



Technology

- ◆ Secure processors
- ◆ Security tokens (smartcards etc)
- ◆ Mechanical switch
- ◆ Hall Effect sensor
- ◆ Smart PCB layout using signal mesh
- ◆ Secured enclosure

Overview

Embedded devices used for electronic transactions need to be ultra secure from any type of electronic hacking as well as physical tampering. Aftek has expertise in design and development of systems for secure transactions and provides corresponding services to its customers.

Expertise

Aftek has designed secure and tamper-proof systems for card based payment devices using secure processors, mechanical switches, Hall Effect sensors, smart PCB design and mechanical safety cover. Following are some of the key measures that are involved in building such a system :

- ◆ Selection and use of a secure processor. Aftek has experience of designing systems based on secure processors such as Atmel SecurCore processor and NXP SmartMX smartcard controller for secure applications.
- ◆ Use of secure elements like dual interface smartcards for both contact and contactless operation. Aftek has designed smartcard based identity, payment and access control systems.
- ◆ Mechanical switch informs operating system of any tamper so that predefined actions like erasing sensitive data can be taken.
- ◆ A Hall Effect sensor works with the help of small disc magnet placed above it. If the magnet moves away from the sensor, sensor gives predefined pulses to inform the processor about the tampering.
- ◆ Smart PCB layout design avoids unwanted tapping of any secured signal. Using BGA package with blind / buried VIAs does not allow miscreants to tap any signal. A signal mesh created under the IC in different layers prevents any drilling or tampering of the BGA device.
- ◆ A mechanical safety cover / secured enclosure design helps to protect our design from tampering.

About Aftek

Aftek Limited is a full spectrum technology services company from India. Over last 20 years Aftek has gained significant exposure to variety of technologies. Rich technological capabilities, focused investments in Research & Development and industry exposure enables us to reach beyond the basic IT services to design and deliver projects, products and implement end-to-end solutions to customers in variety of industries. Our service spectrum covers key services as Hardware Development, Firmware Development, Embedded Systems, Application Development, Application Maintenance, and Testing Services.

