

# COLIBRI-Wireless



## FEATURES

Two 3-axis MEMS accelerometers with redundancy z-axis  
3-axis MEMS gyroscope  
3-axis AMR (magneto resistive) magnetic sensor  
Temperature sensor

2.4 GHz band operation  
10 meters working distance  
10 hours 570mAh Li-Po battery  
micro-USB charging  
Up to 10 trackers **synchronized** in the wireless network

USB-dongle (receiver), with USB interface (Virtual COM-port) and synchronization IN/OUT

Auxiliary digital and analog inputs (e.g. for OEMs to implement joystick)

Software API for Windows and Linux representing extended Kalman filter for the orientation tracking

High-precision aluminum base plate

## SPECIFICATIONS

### Accelerometer

Scale:  $\pm 16$  g and  $\pm 6$  g  
Resolution: 13-bit

### Gyroscope

Scale:  $\pm 1500$  °/s  
Resolution: 13-bit

### Magnetic sensor

Scale:  $\pm 400$   $\mu$ T  
Resolution: 12-bit

### Temperature sensor

Accuracy:  $\pm 0.5$  °C  
over a 0 °C to +70 °C range

## GENERAL DESCRIPTION

Colibri-Wireless is the Inertial Measurement Unit (IMU).

It carries 3-axis state-of-art sensors to measure acceleration, angular rate and magnetic field.

Built-in temperature sensor helps to eliminate temperature influences on sensors.

Lower range higher precision accelerometer may be optionally added for certain applications.

Up to 10 Colibri-Wireless can be connected in the **synchronous** network to the single USB-dongle (receiver).

Sampling frequency is 100 Hz for every tracker.

Supplied API for Windows and Linux implements orientation tracker.



Working frequency:  
100 Hz

Orientation accuracy:  
Pitch/roll: 0.5 °  
Yaw: 1 °

Power consumption:  
3.7 V Li-Po battery 570mAh  
55 mA

Dimensions: 56x42x29mm  
Weight: 60 gram