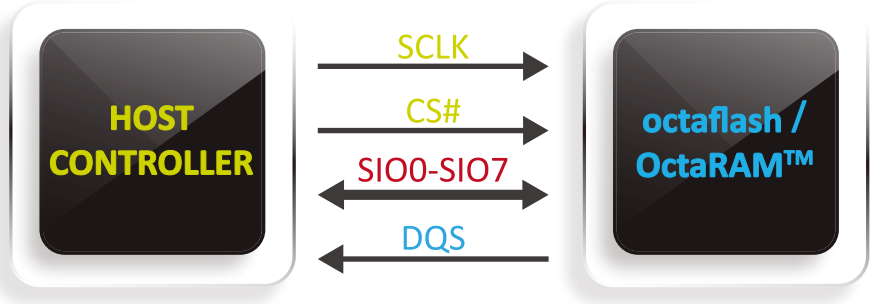
MACRONIX

Macronix OctaBus™ is a new generation high speed, high efficiency interface.

This breakthrough product incorporates flash memory and RAM memory into the same data I/O bus, reducing the pin count to 12. An OctaBus™ based memory design allows for octaflash, OctaRAM™, and OctaMCP™ products which are high performance, low pin count solutions.

Macronix OctaBus™ is ideal for bus sharing, which enables simplicity in system design, while optimizing PCB space resulting in significant cost savings. At the same time, the extended 8 I/O interface, with 250MHz frequency and DTR operation enhances the octaflash data throughput up to 500MB/s, dramatically improving system performance.



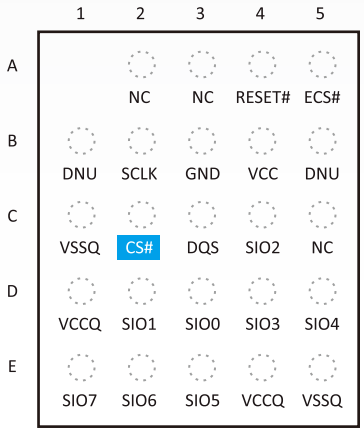
/ OctaBus™ Interface /

www.macronix.com

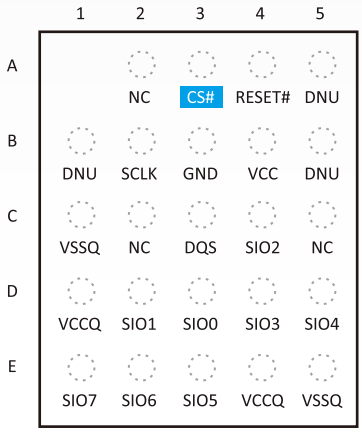
OctaBus™ Product Overview

Items	octaflash	OctaRAM™	OctaMCP octaflash+OctaRAM™
Power Supply	3V/1.8V	3V/1.8V	3V/1.8V
Max. Operating Frequency	3V: 133Mz 1.8V: 250MHZ	3V: 133Mz 1.8V: 200MHz	octaflash: 256Mb-512Mb OctaRAM: 64Mb-128Mb
Bus Protocol	STR/ DTR	DTR	STR/ DTR
Package	24BGA (5x5 Ball Array)	24BGA (5x5 Ball Array)	24BGA (5x5 Ball Array)

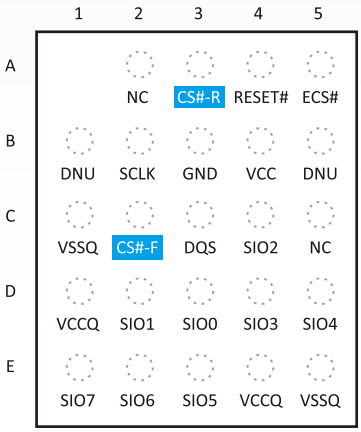
Packages Compatibility



octaflash



OctaRAM™

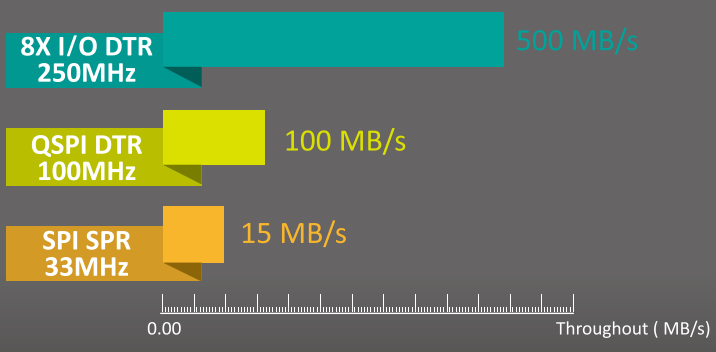


OctaMCP

octaflash

octaflash solution is designed to meet the growing demand for "instant-on" performance and real-time system responsiveness in automotive, industrial and consumer applications.

Macronix's octaflash provides ultra-high performance through operating at frequencies up to 250MHz with a fast latency access time of 80 nanoseconds (ns), sequential byte reads as fast as 2ns and a maximum read throughput of 500 megabytes per second (MB/s)



Applications

- Automotive Cluster
- Automotive ADAS
- Car Infotainment
- Data Communication Module (Telematics, Emergency)
- Digital Camera
- Smart Home Appliances, Speaker

Macronix octaflash Solutions

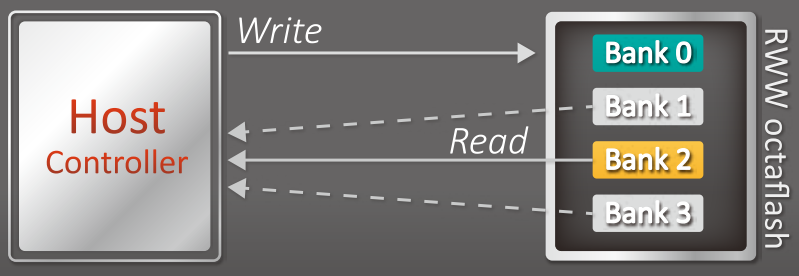
Density	Voltage	Part Number	Grade
2Gb	1.8V	MX66UM2G45G	-40°C – +85/105°C
	3V	MX66LM2G45G	-40°C – +85/105°C
1Gb	1.8V	MX66UM1G45G	-40°C – 85/105/125°C
	3V	MX66LM1G45G	-40°C – +85/105/125°C
512Mb	1.8V	MX25UM51245G	-40°C – +85/105/125°C
	3V	MX25LM51245G	-40°C – +85/105/125°C
256Mb	1.8V	MX25UM25645G	-40°C – +85/105/125°C
	3V	MX25LM25645G	-40°C – +85/105/125°C

RWW octaflash Memory

Macronix's Read-While-Write (RWW) octaflash family offers a multi-bank architecture with simultaneous Read-While-Write (RWW) capability. This provides the possibility to allow read access from one memory bank while simultaneously writing to another memory bank.

This is an ideal solution for Over-The-Air (OTA) update applications, enabling systems to continue operating during the OTA update process; furthermore, systems can also 'roll back' to the previous version of firmware in the event of OTA failure or if there is any data corruption experienced.

Multi-Bank Architecture : Provide Simultaneous Read-While-Write (RWW) capability



Macronix RWW octaflash Solutions

Density	Voltage	Part Number
2Gb	1.8V	MX66UW2G45G
	3V	MX66LW2G45G
1Gb	1.8V	MX66UW1G45G
	3V	MX66LW1G45G
512Mb	1.8V	MX25UW51245G
	3V	MX25LW51245G
256Mb	1.8V	MX25UW25645G
	3V	MX25LW25645G
128Mb	1.8V	MX25UW12845G
64Mb	1.8V	MX25UW6445G