-C
Weight	167 grams (incl. battery)
Wired communication	USB-C
Wireless communication	Bluetooth Low Energy 5
Wireless range	Up to 15 meters
Textile information	Multiple Sizes Available

WHAT'S IN THE BOX?

1x	Pair of Metaglove Pro Sensor Gloves
1x	Pair of Metaglove Pro Top Modules
1x	Wireless Dongle
4x	Metagloves Pro Battery
2x	USB-C Cables
1x	Quick Start Guide
1x	Travel Case

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METAGLOVES **PRO HAPTIC**

Precision Hand Tracking with Haptic Feedback

MANUS Metagloves Pro Haptic integrate electromagnetic field (EMF) tracking with haptic feedback to deliver millimeter-level hand motion capture and real-time object interaction signals. With 25 degrees of freedom, the system generates anatomically complete datasets of the human hand, capturing every joint and micro-movement for high-fidelity robotic control, embodied AI training, and VR/XR interaction.

CORE TECHNOLOGY

EMF tracking provides millimeter-level accuracy with no occlusion, no drift, and persistent calibration. Integrated Linear Resonant Actuators provide real-time vibrotactile feedback during object interaction, enhancing spatial awareness and accelerating learning in teleoperation and virtual environments. Calibration completes in seconds, with user-specific profiles stored locally on the computer that persist across battery changes and wear sessions.
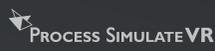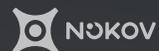
MODULAR DESIGN

The detachable Haptic Top Module contains all electronics and connectivity, enabling cost-efficient multi-user deployment. Each operator requires only their own sized Haptic Sensor Glove. Swappable batteries and optional USB-C power support continuous 24/7 operation. The system integrates directly into existing pipelines through real-time streaming, industry-standard file export, or full SDK customization.

APPLICATIONS

Designed for teleoperation systems requiring tactile feedback, embodied AI training workflows demanding rich interaction datasets, and XR/VR environments where haptic response improves task performance and immersion. Suitable for robotics research, motion science, and AI development requiring anatomically accurate human hand data.

LIVE DATA STREAM INTEGRATIONS

⠿ROS2	MANUS CORE SDK	OpenXR	IC.IDO	UNREAL ENGINE	Unity
NVIDIA ISAAC SIM	XSENS	OptiTrack	QUALISYS	MOTIONBUILDER	worldviz
NOKOV	Process Simulate VR	FZMotion	NORAXON	VRED	MOTION ANALYSIS

⌇ Supports haptic feedback

HARDWARE OVERVIEW

Signal latency	≤ 7.5 ms
Finger sensor type	5 EMF sensors with 6 DOF tracking
Sensor sample rate	120Hz
Haptic module type	LRA vibration motor
Battery duration	up to 3 hours (swappable)
Charging time	2 hours USB-C
Weight	178 grams (incl. battery)
Wired communication	USB-C
Wireless communication	Bluetooth Low Energy 5
Wireless range	Up to 15 meters
Textile information	Size M

WHAT'S IN THE BOX?

1x	Pair of Metaglove Pro Haptic Sensor Gloves
1x	Pair of Metaglove Pro Haptic Top Modules
1x	Wireless Dongle
4x	Metagloves Pro Haptic Battery
2x	USB-C Cables
1x	Quick Start Guide
1x	Travel Case

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QUANTUM
METAGLOVES

QUANTUM TECHNOLOGY

The MANUS Metagloves provide millimeter accurate finger tracking. Through absolute positioning of the fingertips, the digital hand skeleton is scaled to the physical hand of the user. This results in the highly accurate hand- and finger capture, while remaining easy to use and without a complex calibration.

EASY INTEGRATIONS

A variety of available MANUS software licenses make integration with any pipeline quick and easy to set up. For non-standard projects MANUS offers an SDK license to build custom integrations.

UNREAL ENGINE	Unity	MOTIONBUILDER	MOTION ANALYSIS
XSENS	OptiTrack	QUALISYS	VICON
NOKOV	FZMotion	STEAM VR	IC.IDO
NORAXON	.CSV Export	.FBX Export	ROS

HARDWARE SPECS

Signal latency	≤ 7.5 ms
Finger sensor type	Absolute position, 3 axis rotation
Sensor sample rate	120Hz
Battery duration	up to 3 hours (swappable)
Charging time	2 hours USB-C
Weight	146 grams (incl. battery)
Wired communication	USB-C
Wireless communication	Bluetooth Low Energy 5
Wireless range	Up to 15 meters
Textile information	M/L (washable)
Finger attachments	Liner Gloves

WHAT'S IN THE BOX?

1x	Pair of Quantum Metagloves
1x	Wireless Dongle
4x	Quantum Battery
2x	USB-C Cables
3x	Pair of Liner Gloves (S/M/L)
1x	Quick Start Guide
1x	Travel Case

EMBODIED AI TRAINING
Collecting real-world manipulation data for Neura 4NE1 with MANUS Metagloves Pro

HAPTIC FEEDBACK IN ACTION
Feeling real-time vibrotactile feedback with Metagloves Pro Haptic

MANUS
BODYPACK LITE

UNLIMITED RANGE

Extendible range through WiFi streaming live to any MANUS integration or plug-in or record and export through MANUS Core.

ZERO DATA LOSS

Robust data quality by eliminating packet loss or dropped frames.

INTEGRATED DONGLE

Connect your MANUS Metagloves wirelessly without additional hardware for a seamless experience.

TRIGGERED RECORDING

Recording starts and stops in sync with Vicon, OptiTrack, Qualisys, Xsens, PeelCapture and/or Rokoko.
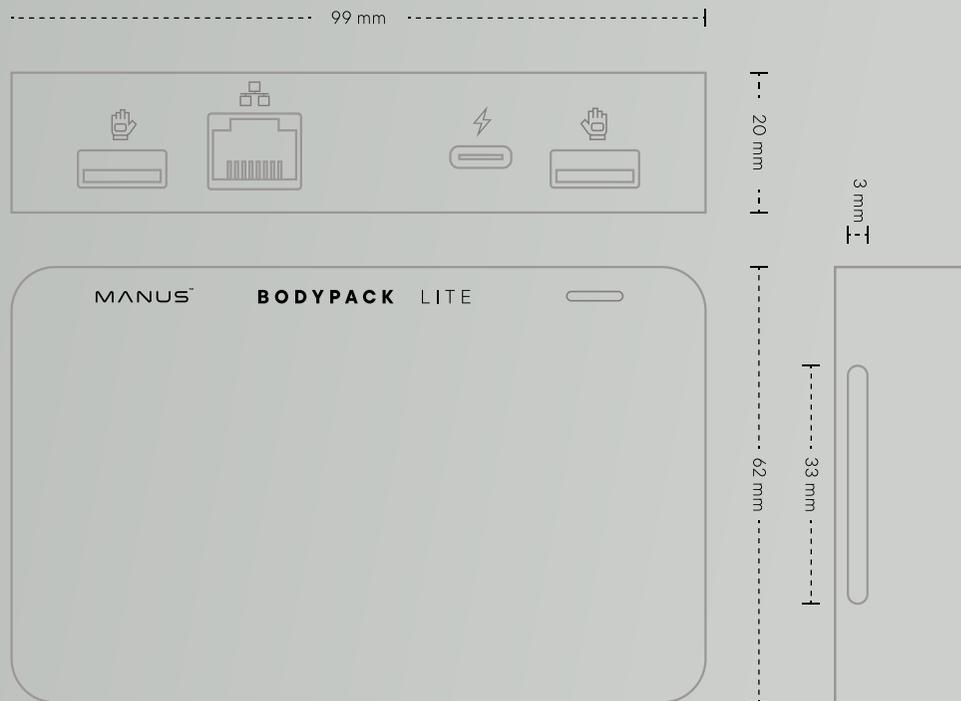
STICK & GO

Can be applied to any motion capture suit with ease with the velco backed casing.

SMALL & LITE

Never experience occlusion and feel the props you are using with your fingertips.

Wi Fi 6E

HARDWARE SPECS

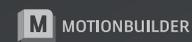|	
Wireless	Wi-Fi 6E (2,4GHz, 5GHz, 6GHz)
Ethernet	1 Gbps
Wireless Gloves	Metagloves Series, Prime 3 Series (requires Prime 3 Wireless Dongle)
Wired Gloves	Metagloves Series, Prime 3 Series
Timecode & Sync	Supported, through external device
Power	USB Type-C
Power Input	5V/2.4A
Power Consumption	~2.5W
Battery Life	~7 hours (on 19Wh Power Bank)
Ports	2x USB 2.0 Type-A (for MANUS gloves, MANUS Wireless Dongle)
Management	Wireless over Wi-Fi, Wired over Ethernet, Wired over USB-C
Weight	95 grams (~3½ ounces)
Body Attachment Type	Velcro backed casing, Strap attachment points

SOFTWARE

MANUS
CORE 3

A central platform for configuring gloves and tracking systems, calibrating users, and streaming motion data into 3D engines and third-party tools through plugins and software development kits (SDKs).

LIVE DATA STREAM INTEGRATIONS

:::ROS2	MANUS CORE SDK	OpenXR	IC.IDO	UNREAL ENGINE	Unity
NVIDIA ISAAC SIM	XSENS	OptiTrack	QUALISYS	MOTIONBUILDER	worldviz
NOKOV	Process Simulate VR	FZMotion	NORAXON	VRED	MOTION ANALYSIS

Supports haptic feedback

LICENSES

	MANUS CORE	MANUS CORE + SDK	MANUS CORE + XR	MANUS CORE + XSENS	MANUS CORE + OPTICAL
FEATURES					
Start Dashboard	✓	✓	✓	✓	✓
Connect / Update Firmware / Apply License	✓	✓	✓	✓	✓
Calibrate / View Dashboard	✓	✓	✓	✓	✓
Stream to Unreal Engine (Plugin)	✓	✓	✓	✓	✓
Stream to Unity (Plugin)	✓	✓	✓	✓	✓
Recording, Saving & Playback (.mrec)	✓	✓	✓	✓	✓
Exporting (.fbx, .csv)	✓	✓	✓	✓	✓
Stream to Motion Builder (Plugin)	✓	✓	✓	✓	✓
Vicon Post Script	✓	✓	✓	✓	✓
DEVELOPER					
SDK Access (C++)	✗	✓	✗	✗	✗
SDK Core Integrated (Linux Compatible)	✗	✓	✗	✗	✗
ROS2 Package	✗	✓	✗	✗	✗
Raw Sensor Data Stream	✗	✓	✗	✗	✗
XR PARTNER INTEGRATION					
IC.IDO Integrations	✗	✗	✓	✗	✗
Siemens TeamCenter Integration	✗	✗	✓	✗	✗
OpenXR	✗	✗	✓	✗	✗
OPTICAL PARTNER INTEGRATIONS					
Xsens MVN	✗	✗	✗	✓	✗
OptiTrack Motive	✗	✗	✗	✗	✓
Qualisys QTM	✗	✗	✗	✗	✓
Nokov XingYing	✗	✗	✗	✗	✓
FZMotion	✗	✗	✗	✗	✓

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	METAGLOVES PRO	METAGLOVES PRO HAPTIC	QUANTUM METAGLOVES
Fingertip Sensors			
Technology	5 EMF sensors with 6 DOF tracking	5 EMF sensors with 6 DOF tracking	5 EMF sensors with 6 DOF tracking
Data	3 axis positional and 3 axis rotational	3 axis positional and 3 axis rotational	3 axis positional and 3 axis rotational
Sampling rate	120Hz	120Hz	120Hz
Motion-to-data latency (wired)	30ms	30ms	80ms
Motion-to-data latency (wireless)	50ms	50ms	100ms
Fingertip Haptics			
Technology	-	5 LRA vibration motors	-
Intensity control	-	256 dynamic levels (per finger)	-
Control rate	-	120Hz	-
Feedback type	-	1-dimensional vibro-tactile feedback	-
Feedback latency (wired)	-	4ms	-
Feedback latency (wireless)	-	16ms	-
Top Module			
Sensor connection	Interchangeable sensor connection	Interchangeable sensor connection	Physically attached to sensors
Status indication	Battery LED, Status LED	Battery LED, Status LED	Battery LED, Status LED
Battery LED	Charging, Fully Charged	Charging, Fully Charged	Charging, Fully Charged
Status LED	Connected Wired, Connected Wireless, Starting Up, Connecting, Pairing, Alert, Low Battery, Firmware Update	Connected Wired, Connected Wireless, Starting Up, Connecting, Pairing, Alert, Low Battery, Firmware Update	Connected Wired, Connected Wireless, Starting Up, Connecting, Pairing, Alert, Low Battery, Firmware Update
Connectivity			
Connection options	Wired, Wireless	Wired, Wireless	Wired, Wireless
Wired communication	USB 2.0 Type-C	USB 2.0 Type-C	USB 2.0 Type-C
Wireless communication	MANUS Wireless Dongle (USB 2.0 Type-A)	MANUS Wireless Dongle (USB 2.0 Type-A)	MANUS Wireless Dongle (USB 2.0 Type-A)
Wireless dongle communication protocol	Bluetooth 5.0	Bluetooth 5.0	Bluetooth 5.0
Wireless dongle range	Up to 15 meters (49 feet) depending on environment	Up to 15 meters (49 feet) depending on environment	Up to 15 meters (49 feet) depending on environment
Wireless long range accessories	MANUS Bodypack Lite	MANUS Bodypack Lite	MANUS Bodypack Lite
Power			
Battery type	Interchangeable	Interchangeable	Interchangeable
Battery model	Metagloves Pro Battery	Metagloves Pro Haptic Battery	Quantum Metagloves Battery
Battery locking mechanism	Snap Fit	Snap Fit	Latch, User Operated
Battery life	Up to 3 hours of continuous use	Up to 3 hours of continuous use	Up to 3 hours of continuous use
Charging time	~2 hours	~2 hours	~2 hours
Charging options	Charge installed battery via USB Type-C (USB 2.0 with 5V/0.5A)	Charge installed battery via USB Type-C (USB 2.0 with 5V/0.5A)	Charge installed battery via USB Type-C (USB 2.0 with 5V/0.5A)
Charging accessories	MANUS Charging Station	MANUS Charging Station	MANUS Charging Station

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	METAGLOVES PRO	METAGLOVES PRO HAPTIC	QUANTUM METAGLOVES
Weight			
Glove with electronics (including battery) for a medium hand	167 grams (5.88 ounces)	178 grams (6.28 ounces)	146 grams (5.15 ounces)
Dimensions			
Hand module height	60.7mm (2.39 inches)	60.7mm (2.39 inches)	65.3mm (2.57 inches)
Hand module width	78.2mm (3.08 inches)	78.2mm (3.08 inches)	89.9mm (3.54 inches)
Hand module depth	34.3mm (1.35 inches)	34.3mm (1.35 inches)	43.2mm (1.7 inches)
Fingertip sensor height	20.3mm (0.80 inch)	20.3mm (0.80 inch)	27.3mm (1.07 inch)
Fingertip sensor width	14.6mm (0.57 inch)	14.6mm (0.57 inch)	14.2mm (0.56 inch)
Fingertip sensor depth	9.6mm (0.38 inch)	9.6mm (0.38 inch)	10.4mm (0.41 inch)
Haptic module height	-	12.5mm (0.49 inch)	-
Haptic module width	-	12.5mm (0.49 inch)	-
Haptic module depth	-	8.1mm (0.32 inch)	-
Wireless dongle height	27.8mm (1.09 inches)	27.8mm (1.09 inches)	27.8mm (1.09 inches)
Wireless dongle width	70.3mm (2.77 inches)	70.3mm (2.77 inches)	70.3mm (2.77 inches)
Wireless dongle depth	8.5mm (0.33 inch)	8.5mm (0.33 inch)	8.5mm (0.33 inch)
Wireless dongle cable length	43cm (16.93 inches)	43cm (16.93 inches)	43cm (16.93 inches)
Gloves			
Glove type	Full finger glove	Full finger glove	Fingerless glove or hand strap
Fingertip sensor placement	Integrated in glove textile	Integrated in glove textile	Requires additional wearable
Fingertip sensor attachment	Removable from glove textile	Removable from glove textile	Removable from wearable
Fingertip sensor cables	Fully integrated, entirely enclosed	Fully integrated, entirely enclosed	Partially integrated, mostly exposed
Fingertip sensor wearable	-	-	Finger tape, Finger sleeve or Liner glove
Fingertip sensor wearable sizes	-	-	1 size, S/M/L, XXS/XS/S/M/L/XL/XXL
Fingertip sensor wearable washability	-	-	No
Finger haptic actuator placement	-	Integrated in glove textile	-
Finger haptic actuator attachment	-	Removable from glove textile	-
Finger haptic actuator cables	-	Fully integrated, entirely enclosed	-
Hand module attachment	Attached with integrated latch	Attached with integrated latch	Attached with bayonet and Velcro straps
Hand module attachment steps	1	1	3
Glove size options	XS, S, M, L	M	M/L
Glove textile material	72% polyester, 28% spandex	72% polyester, 28% spandex	72% polyester, 28% spandex
Glove textile washability	Yes, with electronics removed	Yes, with electronics removed	Yes, with electronics removed

HUMANVERSE AT BONES STUDIO
Performance Capture for Digital Avatars.
Vicon Mocap System, Quantum Metagloves.

MANUS™

Stephan van den Brink

CEO / Co-Founder

"We are proud to set the benchmark for hand tracking and manipulation across industries worldwide. Every day, I see our products enabling breakthroughs in robotics labs, accelerating AI training, and powering immersive experiences. My commitment is building scalable solutions for human interaction data. MANUS is here to deliver the tools you need today while continuously innovating for tomorrow's applications."

Maarten Witteveen

CTO / Co-Founder

"At MANUS we build high precision data gloves that capture the full spectrum of human hand motion with millimeter-level accuracy. Our gloves power natural teleoperation for robots, train embodied AI, and open new ways to interact in VR/XR, entertainment, and research. I love helping creators, scientists, and engineers turn hand movements into real-world or digital action, making interactions more intuitive, precise, and human."

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