RZ Ecosystem Partner Solution
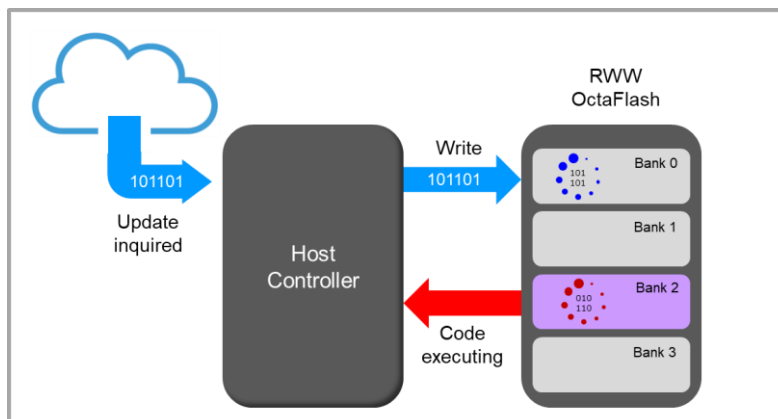# Macronix Boot Code Integrity OTA Function

Solution Summary

Macronix Flash continues to be the standard Boot Flash for Renesas RZ product evaluation boards, supported by RWW Flash.

Features/Benefits

- Macronix Octa/Quad SPI-Nor Flash is standard on the RZ product evaluation boards below.
  - RZ/A series:RZ/A1H, RZ/A1LU, RZ/A2M, RZ/A3UL
  - RZ/T series:RZ/T1, RZ/T1M, RZ/T2M
  - RZ/N series:RZ/N1D, RZ/N1L, RZ/N1S, RZ/N2L
  - RZ/G series:RZ/G2L, RZ/G2UL, RZ/G2LC (Under Preparation)
- MX25 / 66 LW / UW series support Macronix's original RWW (Read-while-write) function.
- It is an indispensable function to realize OTA function that updates various data on the network in the future, be able to write to other banks while executing the program from an external.

Diagrams/Graphics

- Updates can be carried out while application is actively running from Flash.
- Always have original firmware to roll back. Guaranteed no vehicle downtime regardless of update errors.

Target Markets and Applications

- OTA

https://www.mxic.com.tw/en-us/products/NOR-Flash/Pages/octaflash.aspx
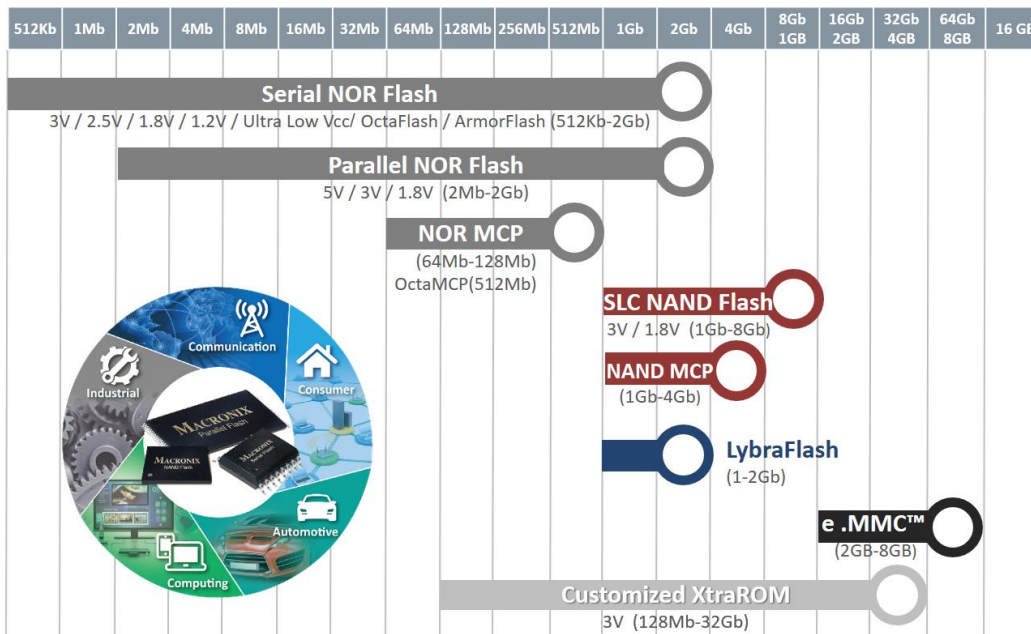
2021.12

Innovating for Today and Tomorrow

Macronix, a leading integrated device manufacturer in the Non-Volatile Memory (NVM) market, provides a full range of NOR Flash, NAND Flash, and ROM products. With its world-class R&D and manufacturing capability, Macronix continues to deliver high-quality, innovative and performance driven products to its customers in the consumer, communication, computing, industrial, automotive, networking and other segment markets.

Macronix is one of the very few suppliers offering a wide range of Serial NOR Flash products from 512Kbit to 2Gbit densities. We also provide Flash products with extremely small packages and very thin packages for space-constrained applications to meet the market trend. In addition, we have launched our 19-nanometer NAND Flash and e•MMC™ product family, which are ideal for embedded applications demanding higher quality and reliability

Macronix owns one 12-inch wafer fab (Fab 5) and one 8-inch wafer fab (Fab 2). Macronix designs and fabricates its nonvolatile memory products in Fab 5 & Fab 2.

COMPREHENSIVE PRODUCT PORTFOLIO

| 512Kb | 1Mb | 2Mb | 4Mb | 8Mb | 16Mb | 32Mb | 64Mb | 128Mb | 256Mb | 512Mb | 1Gb | 2Gb | 4Gb | 8Gb 1GB | 16Gb 2GB | 32Gb 4GB | 64Gb 8GB | 16 GB |

Serial NOR Flash
3V / 2.5V / 1.8V / 1.2V / Ultra Low Vcc/ OctaFlash / ArmorFlash (512Kb-2Gb)

Parallel NOR Flash
5V / 3V / 1.8V (2Mb-2Gb)

NOR MCP
(64Mb-128Mb)
OctaMCP(512Mb)

SLC NAND Flash
3V / 1.8V (1Gb-8Gb)

NAND MCP
(1Gb-4Gb)

LybraFlash
(1-2Gb)

e .MMC™
(2GB-8GB)

Customized XtraROM
3V (128Mb-32Gb)

Note: e.MMC™ is the trademark of JEDEC/MMCA.

MACRONIX

HIGHLIGHT PRODUCTS

ArmorFlash	LybraFlash	OctaBus Memory	Ultra Low Vcc
Security	NOR NAND	High Performance	Low Power
• AEC-Q100 Compliant • NIST Cryptographic Algorithm Validation Program	• High Reliability & Longevity • The Optimum Solution for Gigabit Flash Memory	• Extreme Speed: 250 MHz with 500 MB/s • Power "Instant-on" GUI Application	• Wide Range Vcc 1.65 – 3.6V • Ultra Low Vcc 1.2 V • Power Saving & Simple System Design

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