

Patented battery anti-tampering shell technology

Are battery backed-up anti-tampering hardware systems autonomous?

Autonomy is a crucial reported drawback of miniaturized battery backed-up anti-tampering hardware systems: the presented architecture and implementation ensures a lifetime of at least 3 years when powered by one CR2032 coin cell battery.

Do tamper detection sensors protect data from unauthorized access?

Abstract: This article presents a tamper detection sensor complementing cryptographic techniques in order to protect data from unauthorized access and/or from data falsification. Both the mechanical and electronic parts of the systems are described.

How does a tamper detection circuit work?

The tamper detection circuit is based on a capacitive sensing principle and uses ultra-low-power electronic components, leading to an overall consumed current below 10^{-10} A.

How sensitive is tamper detection?

The paper also assesses the sensitivity of the tamper detection: measurements show that the system is able to detect a variation of at least one percent of the capacitance of the tamper layer, resulting from an attempt to breach the outer shell surrounding the circuit for accessing the sensitive data.

We prepared patent applications for battery safety systems, charging and discharging algorithms, and controlling the drawing of energy from hybrid power systems.

An anti-tampering apparatus and method for drug delivery devices provides for the capture of caps in a manner that restricts repositioning of a captured cap onto a corresponding drug delivery device. The anti-tampering apparatus includes one or more retention members to define a capture region for restrainably capturing a cap. The anti-tampering apparatus further locates an ...

Devices and methods for resisting or preventing physical tampering of electronic components are described. A tamper resistant apparatus comprises a tampering sensor having a surface at which a first and second conductive portion are disposed. A core-shell particle (or a plurality of particles) is disposed on the surface of the tampering sensor.

This invention relates to an anti-tamper assembly for a circuit board comprising one or more electronic components, the assembly comprising: a container having side walls, a first, closed end and a second, opposing, open end, the container being configured to be mounted on said circuit board at said open end, over at least one of said electrical components, to form, in use, a ...

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The application discloses a tamper-proof circuit of a lead-acid battery of an electric two-wheeled vehicle, which relates to the technical field of battery safety and solves the technical problem that the battery is easy to be disassembled and tampered to cause ignition, and the technical scheme is characterized in that the tamper-proof circuit is added in a lead-acid 12V battery module for ...

Protecting embedded devices against physical attacks is a challenging task since the attacker has control of the device in a hostile environment. To address this issue, ...

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An anti-tamper integrated circuit (IC) apparatus is adapted for use with an IC that carries an active component, such as a secure processor, which requires a constant power signal to operate. If the power signal is interrupted, data is erased from a volatile memory of the secure processor. The memory is located within the IC package. An external power signal is coupled to the memory ...

This page includes the patent name, patent number, legal status, invention/applicant, technical efficacy and accompanying drawings of Tamper resistance-related invention patents and utility model patents, which can be searched for their Tamper resistance-related patent result data, and can also be analyzed for Tamper resistance-related patent technical data.

A tamper resistant device comprises an internal component, such as an electronic device, and a latent battery that is connected to the internal component. An activator material is separated...

A battery pack includes a protective circuit module (PCM) including a first incoming power terminal and a second outgoing power terminal; a first pouch battery including a third power terminal...

European Patent Office Prior art keywords circuit security security system pos terminal tamper Prior art date ... In step 2 (Fig. 5B), one end of security film 340 is inserted into security shell 330 using a locating pin to secure it into place. In step 3 (Fig. 5C), ... Keymat Technology Ltd: Anti-tamper devices US8099783B2 (en) * 2005-05-06: ...

When tampering occurs, forces associated with the tampering cause the core-shell particle to rupture. The released liquid metallic core material can form a conductive pathway between the first and second conductive portions of the tampering sensor. ... Justia Patents Having Particular Key Generator US Patent for Core-shell particles for anti ...

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Hytera's latest patent features a dual-power system design that uses a main battery and a backup battery to ensure a continuous power supply to critical storage components. This ensures that even if the main battery is removed, the backup takes over, preventing the loss of sensitive data until the device can be restored to a secure state.

An anti-tamper device for preventing data from being tampered with by an unauthorized person includes a top cover, a bottom cover, a printed circuit board (PCB), and a signal connector. ... 2015-10-29 Publication of US20150313027A1 publication Critical patent/US20150313027A1/en ... Electronic product shell anti-disassembly system EP4084588A1 ...

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