Secure Payment Solution

In the age of digitization and connectivity, the security of your personal and confidential data is paramount, and in the payment industry, even more so.

YTSEC is a low-cost secure microcontroller featuring key security modules. It implements the security standards defined by PCI PTS (version 5.x and above) as a **System on Chip** for PIN processing. YTSEC solution can also be used for contact and contactless payments using the YouTransactor EMV libraries. YTSEC leverages on STMicroelectronics' general purpose microcontroller STM32, easy to integrate and benefiting from a low-energy consumption**.**

One-Stop-Shop for Payment solutions

YouTransactor provides all components, products and technical expertise required to design contact & contactless Payment Solutions, from EMV/PCI Microcontroller and Module / Hardware Reference Design or white label Payment Terminal.

Secure Microcontroller	PCI/EMV Microcontroller	PCI/EMV Module	POS Terminal By YouTransactor	POS Terminal White label

Software Security Modules

Implementation of PCI-compliant security standards in the form of software eliminates the need of using a dedicated and expensive secure-microcontroller, thus reducing the hardware and peripheral requirements, and by extension, significantly reducing the cost of producing a payment terminal.

The state-of-the-art YTSEC ultra-low-power processor reduces the power consumption of the terminal, thus increasing the battery-life and mobility of the payment terminals.

Module 3: Secure boot & Crypto Library

Module 2: Hardware security

Module 1: Security Software Libraries
- PCI-ready components
- EMV payment kernels

- **IoT and M2M Connectivity**

- **Secured data transmission & storage**

- **PCI-Compliant Solutions**

- **EMV Payment Terminal & Hardware**

Module 1: Security Software Libraries

PCI-PTS 5.1

X-CUBE CRYPTOLIB, Secure boot, Remote updates, key provisioning, digital security, SRED, Key Provisioning / Production Process, Secure Prompt, PCI Software

→ PCI-ready (pre-certified) CE PCI-PTS v5.1

EMV

EMV L2 Contactless

EMV L2 Contact

EMV L1 Contactless
Low level drivers

EMV L1 Contact
Low level drivers

→ Certified EMV Co, EMV L1 & L2 contact
→ Pre-certified EMV L1 & L2 contactless
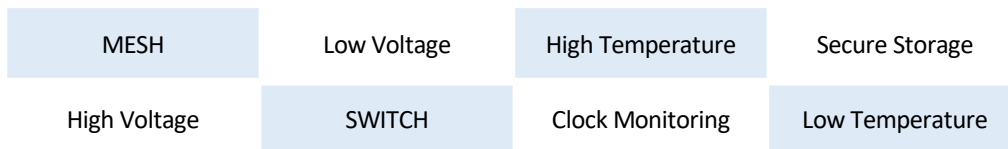
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Module 2: Hardware Security Functionalities

YouTransactor's YTSEC implements security mechanisms based on periodic monitoring of different signals for each of the parameters under observation and erasure of the Master key upon detection of violation signal (secure storage erased if tempered), in addition to updating the violation event in the security logs

Periodic Monitoring	Security Monitoring	Violation Signal	Erase Secure Storage	Security Logs

Security monitoring

List of key parameters monitored resulting in secure storage being erased if tempered

MESH	Low Voltage	High Temperature	Secure Storage
High Voltage	SWITCH	Clock Monitoring	Low Temperature

Mobile Payment Terminal - uCube Touch

YouTransactor's YTSEC microcontroller is used in the smallest payment terminal ever created, the *uCube Touch*, implementing EMV and PCI as a System-on-Chip to provide merchants with long lasting battery, while keeping the highest security security standards.

Mobile POS with 2G/4G/WIFI and BLE

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