

Solution Summary

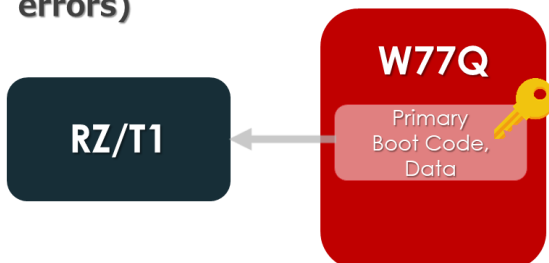
Winbond secure flash W77Q provides 'add-on' security in the boot code integrity and firmware resilience on [RZ/T1](#) platform.

Features/Benefits

- W77Q secure flash memory is compatible to standard SPI NOR flash memory.
- W77Q can be "Root-Of-Trust" for ROM-Less SoC.
 - W77Q automatically verifies boot code by itself and raises reset pin from "L" to "H" for SoC.
 - If the boot code was hacked, W77Q automatically jump to redundant boot code for recovery.
- Platform Firmware Resilience supported
 - Referenced to NIST SP800-193

Diagrams/Graphics

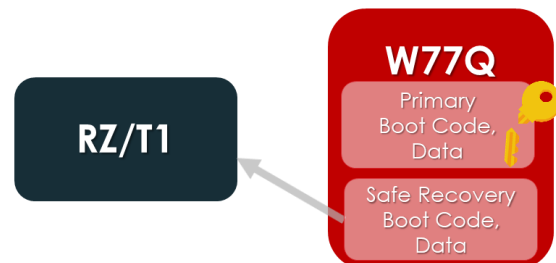
Self Integrity Protection (Verify Boot Code to detect errors)



□ Self Integrity Protection

- Primary Boot Code shall be verified from falsification or errors
- After passed the verification, SoC can start fetching (Secure Boot)
- Two control methods for SoC to wait; A H/W pin (RSTOUT#) or S/W loop

Safe Fallback = Firmware Resilience (Recovery)



□ Safe Fallback

- If primary Boot Code had problem, switch to other redundant Boot Code for recovery automatically

Target Markets and Applications

- Network, IoT
- Industries requiring security guideline
 - ISO/IEC62443-4-2
 - CC/EAL, GP/SESIP, ASIL certification



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Winbond's combination of advanced semiconductor technologies developed in-house and close relationships with customers support its position as a trusted supplier of memory products.

Company Name	Winbond Electronics Corporation
Date of Establishment	1987-09-29
Chairman	Arthur Yu-Cheng Chiao
Vice Chairman	Thung-Yi Chan
President	Pei-Ming Chen
Capital Stock	39.8 billion Taiwan dollars (as of October 2020)
Number of employees	3048 (as of October 2020)
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