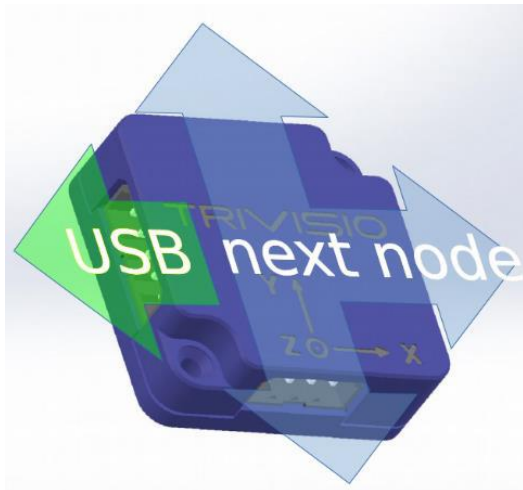


## Light Motion Suite

- wireless full-body tracking -

### 1. Technical Characteristics

Light motion suit is the set of inertial measurement units (IMU), *nodes*. A node may perform function of a *gate* that is to be connected to USB, via its 5-pin connector. Each node may be connected up to 3 other nodes via 4-pin connectors. Maximum number of nodes connected to a gate is 10 (including internal node).



We offer to customers either separate IMUs or wireless full-body tracking set that consist of:

- Wearable PC, including:
  - IMU compartment
  - Internal battery
  - Wi-Fi router
  - Ubuntu Linus OS
- 15 IMUs
- Straps and cables



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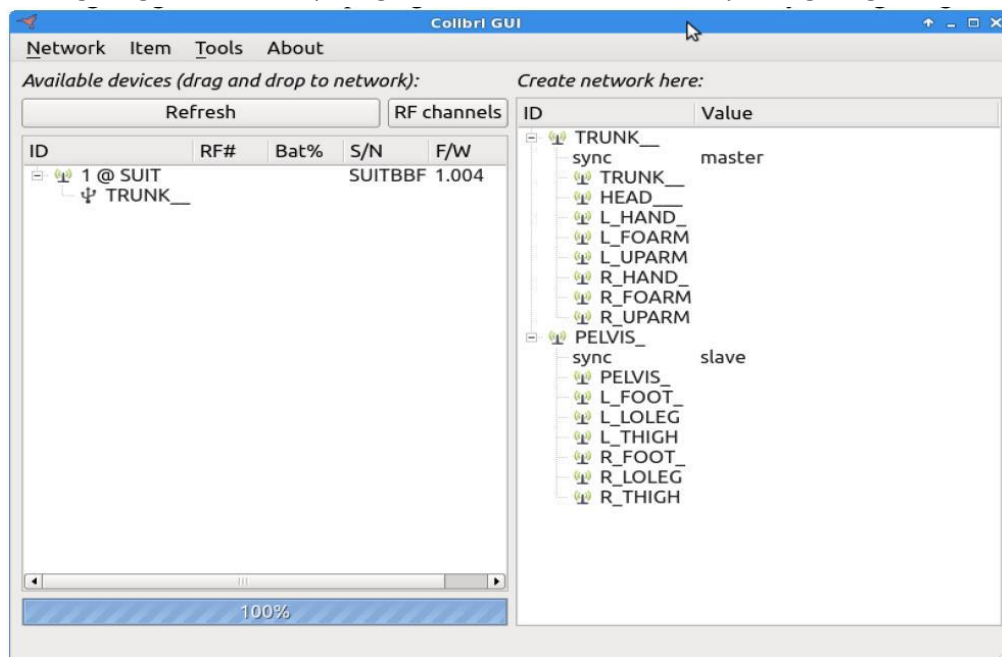
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## Light Motion Suite

- wireless full-body tracking -

### 2. Software:

For separate IMUs Colibri API may be used. It's a cross-platform library for Windows, Mac OS X and Linux for configuring IMUs and acquiring data. It includes GUI for easy configuring:



For wireless set VRPN may be used. It's open source client/server software for transferring sensor data via network. Often motion capture software has a VRPN plug-in. VRPN server runs in the wearable PC. You must have VRPN client to get date. Run server from client PC:

```
suit_config -c <configuration file> -f <frequency>
```

```
suit_run
```

```
vrpn_orientation Colibri@192.168.8.1
```

Wireless set may be used also in data-logger mode, saving captured data to flash memory.

### 3. Technical Specifications

Sensor type:	3-DOF orientation, based on inertial and magnetic field sensors
Gyroscope:	Scale: $\pm 2000$ °/s
Accelerometer:	Scale: $\pm 16$ g
Magnetic field sensor	May be disabled for industrial environments
Orientation accuracy	Pitch/Roll: $1^\circ$   Yaw: $2^\circ$
Working frequency	260 Hz with 15 nodes (every node runs at this freq.), 500 Hz with only 1 node
Dimensions (W/H/D)	
Sensor	30 mm x 10 mm x 30 mm
Wearable-PC	TBD
Connection type	USB (separate IMUs) / Wi-Fi (wireless set)
Latency	2 ms / 5 ms
Power consumption	0.15 W / 4 W (3-hours operation with internal battery)

*Subject to technical modifications*



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