MANUS™

PRODUCT PORTFOLIO 2026

Where Human Motion
Becomes Machine Skill.

MANUS™

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 · MOTIONBUILDER · MOTION ANALYSIS

XSENS · OptiTrack · QUALISYS · VICON

NOKOV · FZMotion · STEAMVR · IC.IDO

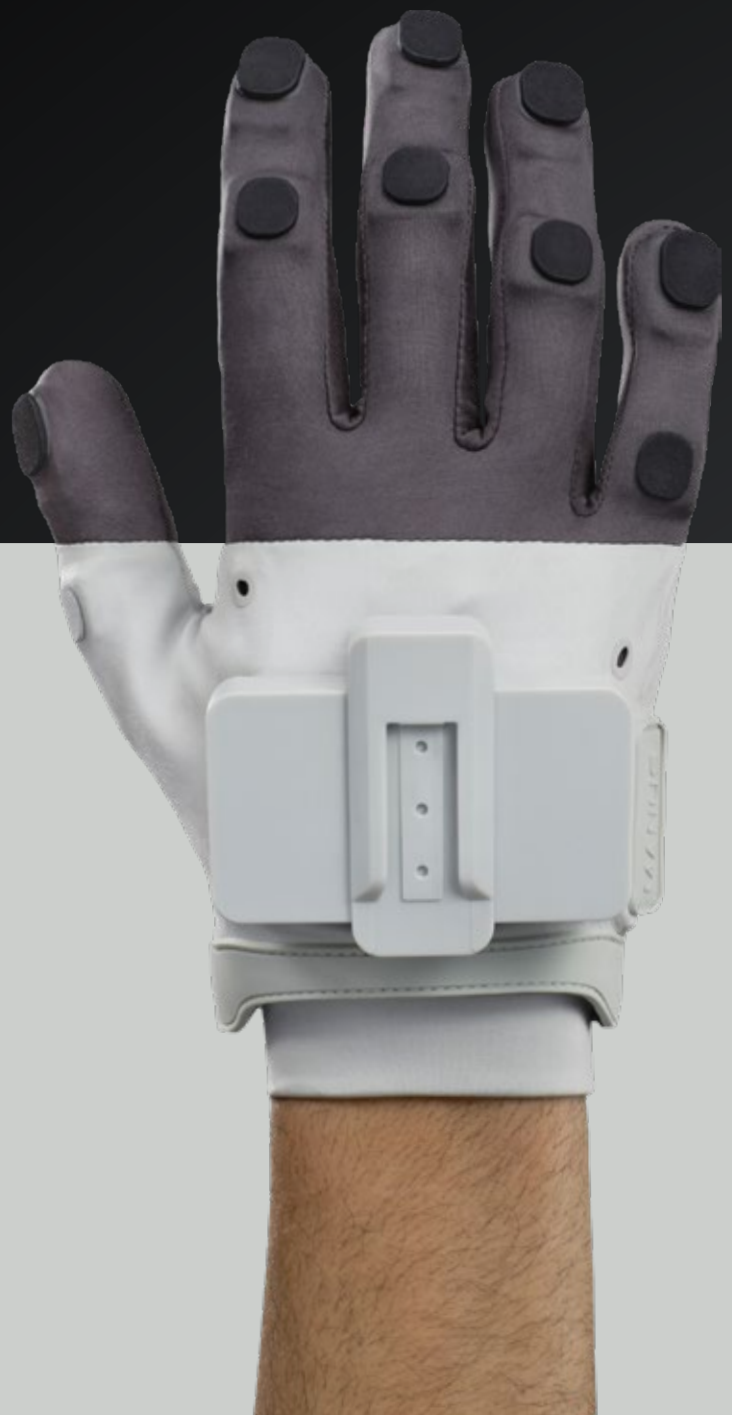
NORAXON · .CSV Export · .FBX Export · ROS2

HARDWARE SPECS

Motion-to-data Latency	30ms (wired), 50ms (wireless)
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
2x	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

MANUS' Proprietary 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 CORESDK · 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

Motion-to-data Latency	30ms (wired), 50ms (wireless)
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, L

WHAT'S IN THE BOX?

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

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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

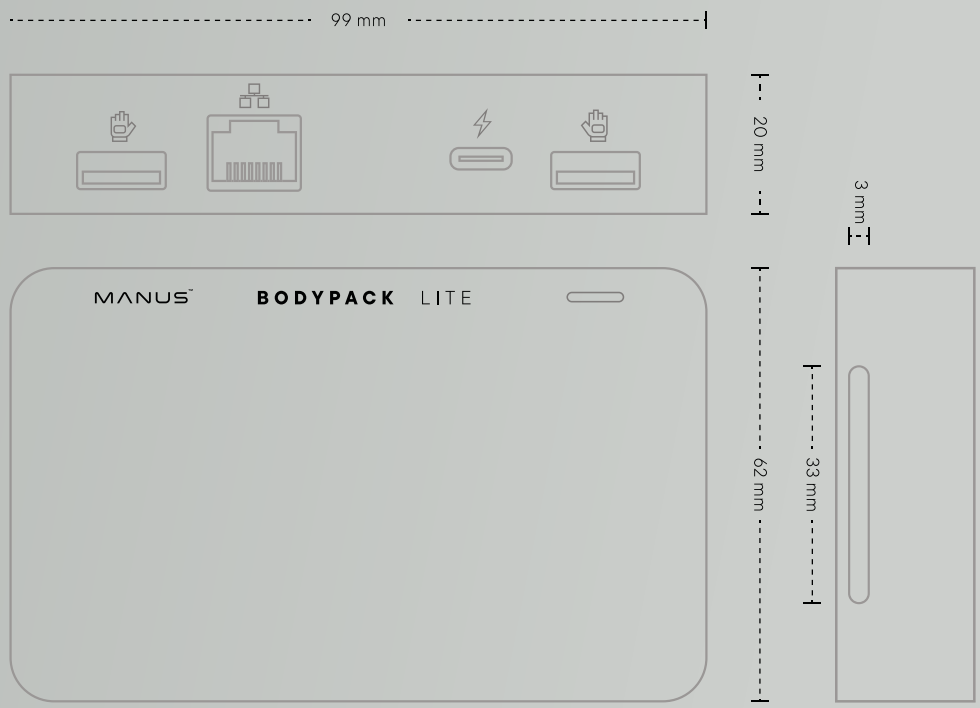
Recording starts and stops in sync with Vicon, OptiTrack, Qualisys, Xsens, PeelCapture and/or Rokoko.

STICK & GO

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

SMALL & LITE

Lightweight at just 95 grams, it reduces wearer fatigue and supports stable, long-duration use.



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

Charging Station

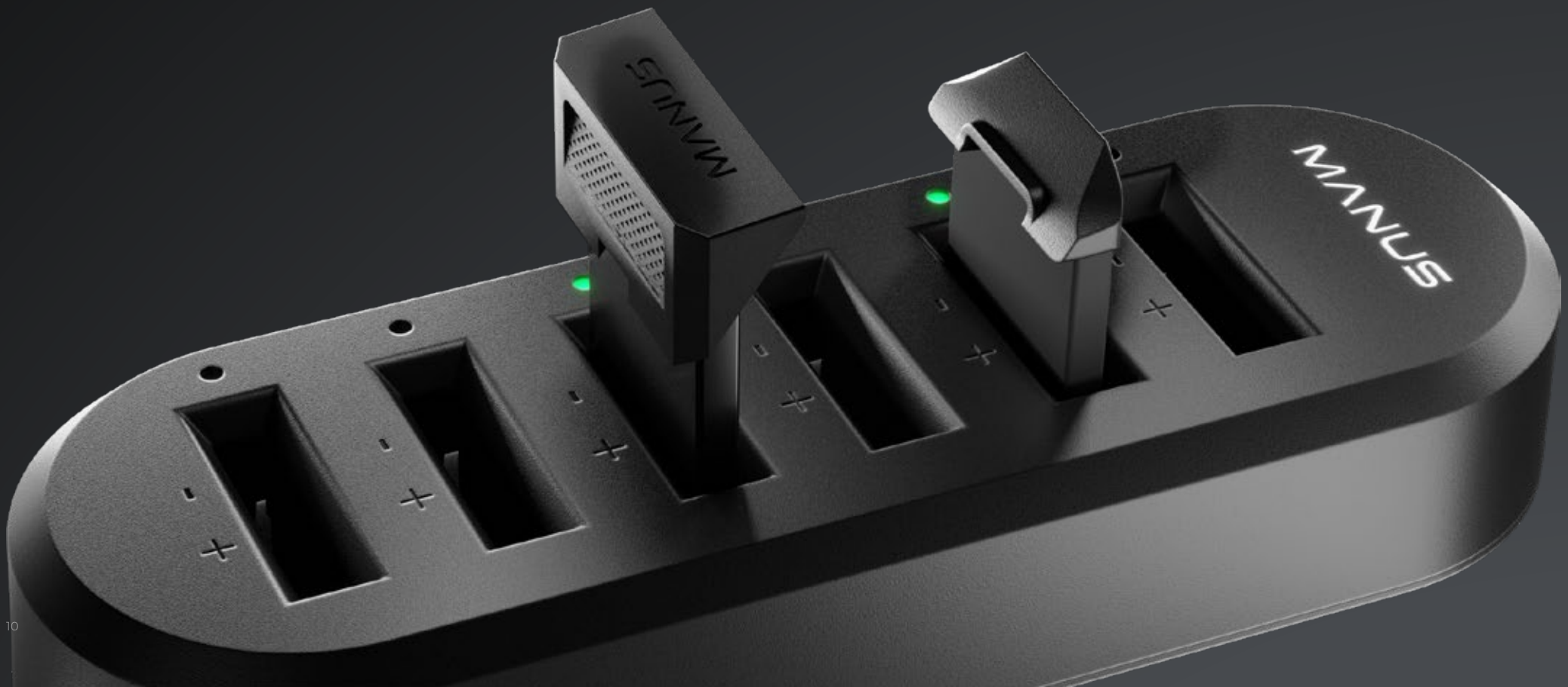
UNINTERRUPTED WORKFLOW

Hot-swappable batteries deliver 3+ hours of continuous use per charge. Keep spare batteries ready in the charging station to maintain uninterrupted workflow throughout your entire session.

Charger Pack

CHARGING STATION +2 BATTERIES

Available for Metagloves Pro and Metagloves Pro Haptic



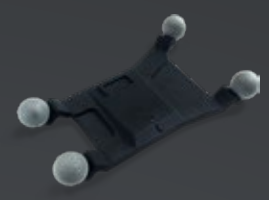
Sensor Glove

For Metagloves Pro, sizes XS, S, M, L and XL

For Metagloves Pro Haptic, sizes M and L

Set of Batteries

Available for Metagloves Pro & Metagloves Pro Haptic



Optical Tracking Adapters

SET OF 2

Four optical markers, four marker screws & one rigid mounting plate.

XSENS Adapters

3 SETS OF 2

Two Xsens Link (pre 2025) adapters, two Link (next-gen) adapters, and two Xsens Awinda adapters

Vive Tracker Adapters

SET OF 2

Quest 3 Adapters

SET OF 2

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
Fingertip Sensors		
Technology	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
Sampling rate	120Hz	120Hz
Motion-to-data latency (wired)	30ms	30ms
Motion-to-data latency (wireless)	50ms	50ms
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
Status indication	Battery LED, Status LED	Battery LED, Status LED
Battery LED	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
Connectivity		
Connection options	Wired, Wireless	Wired, Wireless
Wired communication	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)
Wireless dongle communication protocol	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
Wireless long range accessories	MANUS Bodypack Lite	MANUS Bodypack Lite
Power		
Battery type	Interchangeable	Interchangeable
Battery model	Metagloves Pro Battery	Metagloves Pro Haptic Battery
Battery locking mechanism	Snap Fit	Snap Fit
Battery life	Up to 3 hours of continuous use	Up to 3 hours of continuous use
Charging time	~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)
Charging accessories	MANUS Charging Station	MANUS Charging Station

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	METAGLOVES PRO	METAGLOVES PRO HAPTIC
Weight		
Glove with electronics (including battery) for a medium hand	167 grams (5.88 ounces)	178 grams (6.28 ounces)
Dimensions		
Hand module height	60.7mm (2.39 inches)	60.7mm (2.39 inches)
Hand module width	78.2mm (3.08 inches)	78.2mm (3.08 inches)
Hand module depth	34.3mm (1.35 inches)	34.3mm (1.35 inches)
Fingertip sensor height	20.3mm (0.80 inch)	20.3mm (0.80 inch)
Fingertip sensor width	14.6mm (0.57 inch)	14.6mm (0.57 inch)
Fingertip sensor depth	9.6mm (0.38 inch)	9.6mm (0.38 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)
Wireless dongle width	70.3mm (2.77 inches)	70.3mm (2.77 inches)
Wireless dongle depth	8.5mm (0.33 inch)	8.5mm (0.33 inch)
Wireless dongle cable length	43cm (16.93 inches)	43cm (16.93 inches)
Gloves		
Glove type	Full finger glove	Full finger glove
Fingertip sensor placement	Integrated in glove textile	Integrated in glove textile
Fingertip sensor attachment	Removable from glove textile	Removable from glove textile
Fingertip sensor cables	Fully integrated, entirely enclosed	Fully integrated, entirely enclosed
Fingertip sensor wearable	-	-
Fingertip sensor wearable sizes	-	-
Fingertip sensor wearable washability	-	-
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
Hand module attachment steps	1	1
Glove size options	XS, S, M, L	M, L
Glove textile material	72% polyester, 28% spandex	72% polyester, 28% spandex
Glove textile washability	Yes, with electronics removed	Yes, with electronics removed

ADAM SAVAGE'S TESTED

Teleoperation of Thing from "Wednesday"
©2025 RaptorHouse FX. ©2025 Netflix

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

MANUS FOUNDERS

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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