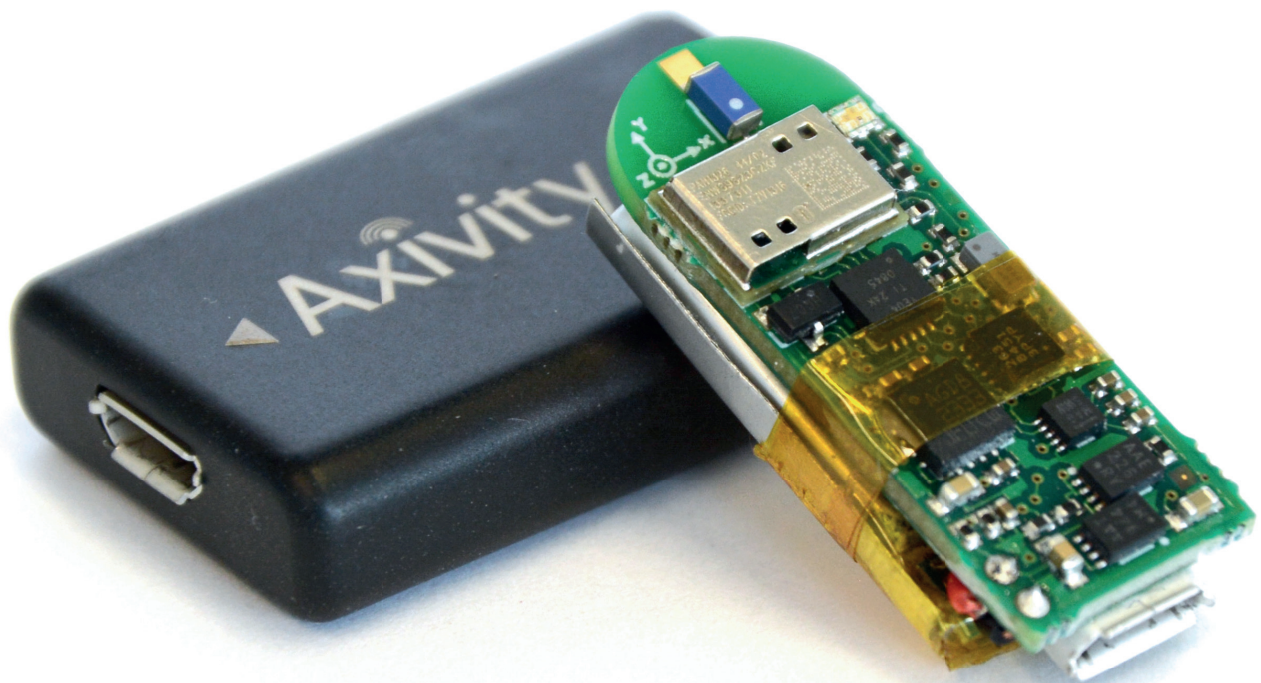


WAX9 Data Sheet

9-Axis Bluetooth Streaming IMU



WAX9

9-Axis Bluetooth Streaming IMU

Description

The WAX9 is a streaming inertial measurement unit (IMU). The sensor combines a MEMS accelerometer, gyro and magnetometer with a Bluetooth Low Energy (BLE) compatible radio. The WAX9 sensor is an ideal platform for wirelessly gathering real time movement data. Additionally, the WAX9 also features a barometric pressure sensor and temperature sensor.

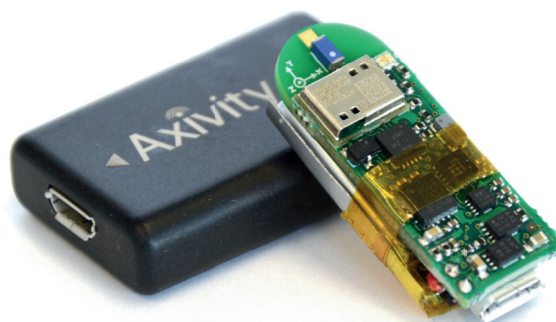
The WAX9 is fully configurable and can provide its output in a range of format options at a variety of rates. The WAX9 sensor is provided in a convenient Puck form factor.

Summary

- 3-axis accelerometer
- 3-axis gyroscope
- 3-axis magnetometer
- Temperature sensor
- Barometric pressure sensor
- Bluetooth 4.0 Radio

Applications

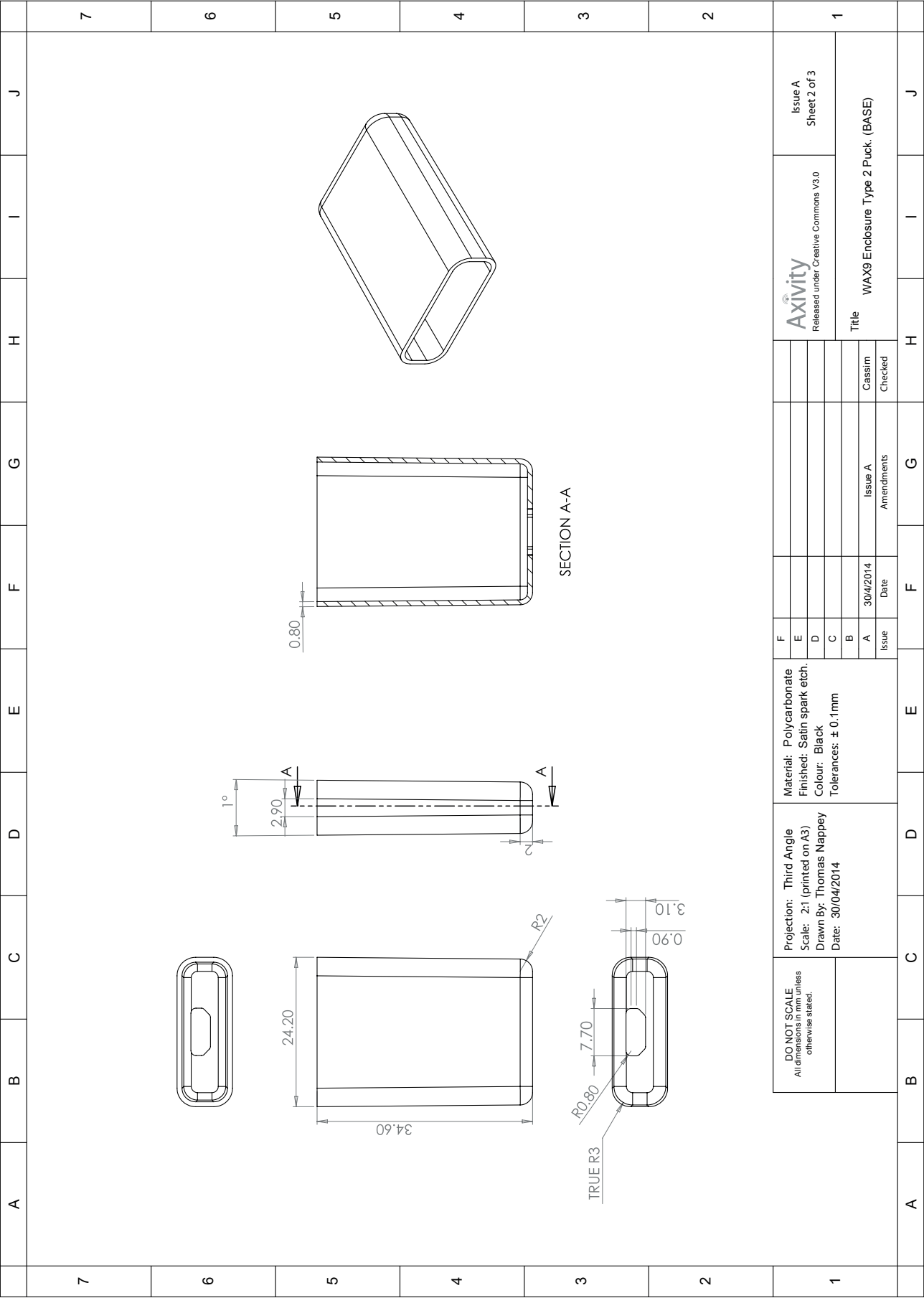
- Human movement science
- Sports research
- Instrumented environments
- Digital interaction
- Activity recognition

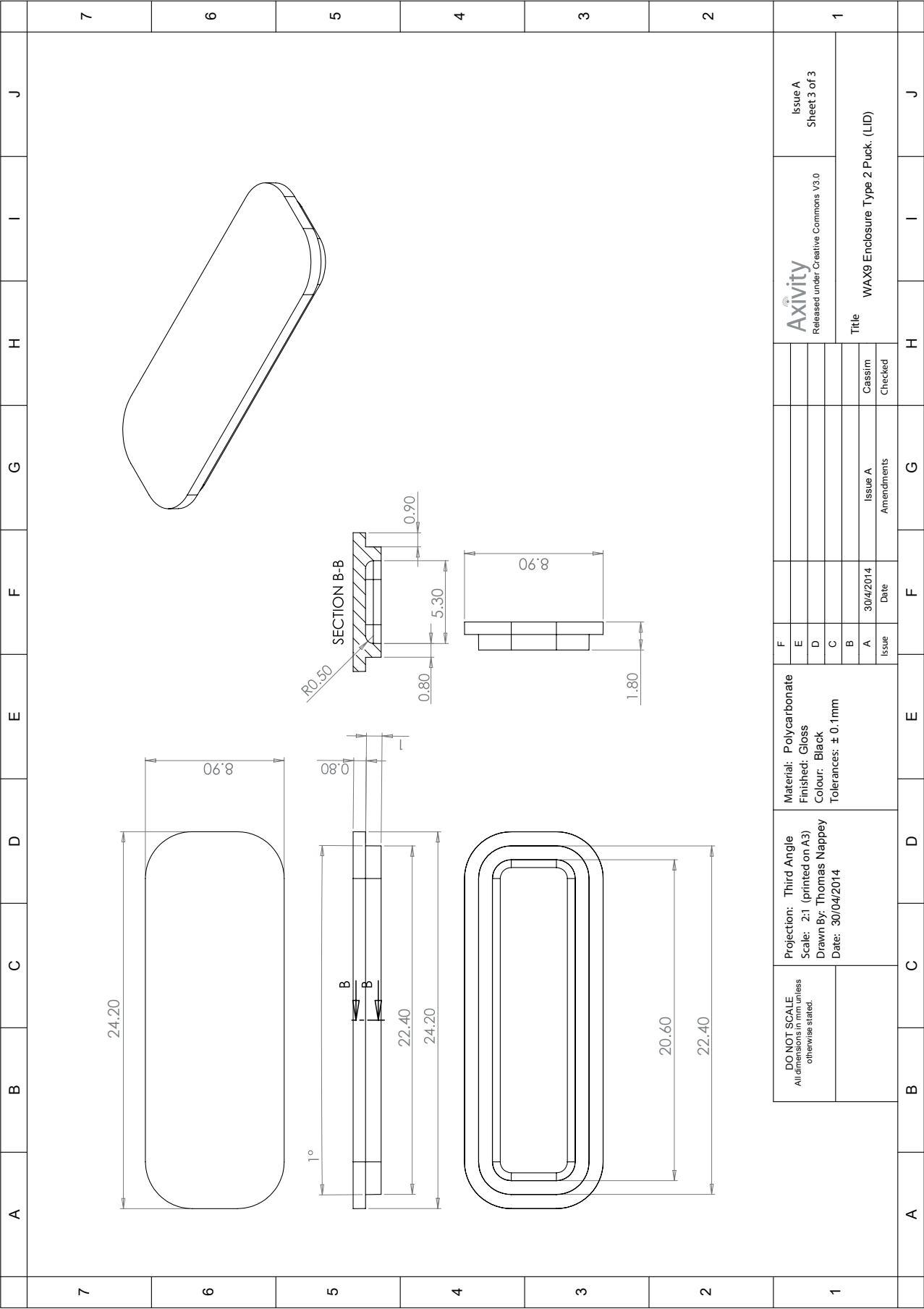


Specification: WAX9

PARAMETER	VALUE	NOTES
Puck Size	23x32.5x7.6 mm	
Puck Weight	8g	
Enclosure Material	Polycarbonate	
Battery Capacity	85mAh	Rechargeable lithium polymer
Battery Charge Current	100mA	
Connectivity	Micro USB	
TYPICAL LIFE (full charge)		
Hibernate	56 days	
Discoverable	117 hours	
Connected (not showing)	3 hours	Bluetooth Basic Rate
Connected (50Hz stream)	2 hours	Bluetooth Basic Rate
LE Mode Connected (not showing)	25 hours	Bluetooth 4.0 Low Energy
LE Mode Connected (50Hz stream)	6 hours	Bluetooth 4.0 Low Energy
ENVIRONMENTAL PROTECTION		
Dust Ingress	Dust tight (IP6X)	
Operating Temperature	0°C to 65°C (not charging)	40°C if charging
MEASUREMENT CAPABILITIES		
Output Data Rate	Configurable 1Hz - 400Hz	See developer guide for details
ACCELEROMETER		
Sensor Type	MMA8451Q	
Range	±2/4/8g	
Resolution	14-bit	up to 0.1mg
MAGNETOMETER		
Sensor Type	MAG 3110	
Range	±1mT	
Resolution	16 Bit	
GYRO		
Sensor Type	L3G4200D	
Range	±250/500/2000 dps	
Resolution	16 Bit	
TEMPERATURE		
Sensor Type	BMP180	Linear thermistor
Range	0°C - 65°C	
Resolution	0.1°C	
PRESSURE		
Sensor Type	BMP180	
Range	30-110 kPa	
Resolution	1Pa	




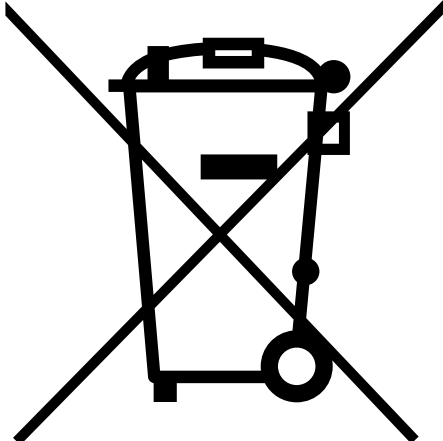
info@axivity.com





Certification:

The WAX9 is certified to the following:

Certification	Test
	This product complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
	The product is compliant with the Directive 2004/108/EC; the relevant Declaration of Conformity is available from Axivity The product has been tested to BS EN 61000-6-1 :2007 and BS EN 61000-6-3 :2007 (Electromagnetic compatibility (EMC), Generic standards, Immunity for residential, commercial and light-industrial environments).
	This product is compliant with European Union RoHS (2011/65/EU) directive which restricts the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE) in electrical and electronic equipment put on the market in the European Union.
	In accordance with the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE), the product must not be disposed of in the normal unsorted municipal waste stream. Instead, it is the user's responsibility to dispose of this product by returning it to a collection point or directly to Axivity. Separate collection of this waste helps optimize the recovery and recycling of any reclaimable materials and also reduces the impact on human health and the environment. For more information concerning the correct disposal of this product, please contact your local authority or our issuing authority. The lithium polymer cell has met the acceptance criterion for the UN Recommendations on the Transport or Dangerous Goods relating to lithium batteries, reference Para 38.3 of Manual tests and Criteria document No. ST/SG/AC.10.11/Rev.4:2003

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