

# axoLOCK

## HIGH SECURITY GPS TRACKING PADLOCK

axoLOCK is an advanced GPS tracking with security padlock, providing a real-time tracking and monitoring solution (supports Hybrid GNSS) with advanced onboard sensors: Open/ Close, Temp, Pressure, Movement, Impact, & more.., offers a complete security, monitoring and tracking solution for your cargo. Designed with extremely rigid polymer protective casing and with a robust tracking technology that preforms beyond the lock itself..

axoLOCK was integrated with the industry highest level of padlock security, manufactured by world leader. Supplied with patented key protection against unauthorised key duplication and enhanced restricted key control. Also available with Electro-mechanical Access control technology for maximum security and remote management.

### axoLOCK Tracking

Enables real-time Tracking of the location and condition of cargo, assets or goods, providing specific alerts about issues and delays. The axoLOCK has integrated sensing capabilities and with the long-range wireless (Ex-Sensor) IoT devices to completely protect and monitor your cargo.

### axoLOCK Security

Maximum resistance against physical attack, hardened steel padlock body and hardened boron steel shackles in our axoLOCK, offered maximum resistance against corrosion environment.



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axoLOCK is a mobile GPS-security padlock with on board advanced tracking and monitoring solutions. On board sensors included: Temperature, Barometric pressure, Tampering, Impact, Movement, and Light. SiRFstarV™ engine support hybrid GNSS satellite network. (GPS & GLONASS) Communicate with the server via secure cellular 2G, 3G or 4G LTE for remote monitoring and Over-The-Air configuration that include device updates and firmware upgrades. Compliant with cold chain standards and regulations include pharmaceuticals (GDP), perishables transportation standard En12830. Automatic Airplane mode – enables end-to-end airborne shipment scenarios, include shipment by land-air-land.



### axoLOCK - Powerful Batteries

Heavy duty, long lasting rechargeable batteries. Available in 5Ah, 10Ah and 15Ah capacity for longer usage. Secured battery installation, with a simple plug and play replacement. Ergonomically designed surface for better handling in wet conditions or when wearing gloves.



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The automatic airplane mode enables it to cover end-to-end airborne shipment scenarios, including shipment by land-air-land. When the automatic airplane mode is enabled, the axoLOCK, allows its internal multiple sensors to identify that the flight has commenced and automatically shuts down RF transmissions after take-off and during the entire flight. The axoLOCK logs all events internally and transmits those events upon landing.

Transmission is automatically renewed as soon as the airplane has landed and completely still. At this point, all the logged events are transmitted to the server back-end. This unique feature complies with FAA and IATA guidelines.

### Cold Chain solutions

axoLOCK is a complete Real-time Cold-chain monitoring unit for temperature and humidity-controlled containers, trailers, pallets or boxes with pharmaceutical or perishable goods. The axoLOCK enables on-the-fly responses when deviations from the required temperature or humidity boundaries occur, and guarantees compliance with the strictest cold chain regulations (EN 12830).



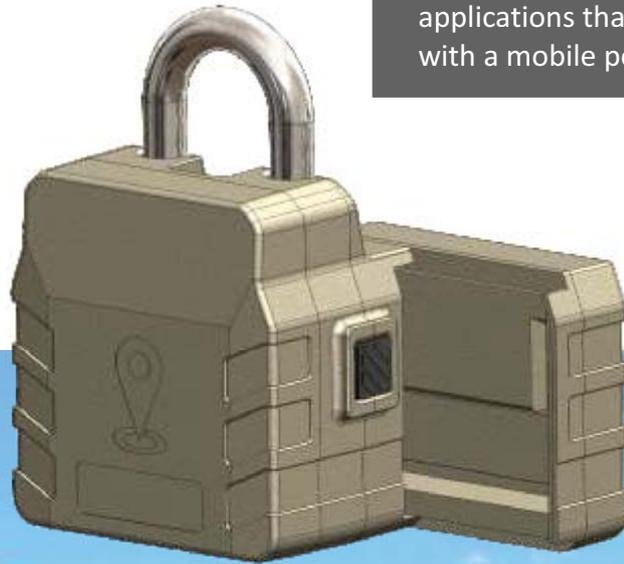
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axoLOCK, security padlock enables Command centre to monitor their cargo conditions of high value goods are kept according to the defined specifications. Real-time alerts generated when the goods are mishandled or deviate from the planned route, and if opened unexpectedly.

### Smart control

Manage your entire fleet via secured web-portal for your complete control. Designed for advanced asset tracking with remote monitoring that features enhanced functionality. The axoLOCK is suitable for a wide variety of asset management applications that require long operation with a mobile power source.



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## HIGH SECURITY GPS TRACKING PADLOCK

### 2G/ 3G/ 4G LTE Cellular Communication

2G GSM Modes	Quad band GSM (2G - worldwide): GSM/GPRS: 42.8[UL]/85.6[DL] Kbps, 850/900/1800/1900MHz
3G GSM Modes	Five bands UMTS (WCDMA/FDD): 800, 850, 900, 1900 and 2100 MHz HSDPA data rates: 7.2[DL] / 5.76[UL] Mbps Quad-band GSM: 850, 900, 1800 and 1900 MHz EDGE data rates: 237[DL] / 237[UL] Kbps GPRS data rates: 85.6[DL] / 85.6 [UL] Kbps
4G (LTE)	Quad-Band LTE: Bands 2, 4, 5, 12 (700, 850, 1700/2100 (AWS) and 1900 Mhz) Data rates: 10.2[DL] / 5.2[UL] Mbps
4G Modes	Tri-Band UMTS: Bands 2, 4, 5 (WCDMA/FDD 850, 1700/2100 (AWS) and 1900 Mhz) Data rates (HSPA+ Cat.8): 7.2[DL] / 5.76[UL] Mbps
2G Power Output	Up to 2W for 850/900 bands, and up to 1W for 1800/1900 bands
3G Power Output	Up to 2W for 800/850/900 bands, and up to 1W for 1800/1900/2100 bands
4G Power Output	Up to 0.25W for UMTS bands, and up to 0.2W for LTE bands
SIM	Internal, full size, replaceable, remote PIN code management, option for M2M type SIM chip
Antenna	Internal, On board (PCB) penta band GSM antenna
Packet Data	TCP/IP, UDP/IP
SMS	PDU mode

### GPS

Technology	CSR SiRFstarV™ engine supporting Hybrid GNSS
Sensitivity (tracking)	-165dBm
Acquisition (normal)	Cold <35Sec, Hot<1Sec, Warm <9 Sec
Internal Antenna	Internal, on board patch antenna

### Wireless Sensor Network

Short range RF	2.4GHz wireless communication
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### Power

Battery	Li-Ion Polymer, 3.7V, 5,000mAh, 10,000mAh, 15,000mAh Removable & rechargeable Operating Temperature: -20 (65% charge) to 60°C Protections: over current, overcharge and over discharge Batteries Ingress Protection IP65
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### Sensors

Temperature	Typical accuracy[3]: 0°C to 85°C : ±0.5°C -25°C to 0°C: ±1.0°C -30°C to -25°C : ±2.0°C Resolution: 0.1°C
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Accelerometer	3D, $\pm 8g$ range, 4mg resolution, I2C interface
Light	Effective range 1÷1023 lux
Impact/Free Fall	Impact/Free fall with threshold up to 8g
Movement	Detection of stationary or movement state by accelerometer
Barometric Pressure	Air pressure translated to "Meters above sea level" Effective range -400m÷6153m, Resolution 0.1m

### Environment

Temp, operation	-20°C to +60°C full performance
Temp, storage	-40°C to +85°C
Humidity	95% non-condensing
Ingress Protection	GPS-security padlock IP67
Vibration, Impact	According to standard EN 12830

### Certifications

FCC	Part 15 Subpart B, part 22/24 compliant
CE	CE EMC & R&TTE according to 89/336/EEC or 1999/5/EC CE Safety EN60950-1:2001+A11:2004
PTCRB	TRP, TIS, Spurious and harmonics emission
AT&T	AT&T certified
EN12830:1999	Temperature recorders for the transport, storage and distribution of chilled, frozen, deep-frozen/quick-frozen food and ice cream. Tests performance and suitability. Designation: -20 to +30°C – T/B/1 +30 to +60°C – T/B/2
GDP	Good Distribution Practice (Europe, US)
FAA	Comply with regulation instructions (14 CFR 91,21 and 121.306)

### Dimensions and Weight

Dimensions	85 x 80 x 70 mm (Body dimensions)
Weight	960 gr



**BITLOCK** TRACKING

**BITLOCK PTY LTD**

E-mail: [info@bitlock.com.au](mailto:info@bitlock.com.au)

Phone: +612 8012 8429

Web: [www.bitlock.com.au](http://www.bitlock.com.au)

Suite 1.12, 46-50 Kent Road,  
Mascot, NSW 2020, Australia