RT-BLE-001 r3

The RT-BLE-001 r3 is a fully self-contained wireless foot-tracking solution, designed to precisely monitor foot position and orientation in real-time. This device, rich with innovative features, boasts inertial sensors, an integrated computer, a Bluetooth Low Energy (BLE) interface, and a rechargeable battery, all tidily packaged within its design. Sophisticated calculations by the onboard computer determine the user's foot placement and orientation within a three-dimensional framework.

Providing real-time updates through the BLE interface, this device maximizes the efficiency of data transmission. To capture this data stream, the user simply needs a device that is equipped with BLE, such as a smartphone, PC, or Raspberry Pi. This high level of compatibility is achieved using our accessible open communication protocol, simplifying the process for users.

Features:

Provides reliable and continuous tracking
Fully self-contained solution
Step-to-step tracking error: <1% (typically)
Localization error: <4% traveled distance
Update rate: up to 100Hz
Dynamic range: up to running (~5 m/s)
Not reliant on external references, resistant to interference
Ensures quiet operation by not needing to broadcast signals

RT-BLE-001 securely fastened to a shoe in action

System Specs:

Size: 30x20x8 mm
Weight: 6 gm (2 US pennies)
Battery life: >12 hours
Charging time: 1.5 hours
Connectivity: BLE 4.0 and up

Applications:

Emergency first responders, surveying, asset mapping, and workflow analysis tracking system in GPS denied environments.
Gait analysis and assessment for performance, medical, sports, and rehabilitation.
Rehabilitation, rehab-robotics, and training applications utilizing biofeedback.
General purpose foot motion tracking.
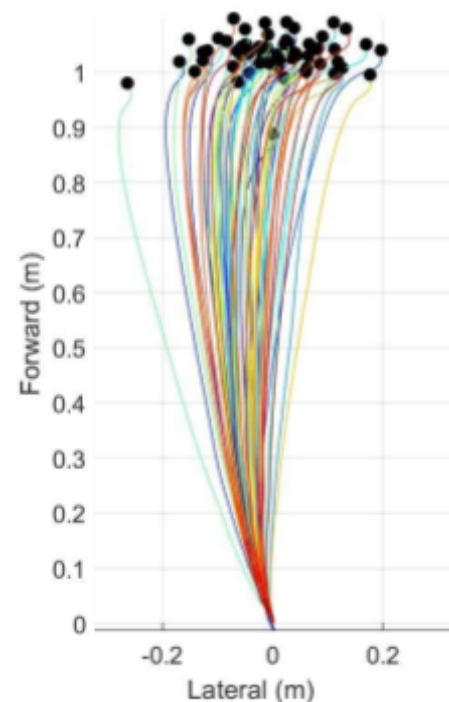
Analyzing stride variability as a subject walks through a corridor