Combating Persistent Cyber Attacks: The Secure Flash-to-Cloud Approach

Naseem Aslam – Sr. Manager Product Marketing, Cypress Semiconductor
Yoni Kahana – VP Customers, NanoLock Security
Security is a Growing Concern

This 'most dangerous' hacking group is now probing power grids
Hackers that tried to interfere with the safety systems of an industrial plant are now looking at power utilities too.

Flaws in hospital anesthesia and respiratory devices allow remote tampering

Source: SonicWall - 2019 Cyber Threat Report

Connected systems present expanding security risks, and customers need an end-to-end security solution which includes a secure storage
Requirements for Combating Persistent Cyber Attacks

Real-time attack prevention of firmware manipulation & reliable status and alerts

Prevent outsiders, insiders and supply-chain attacks

Reliable OTA updates and status through a root-of-trust

Big data analysis - Unique and trusted device analytics to identify critical patterns and anomalies.
Flash-to-Cloud Ironclad Solution

NanoLock + Cypress Ecosystem Partnership
Secure Flash Use Cases

- Cryptographically secure storage of code, data, and system secrets (Keys, Certificates)
- Firmware over the air (FOTA) update between host, secure storage, and cloud
- Fast Secure boot for firmware authentication, version attestation and rollback protection
- Secure Provisioning in unsecure manufacturing facility and unsecure service center
Move the control from a vulnerable device to a trusted entity in the customer’s cloud.
Managed Flash

- Embedded protection
- No additional BoM
- Processor & operating system agnostic
- Zero power / resources / memory constraints
- No performance hit
Wide Range of Applications

- Automotive
- Smart Cities & Security Cameras
- Smart Meters
- Connectivity
Automotive Use-Case

• Working with major OEMs and Tier-1 in EU, Japan and USA
• Need to protect from insiders and outsiders
• Customers can enjoy:
  • Device level protection
  • Alerts and inside information on attack vectors
  • Secured updates
Flash-to-Cloud protection stops the attacks even if there is unknown SW bug

Easy integration with extended capabilities

The customer can enjoy and present to the market:

- Device protection
- Alerts on multiple attacks
- Operational benefit on versions installed

Customers are:
- Telcos
- Integrators
- Device makers
NanoLock
Last Protection Standing for Connected Edge Devices

- **Category leading customers** in Japan, Singapore, EU & USA
- **Offices** in Israel, USA & Japan
- **Strong IP Portfolio**
THANK YOU

Ironclad, Flash-to-Cloud Protection for critical assets