

The Problem:

"Internet-of-Threats" are vulnerable to:

- IP theft
- Product cloning
- System hacking
- Weaponization

Hardware Based Security is the Only Truly Secure Approach

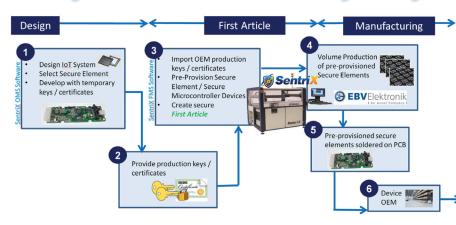
The Solution:

An integrated solution to embed security roots-oftrust in silicon early in manufacturing using:

- Authentication devices
- Secure elements
- Secure microcontorllers

Secure Element Personalization No S/W Based H/W Based OEM Key Material Management Tools Security Security Security Read Silicon Vendor Device Certificate and Authenticate Device Create and Sign OEM Device Certificate Public Key Authorization Secures against Root-of-Trust Secures against Private Key Injection physical hardware • OEM Key Authentication Open and basic attacks and software attacks. **Easily Hacked** hardens Vulnerable to Secure Microcontroller Provisioning against physical OEM Key Material Management Tools software attacks **Reading of Code** hardware attacks Read Silicon Vendor Device Certificate and Authenticate Device Create and Sign OEM Device Certificate OEM Secure Bootloader: Embedded Firmware Loaded and Run by **<I**> Secure Bootloader during and after manufacturing **Code Analysis** Software Tools for OEM Mastering in Development and Factory Management in Production

Securing IoT Devices from Hardware Design through Production & Beyond with SentriX



Data I/O, the leader in semiconductor security provisioning and data programming, partners with industry leaders throughout the ecosystem to secure silicon cost-effectively for 1 unit to millions in volume production

The SentriX[™] Platform embeds a strong foundation of security, roots-oftrust and authentication in manufacturing to deliver a secure supply chain for trusted devices.

SentriX[™] Platform Features

- Secure flow of OEM IP (key material, boot loaders, firmware, production count) from OEM to factory
- Secure job creation
- Identity and Authentication create and program keys and certificates; authenticate certificates
- Program firmware in secure storage and bind it to secure execution
- Lock device
- Comprehensive IC component traceability
- Integrated multi-tenancy Hardware Security Module
- Automated Security Provisioning System scalable for low to high volume applications

Semi Supplier → OEM → Programming → Manufacturing →			→ Consumer
Develop		Manufacture	Manage
Secure Element or MCU/ECU Secure Tools Secure IDE Extensions		SentriX™ Secure Provisioning System	Cloud Based Secure Update Services
maxim integrated.			SECURE THINGZ

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