MACRONIX

OctaBus™ Memory
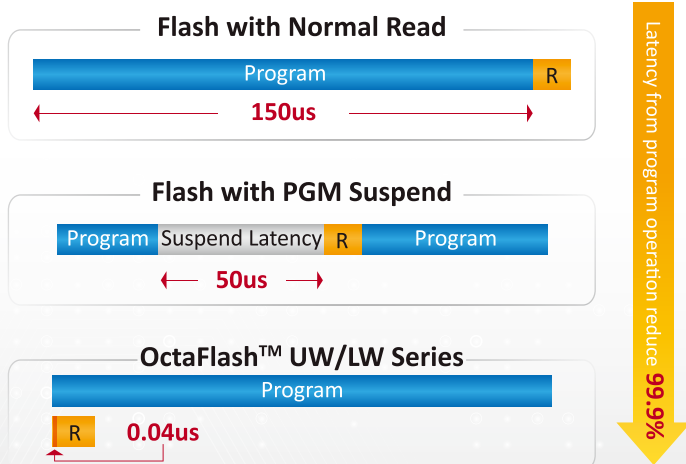### High Efficiency OctaFlash™

Product Family

Macronix LW/UW OctaFlash™ memory family offers densities ranging from 64Mb (8MB) to 2Gb (256MB). NXP S32Z/E real-time processors have validated 3 densities: 128Mb, 256Mb, 512Mb.

Key Features

- Instant-on, high performance @ 400 MB/s throughput.
- Over-the-Air (OTA) update ready.
- High efficiency enabling read access from one memory bank while writing to another.
- Supports eXecution in Place (XiP) for large applications.
- Automotive Grade 1 (-40°C to +125°C)
- ECC for 1b-correction and 2b-detection for functional safety.
- ISO 26262 ASIL D Ready.

Density	Voltage	Part Number
2Gb	1.8V 3V	MX66UW2Gx45G MX66LW2Gx45G
1Gb	1.8V 3V	MX66UW1Gx45G MX66LW1Gx45G
512Mb	1.8V 3V	MX25UW51x45G MX25LW51x45G
256Mb	1.8V 3V	MX25UW25x45G MX25LW25x45G
128Mb	1.8V	MX25UW12x45G
64Mb	1.8V	MX25UW6x45G

NXP S32Z/E Validated

Benefits for XiP operation :

- Reduce data write latency over 99%.
- Enhance power consumption by improving CPU efficiency.

Benefits for OTA update:
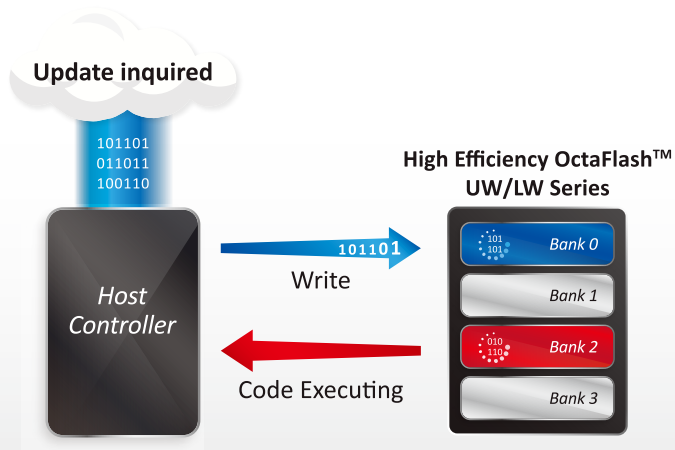
- No system downtime. Updates can be carried out while application is actively running from flash.
- Partitions for keeping firmware roll back capability.

Flash with Normal Read

Program | R
150us

Flash with PGM Suspend

Program | Suspend Latency | R | Program
50us

OctaFlash™ UW/LW Series

Program
R | 0.04us

Latency from program operation reduce **99.9%**

Update inquired

101101
011011
100110

Host Controller

101101
Write

Code Executing

High Efficiency OctaFlash™ UW/LW Series

Bank 0
Bank 1
Bank 2
Bank 3