MANUS • VR

THE PINNACLE OF VIRTUAL REALITY CONTROLLERS

PRODUCT INFORMATION

The Manus VR Glove is a high-end data glove that brings intuitive interaction to virtual reality. Its unique design and cutting edge technology allows for truly immersive experiences by tracking your hands in real-time. With an unlimited amount of possibilities, the Manus VR Glove offers key solutions for training simulations, VR arcades and motion capture. It has been optimized to work with the HTC Vive, Xsens, PhaseSpace and OptiTrack.

The Manus VR Glove is tailored for VR enterprise solutions. With years of accumulated experience and expertise in virtual reality, our team can offer excellent support to VR projects.

Manus VR has bridged a crucial gap between the physical and virtual world. With a focus on intuitive hand interaction, design and durability we bring the most immersive experience to VR.

Green	=	1 DOF tracking
Red	=	360° / 3 DOF
Orange	=	Fully programmable vibration motor
RF	=	Proprietary Radio Frequency/Bluetooth Module

Open Finger Tips
Feel textures and provides tactile feedback when handling objects and peripherals in the real world.

IMU
9DOF IMU on the thumb to measure its rotation

Flex Sensors
Each finger has a custom made double segmented Flex Sensor providing high accuracy and reliable analog data.

Waterproof Casing
Fully encased technology; making the gloves completely hand washable.

Casing Contains

- 9DOF IMU
- Single stack connectivity: Low latency <5ms with a provided USB dongle
- Fully programmable vibration motor for haptic feedback

TECHTALKS

Full Finger Tracking
Each finger contains two sensors that track its movement. In addition, the thumb has a separate sensor to measure its rotation.

Arm Tracking
Through the tracking solutions on your wrist and inverse kinematics you will also be able to see your arms in the virtual world.

Wireless Low Latency
The Manus VR Glove is completely wireless and has a latency of less than 5ms. Truly immersive experience should not be hampered by wires.

Haptic Feedback
Each glove contains a fully programmable vibration motor for haptic feedback. When a user performs an action, a vibration can be felt on the back of the hand.

IMU
With the finest sensors from our partner Bosch; each glove contains a gyroscope, accelerometer and magnetometer to measure the orientation of your hand.

Washable
Every piece of clothing you wear needs to get cleaned. Thanks to the water-resistant casing each glove can be hand washed.

Low Computational Requirements
The Manus VR Glove requires virtually no resources from your desktop pc or mobile device.

Long Battery Life
Each glove is powered by a Varta's state of the art power cells, lasting up to 3-6 hours of extensive use.

COMPATIBILITY PLATFORMS & PLUG-INS

Windows · UNREAL ENGINE · unity · MOTIONBUILDER

NEAR FUTURE INTEGRATIONS

iOS · OSVR · MATLAB

MANUS VR DEVELOPMENT KIT PRO Q4 2016

WHAT'S IN THE BOX

The Manus VR Development kit contains:

1 Pair of the Manus VR Glove
1 USB Wireless Dongle
2 Micro USB Cables
2 Glove washing trees

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SOFTWARE DEVELOPMENT KIT

Synopsis

Our library (which can be found on our Github) is part of the Manus VR SDK and provides functionality to communicate with the Manus VR Glove and the Manus VR Interface. Currently only communication with the Manus VR Glove is implemented. The main language of the Manus VR SDK is C++.

Usage

To communicate with the Manus VR Glove the SDK has to be initialized with ManusInit() after which the current state of a glove can be retrieved with ManusGetData().
When no longer using the SDK ManusExit() should be called so that the SDK can safely shut down.

Code Example

A minimal program to retrieve the data from the left Manus Glove looks like this:

```
ManusInit();

while (true)
{
	manus_hand_raw_t raw;
	if (ManusGetHandRaw(GLOVE_LEFT, &raw) == MANUS_SUCCESS)
	{
		// The data structure now contains the raw glove data
	}
	else
	{
		// The requested glove is not connected or an error occured
	}
	manus_hand_t model;
	ManusGetHand(GLOVE_LEFT, &model)
	{
		// The model structure now contains the skeletal model for
	the hand
	}
	else
	{
		// The requested glove is not connected or an error occured
	}
}

ManusExit();
```

Skeleton model

The Manus VR SDK includes a skeleton model of the hand, which can be re-designed or edited to your own taste.
The SDK provides the data in two different ways, you receive all the raw data as well as the data processed in the skeleton model.

Unique Avatars

A unique avatar can be made for each user. This means it is possible to insert the size of each finger and your arms to create a realistic representation of your body.

The Manus VR SDK can be found at our github
https://github.com/manusvr

High Level operation flowchart