

Full Tech Specs Industry 4.0

G6 Suits



Industry 4.0

Smooth, secure and reliable: plug-and-play mocap for a changing world.

Featuring seamlessly integrated pipelines and maximum sensor specification, the next generation of mocap systems is the logical outcome of 12+ years of experience with Siemens.

Unparalleled dependability for top-level data precision plus the highest accuracy available in inertial systems – this is flexible, scalable mocap for your industry's requirements.

1- Features

- 9, 12 or 16 sensor Gloves.
- Unity, UE4, MoBu, Siemens PSH, HTC-Vive plugins
- 19 or 31 sensor Suits (18 full-body with single or 7-sensor CG6 gloves)
- Patent-pending 15-axis saturation-resistant sensor technology
- 4000 Degrees/sec. Gyroscopes & 32G Accelerometers
- 5 synchronized devices, each with 30 sensors, running at 200 fps guaranteed
- Internal storage (no limits on the number of files)
- Operates with Wi-Fi, Bluetooth, or USB
- Capture outdoors with Wi-Fi without a router
- PC, Android and iOS capturing apps; analysis OS on PC
- Synchronize start/stops triggers with optical systems
- Automatic timestamps on files
- Socket for prop sensor on the wrist
- Customizable capture parameters:
 - User Skeleton size and posture (saved files, separate application)
 - Calibration method and referenced sensor
 - Scaling sensor data on separate axes
 - Assign scaled sensor data to any segment
 - Add segments for abnormal skeleton structures
 - Switch from Biomechanical to Animation nomenclature
- Separate glove and suit calibration process for more accuracy
- Easy to use, designed for solo operation with vibration warning system
- Raw data capture support with CSV file output
- Synchronized GPS data at 10 Hz
- Synchronized heartbeat data at 1 Hz
- Single device and capture file for suit, gloves, GPS
- Novel 3-piece body suit



2-System Specifications

Power

- Power supply: any 5V 2A power bank with USB-A or USB-C output sockets
- System operation voltage: 3.3V
- Component power consumption:
- Hub: 350 mA
- Sensor: 32 mA
- GPS: 70 mA max
- Vibrator: About 90mA when motor is on.
- 30-sensor system cables power absorption:

Data transmission modes

- Wireless: Wi-Fi & Bluetooth
- Wired: Ethernet through USB

Storage

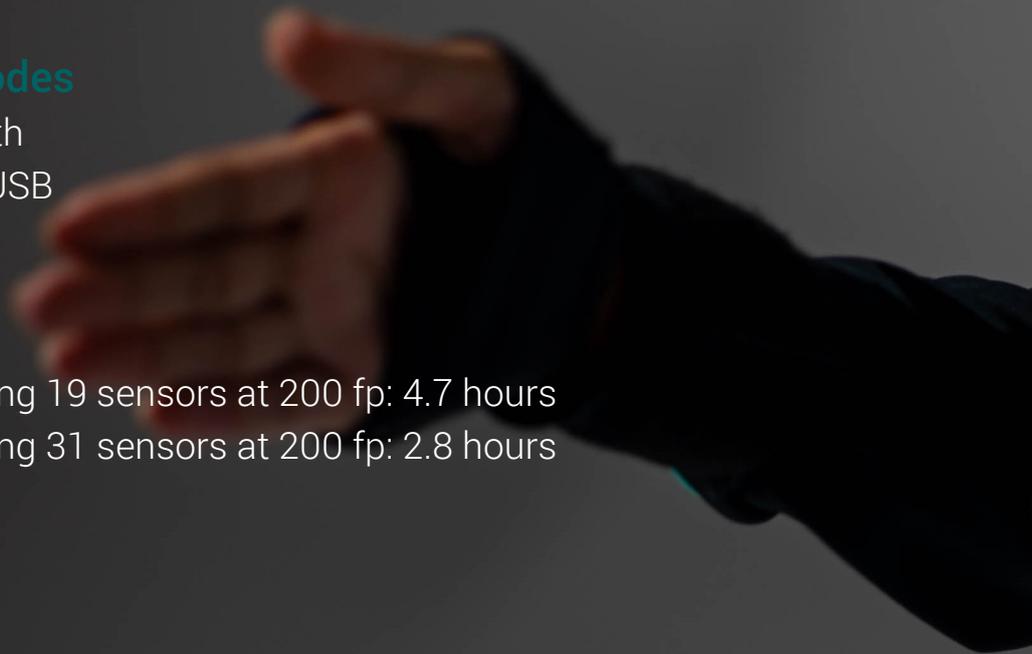
- 1 GB
- Max recording time running 19 sensors at 200 fp: 4.7 hours
- Max recording time running 31 sensors at 200 fp: 2.8 hours

Sensor support

- Up to 31 sensors

Suit & Glove Cloth

- 3-piece stretch suit (upper, lower body, vest & glove) L, M, S size
- Single sensor palm gloves and/or fingered stretch gloves, L, M, S size





 Synertial

Software

- SynDash smartphone capture app on Android & iOS
- SynDash Light motion capture SW application on PC
- SynDash Pro sports analysis and user skeleton parameter settings SW application on PC
- AutoCal user size and posture definition SW application on PC
- SynShow motion capture and system diagnostics SW application on PC
- Unity, UE4, MoBu, Siemens PSH, HTC-Vive plugins

3- Motion Sensor Specification

Power

- Supply voltage 3.3~5V Operation voltage
- 3.3V Current consumption 32mA
- Sensor Update Rate: 416 Hz
- Static Rotation Accuracy 2.0 °
- Dynamic Rotation Accuracy 1.0 °
- Acceleration Accuracy 0.0005 g
- Gyroscope Accuracy 0.12 °/s
- Magnetometer Accuracy 1.4uT
- Accelerometer Range +/- 16 g
- Gyroscope Range +/- 4000 °/s



4- Sensor Network Hub Specification

Power

- Supply voltage 3.3~5V
- Operation voltage 3.3V
- Consumption with Cables/no sensors: 350 mA

Data transmission Modes

- Wi-Fi: 2.4G, support 802.11 b/g/n,
- Bluetooth: 5.0
- USB: 2.0

Storage

- Flash 1 GB

Support Firmware Upgrade

- MCU Yes
- BT Yes
- IMU Yes

Carrying Case

- L 464 mm
- W 366 mm
- D 176 mm



5- Sensor Placements on Suit

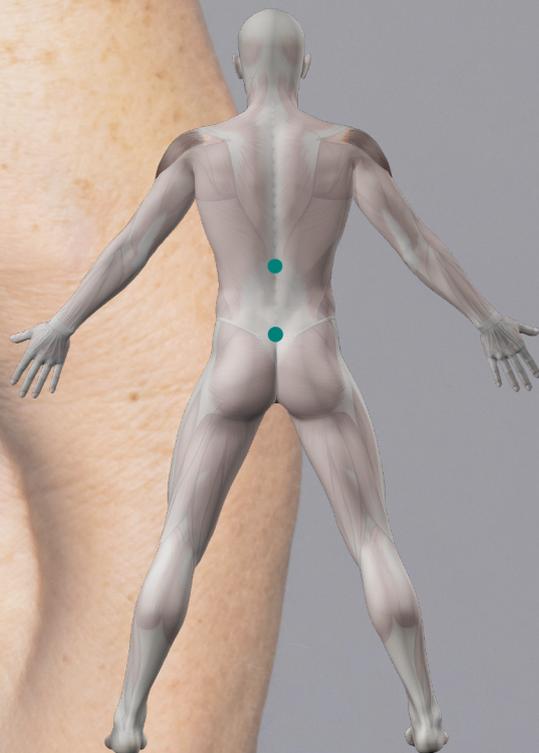
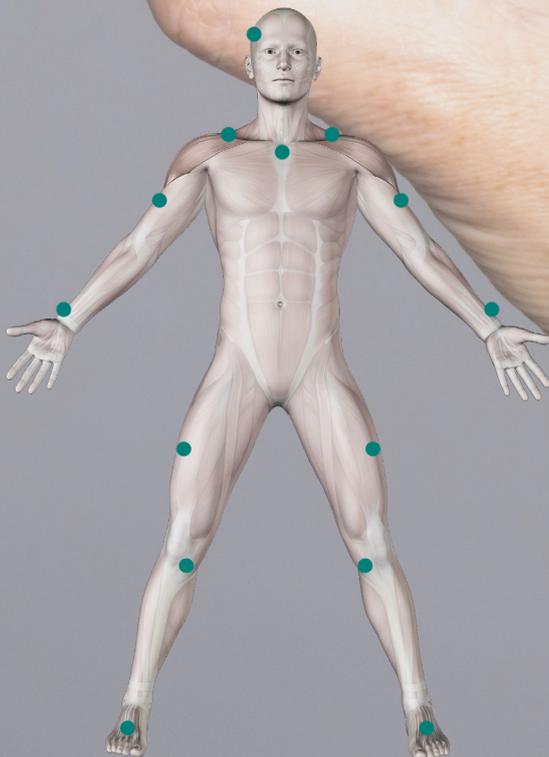
19 Sensors



Prop
Sensor



31 Sensors



Prop
Sensor

