

QUICK REFERENCE GUIDE

# Embedded Software Monetization at a Glance

## The Synopsis:

Today’s embedded appliances are rapidly shifting to architectures that combine standardized hardware with more and more sophisticated software. This shift to software-based intellectual property is enabling more flexible and competitive pricing in an increasingly global, although mature, market. This shift to software-based intellectual property also brings with it many new and unfamiliar risks for intelligent hardware vendors, such as vulnerability to counterfeiting, piracy, and device tampering. It also calls for an entirely new product pricing, packaging, and management strategy then typically applied to a traditional hardware business.

## Customer Business Challenges

**1** The high cost associated with inventory, support, and shipping for a wide variety of hardware SKUs for each product line.

**2** Competitive espionage resulting in the theft of trade secrets.

**3** IP theft resulting in unauthorized reproduction and distribution of ‘knock-off’ products.

**4** Malicious or unintentional device tampering resulting in altered functionality and regulatory non-compliance.






**5** Inflexible feature management techniques resulting in limited market penetration capabilities.

**6** Laborious upgrade and renewal processes resulting in high support costs and a poor customer experience.

## The Solution

To achieve success in the rapidly evolving hardware industry, device and equipment manufacturers need to focus on the control and monetization of the software running their hardware. Utilization of software protection and licensing mechanisms will protect applications from unauthorized access while also enabling the adoption of highly efficient product configuration and management processes.

By focusing on monetization of the software embedded within their hardware, intelligent device manufacturers will be able to:

-  **Preserve product and brand integrity:** Prevent product tampering, reverse-engineering or theft.
-  **Protect new and existing revenue streams:** Prevent unauthorized reproduction and distribution of your products.
-  **Increase revenue through new market penetration:** Reach new market segments with flexible packaging techniques.
-  **Dramatically reduce operational costs:** Streamline hardware SKUs in order to reduce inventory costs while also simplifying product support, upgrade, and renewal processes.
-  **Improve customer experience and new technology adoption rates:** Provide a ‘touchless’ customer management process, making product activation, upgrade, renewal, and support takes easier and more likely to occur.

A successful shift to software-centric business models is heavily reliant on mature software licensing and policy management components to ensure a seamless user experience and scalable business operations.

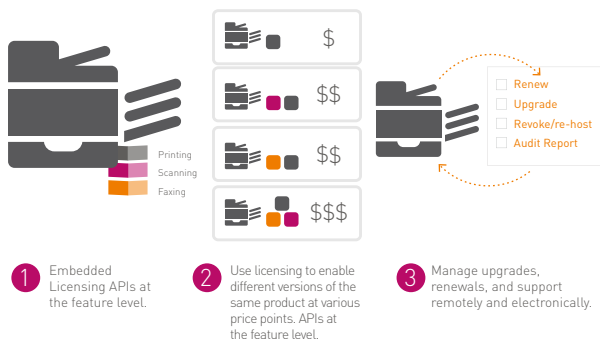
Vendors of proven, secure, and scalable software licensing and entitlement management solutions, such as SafeNet, are key enablers of this new generation vwof software-powered intelligent devices.

-Avni Rambhia, digital media industry manager, Frost & Sullivan.

### How it works:

The implementation of a licensing solution will enable you to gain control of the software powering your device at the feature level. The ability to control your hardware at the software feature level allows you to more cost effectively manage product configurations while also enabling a wider variety of business models in order to attract and retain more customers. Feature-level control will also help to simplify and in many cases automate the processes associated with many ongoing sales and support tasks such as upgrades, renewals, add-ons, and more. Finally, the same technology used to control access to your features can be used to report on product and feature usage. This data can be used to fuel usage based business models or to generate invaluable business intelligence. Supplementing your licensing implementation with an entitlement management system will provide you with the option to easily automate many of the laborious processes associated with customer lifecycle management – from product activation to ongoing use and upgrade management-- in order to further reduce operating costs while also improving customer experience.

### Feature-level packaging, control, and management in action:



### Why Sentinel:

SafeNet’s collection of Sentinel Software Monetization Solutions are tailored specifically to protect and manage software embedded within any piece of hardware—from networking appliances and medical devices to mobile handsets and industrial automation equipment. A reduced footprint paired with efficient use of memory allows our embedded product offerings

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to conform to the strictest of embedded environment constraints without compromising device performance:

- > **Sentinel RMS Embedded** – Ideal for customers working with software based licensing, this highly portable version of Sentinel RMS is designed specifically to meet the challenges of memory-constrained embedded environments. This solution already covers a wide range of platform support including VxWorks, Linux ARM, Linux x86 and Android, however further support to derivative or non-standard platforms is also available. Multi-environment or existing RMS customers can expect a common development experience.
- > **Sentinel LDK Embedded** - This highly portable version of Sentinel LDK provides token-based license enforcement for device manufacturers and software vendors selling into the Embedded market. Incorporating the strongest security available, Sentinel LDK stores license data within the memory of the hardware key utilizing cryptographic means and its license portability quickly transfers licenses to new or replacement devices. The readily available platform support includes Linux ARM and Android.

These product offerings arm device and equipment manufacturers with an entirely new world of product packaging and customer lifecycle management techniques while also protecting their products from unauthorized use, tampering and reverse engineering. Some of the world’s largest and most trusted device and equipment manufacturers rely on SafeNet for:

- > **Award-winning Security** – License enforcement and IP protection technology for ensuring device and brand integrity, mitigating reverse engineering, and safeguarding revenue.
- > **Product Configuration Management** – Generate multiple pricing and packaging options from one primary code build in order to reduce inventory costs and simplify many operational processes.
- > **Flexible Business Models** – The industry’s widest variety of flexible licensing models and enforcement mechanisms for enabling device and equipment manufacturers to meet the packaging demands of every customer every time.
- > **Remote Feature Management** – Upgrade software and control feature-level access remotely in order to simplify the entire customer lifecycle management process.
- > **Centralized Management and Process Automation** – Integration with the company’s web-based entitlement management solution, Sentinel EMS, enabling software publishers to centralize and automate product activation, usage tracking, and ongoing end-user entitlement management.
- > **Highly Portable** – Out-of-the-box Support for a broad variety of platforms and operating systems and a design that supports quick and easy custom porting.

### About Gemalto’s Sentinel Software Monetization Solutions

Gemalto, through its acquisition of SafeNet, is the market-leading provider of software licensing and entitlement management solutions for on-premises, embedded and cloud-based software vendors. Gemalto’s Sentinel is the most trusted brand in the software industry for secure, flexible, and future-proof software monetization solutions.

