

XBUS KIT

AMBULATORY MEASUREMENT OF HUMAN MOTION



xsens

The Xbus Kit is a lightweight, portable system that incorporates the Xbus Master and up to 10 Motion Trackers (MTx), enabling ambulatory measurement of human motion. Controlled and powered by the Xbus Master, MTx's provide drift-free 3D orientation, 3D acceleration, 3D rate of turn (rate gyro) and 3D earth-magnetic field. The Xbus Master samples and sends digital data from the MTx units, wirelessly or via a serial cable, to a PC, where data is recorded using MT Manager or the MT Software Development Kit (SDK).

PRODUCT OVERVIEW

Features

- The Xbus Master connects multiple Motion Trackers (MTx) on one or two Xbus strings
- Synchronous sampling of multiple MTx's at adjustable sample frequencies up to 512Hz
- Compatible with PC via USB cable or wireless Bluetooth 2.0 connection
- Compatible with Xsens MT Manager and MT Software Development Kit
- External triggering & notification of trigger moment available for synchronization
- Battery operated or mains power supply
- Low battery indicator
- Internal 64 kByte communication buffer
- Supplies power to MTx's
- Ergonomic design

Fields of use

- Biomechanics
- Rehabilitation
- Sports science
- Virtual reality
- Ergonomics
- Animation

The Xbus Kit combines a set of MTx's, an Xbus Master and a wireless transceiver enabling completely ambulatory measurement of human motion. The MTx's provide drift-free 3D orientation as well as 3D acceleration, 3D rate of turn (rate gyro) and 3D earth-magnetic field. The Xbus Master samples and sends synchronous MTx data to the PC. Xsens' MT Manager and SDK are Xbus Master compatible.



TECHNICAL SPECIFICATIONS XBUS MASTER

Type

Product code XM-B-XB3

Xbus

Max. number of MTx's 10 (20 with 2 synchronized Xbus Masters)
Type of MTx's MTx Xbus version (MTx-49A##G##)
(See MTx brochure for technical specifications)
Sample frequency Adjustable from 10-512 Hz
(max. depends on number of MTx's connected)
Sample frequency example configuration 150 Hz (5x MTx, raw data output, Bluetooth mode)
Number of Xbus connectors on Xbus Master 2 (enables 2 Xbus strings)

Host interface

Cable type RS-232, USB
Wireless type Bluetooth v2.0 (Serial Port Profile)
Typical range radio 100 m (max. output power 100 mW)

Power

Operating voltage 4.5 - 12 V
Power 2.7 W (5x MTx, Bluetooth mode)
Batteries 4x AA 2700 mAh, rechargeable NiMH (included)
Minimum battery powered operating time 3 hr (5x MTx, Bluetooth mode)
Power adapter (EU, UK, US) 12 V DC 1A

Dimensions

MTx inertial tracker 38 x 53 x 21 mm
Xbus Master 100 x 150 x 40 mm
Xbus Kit case 376 x 463 x 110 mm

Weight

MTx inertial tracker 30 g (1 oz.)
Xbus Master 330 g (0.7 lbs)
200 g (0.4 lbs) excl. batteries
Shipping weight 3200 g (7.05 lbs)

Xbus Kit

The Xbus Kit contains:

- Xbus Master
- 5 MTx (also available in other quantities)
- MT Manager and Software Development Kit
- Accessories:
 - 5 x Xbus cables
 - Xbus Master cable USB
 - Power adapter
 - 4x AA Rechargeable batteries
 - Belt
 - Bluetooth transceiver USB
 - Case

Optional

MVN STRAPS (for easy sensor fixation)



XSENS

ABOUT XSENS TECHNOLOGIES

Xsens is a leading supplier of 3D motion tracking products based upon miniature MEMS inertial sensor technology. Since its inception in 2000, several thousands of motion sensors and motion capture solutions have successfully been deployed in areas such as 3D character animation, rehabilitation and sports science, and robot and camera stabilization. Xsens' customers include Universities of Twente, Amsterdam, Rhode Island and Magdeburg. Research institutes Roessingh Research and Development, AZTI, INAIL and TNO. Companies Össur, Daimler, Sony Pictures Imageworks, Double Negative, Industrial Light & Magic, Electronic Arts, Sony Computer Entertainment, Gearbox Software, THQ, 2K, The Third Floor, Syndicate, CG Sweden and many other companies and institutes around the world.

Xsens' research department has built a unique portfolio of technologies and know-how in the field of multi-sensor data fusion algorithms, combining inertial sensors with aiding technologies such as GPS and RF positioning and biomechanical modeling. The company and its products have received several awards, amongst which 3 consecutive ratings in Deloitte's ranking of fastest growing technology companies in Europe.

Xsens is headquartered in Enschede, The Netherlands and has an office in Los Angeles, CA, US.



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