

ForMotion

Glove G7 Product Specification

PRODUCT MANUAL



FORSENSE (Shanghai) Technology Co., Ltd.

Please read this manual carefully before using the product.

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1. Product Overview

The FORSENSE Glove G7 is a professional hand-motion capture device that supports millimeter-level hand-motion reconstruction. It is designed for applications such as high-precision dexterous-hand teleoperation and professional data acquisition.

2. Package Contents



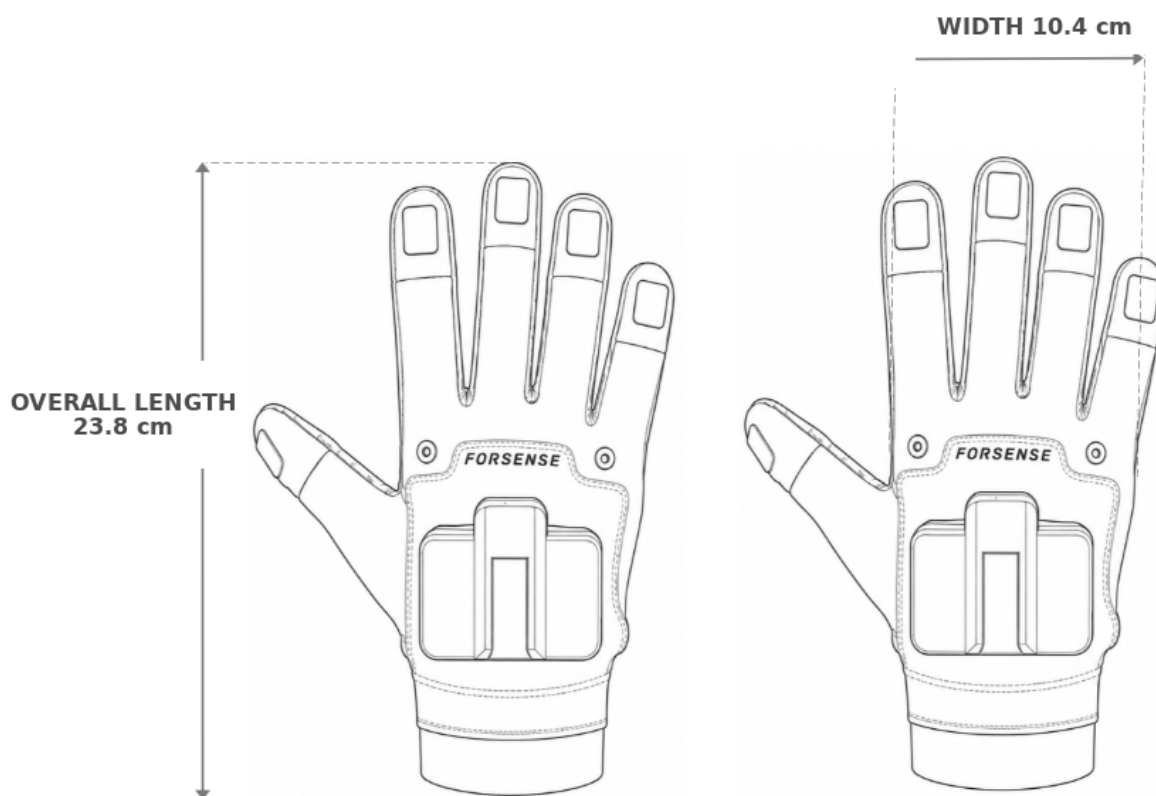
ForMotion Glove G7 Magnetic Tracking Glove Package Contents					
No.	Item	Config.	Description	Qty.	Unit
1	Sensor Set (Single Glove)	Standard	Five fingertip magnetic-inertial hybrid modules (EMF + IMU) and one back-of-hand IMU sensor.	1	set
2	Back-of-Hand Controller (Single Glove)		Processing unit with one IMU sensor.	1	pc
3	G7 Magnetic Tracking Gloves		G7 magnetic tracking glove body.	1	pair
4	G7 Magnetic Tracking Hub		Connects the left and right gloves; provides centralized power, communication aggregation, and dual-glove synchronization control.	1	pc
5	Connection Cable (1 m)		Connects a glove controller to the hub.	2	pcs
6	Data Cable (1 m)		Provides data communication and power to a glove controller.	2	pcs
7	Carry Case		Stores the gloves, data cables, hub, and other hardware.	1	pc
8	Certificate of Conformity		Product certificate of conformity.	1	pc
9	Quick Start Guide (Digital)		Product quick start guide.	1	copy
10	Power Adapter		5 V / 3.4 A power adapter.	1	pc
11	Storage Bag		Stores one glove.	2	pcs

3. Key Specifications

Information Category	Parameter	Specification
Performance	Latency	≤ 1 ms
	Sensor Sampling Rate	120 Hz
IMU Sensors	Finger Sensor Type	6-DOF inertial sensor
	Gyroscope Range	± 4000 dps
	Accelerometer Range	± 8 g
EMF Sensors	EMF Module Count	5 EMF receiver modules (standard)
Spatial Tracking	Position Accuracy	2 mm
	Orientation Accuracy	3°
Electrical Interface	Power Supply	Via the USB-C port on the hub
	Voltage	4.6-5.5 V
	Current	300 mA
Communication	Wired Communication	CAN FD or UART; UART can be converted to RS-485, RS-232, RS-422, or USB
Hardware Dimensions	Fingertip Module	12.6 × 22.85 × 7.7 mm
	Back-of-Hand Controller	67.4 × 53.4 × 22.2 mm
Environment	Operating Temperature	0 to 40 °C
	Operating Humidity	20%-80%
Wearability	Fabric Size	M, L, XL (standard product: L)
Product Weight	Glove (Single)	115 g $\pm$ 5 g

4. Product Dimensions

4.1 Glove Dimensions

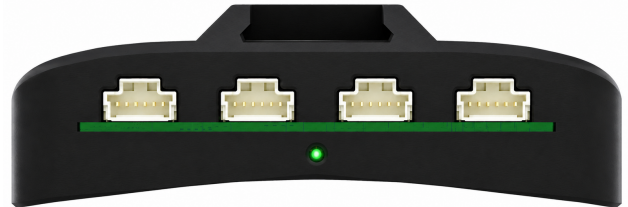


Size	Hand Length	Palm Circumference
M	17.5-18.9 cm	18.5-20.5 cm
L	18.9-20.2 cm	20.0-22.5 cm
XL	20.2-21.6 cm	22.0-24.5 cm

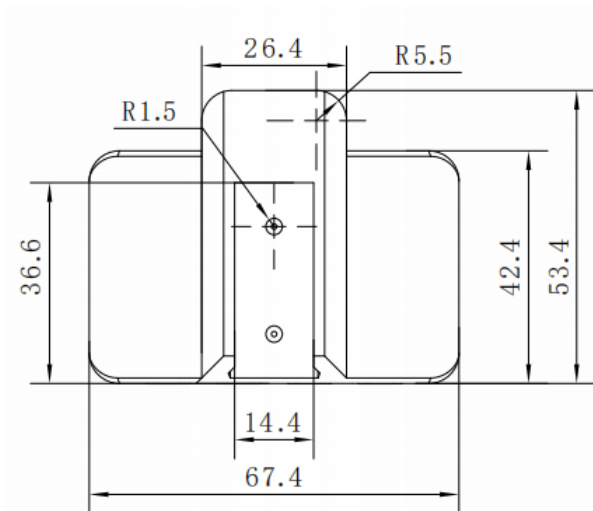
4.2 Back-of-Hand Controller Dimensions



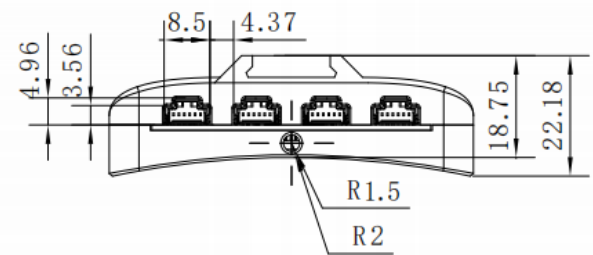
Controller - Physical View 1



Controller - Physical View 2



G7 Controller Dimensional Drawing 1

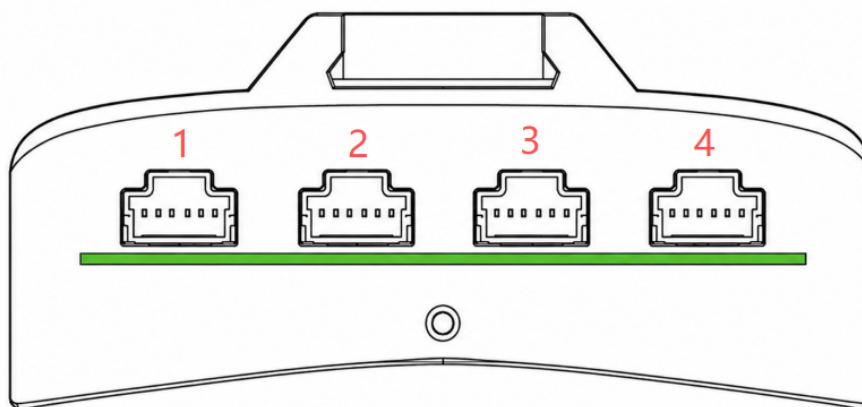


G7 Controller Dimensional Drawing 2

All dimensions are in millimeters.

5. Interface Specifications and LED Indicators

5.1 Interface Specifications



Pin Assignment

Interface	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Function
Interface 1 (CAN)	DC5V	GPIO1	GPIO2	CAN_L	CAN_H	GND	CAN bus device connection
Interface 2 (UART1)	DC5V	GPIO1	GPIO2	TX1	RX1	GND	UART1 device connection
Interface 3 (UART2)	DC5V	GPIO1	GPIO2	TX2	RX2	GND	UART2 device connection
Interface 4 (UART3)	DC5V	GPIO1	GPIO2	TX3	RX3	GND	UART3 device connection

5.2 LED Indicators

Priority	Status Category	System Status	LED Color	LED Pattern
1 (Highest)	Upgrade	Firmware upgrade in progress	Blue	Fast flashing
2	Fault	Hardware fault	Red	Solid
3	Fault	Critical warning fault	Red	Slow flashing
4	Fault	General warning fault	Red	Fast flashing
5	Initialization	Startup initialization in progress	Blue	Slow flashing
6	Operating Status	Left/right glove synchronization valid; operating normally	Green	Solid
7 (Lowest)	Operating Status	Single glove operating normally	Blue	Solid

6. Device Connection Diagram

