

Macronix Secure Flash Solutions

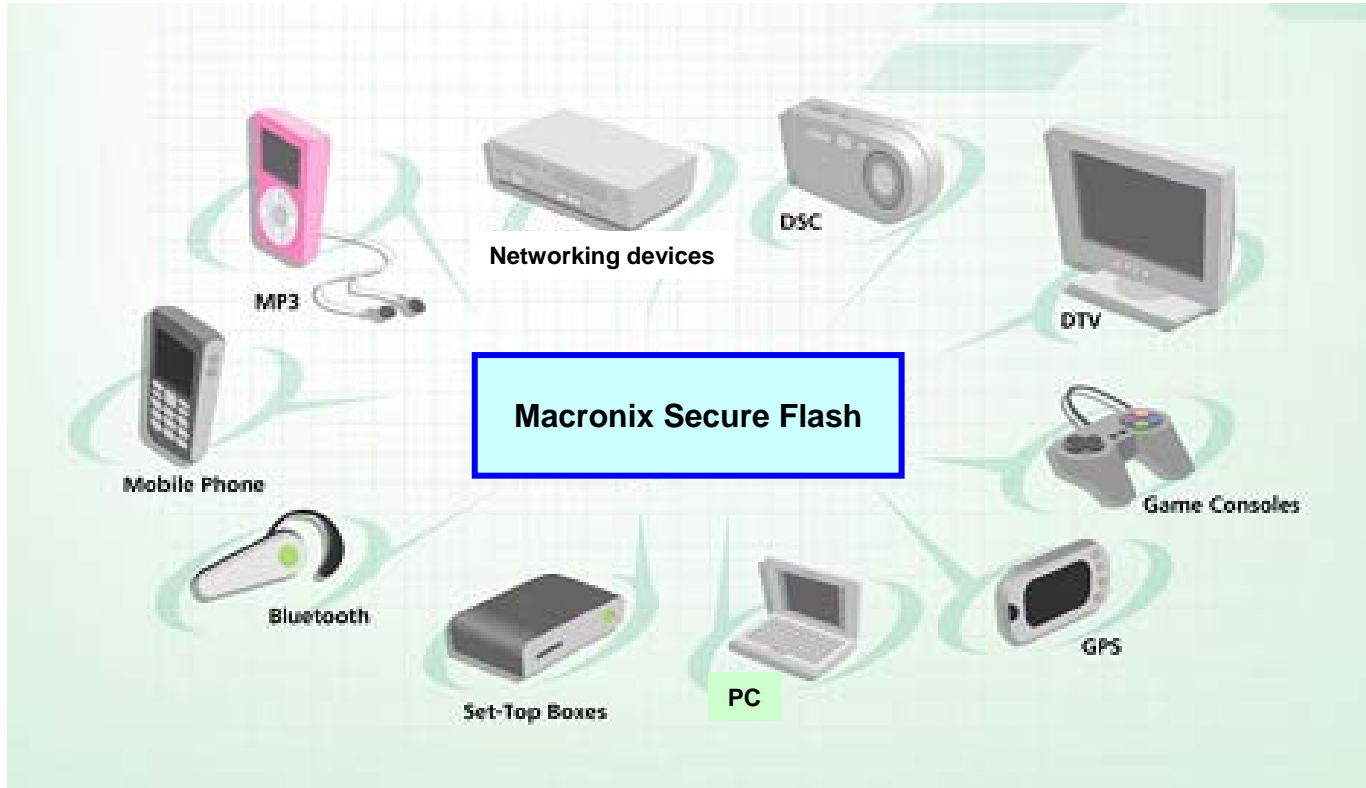
Leading Provider of Non-Volatile Memory

2009



MACRONIX
INTERNATIONAL CO., LTD.

Secure Flash Market



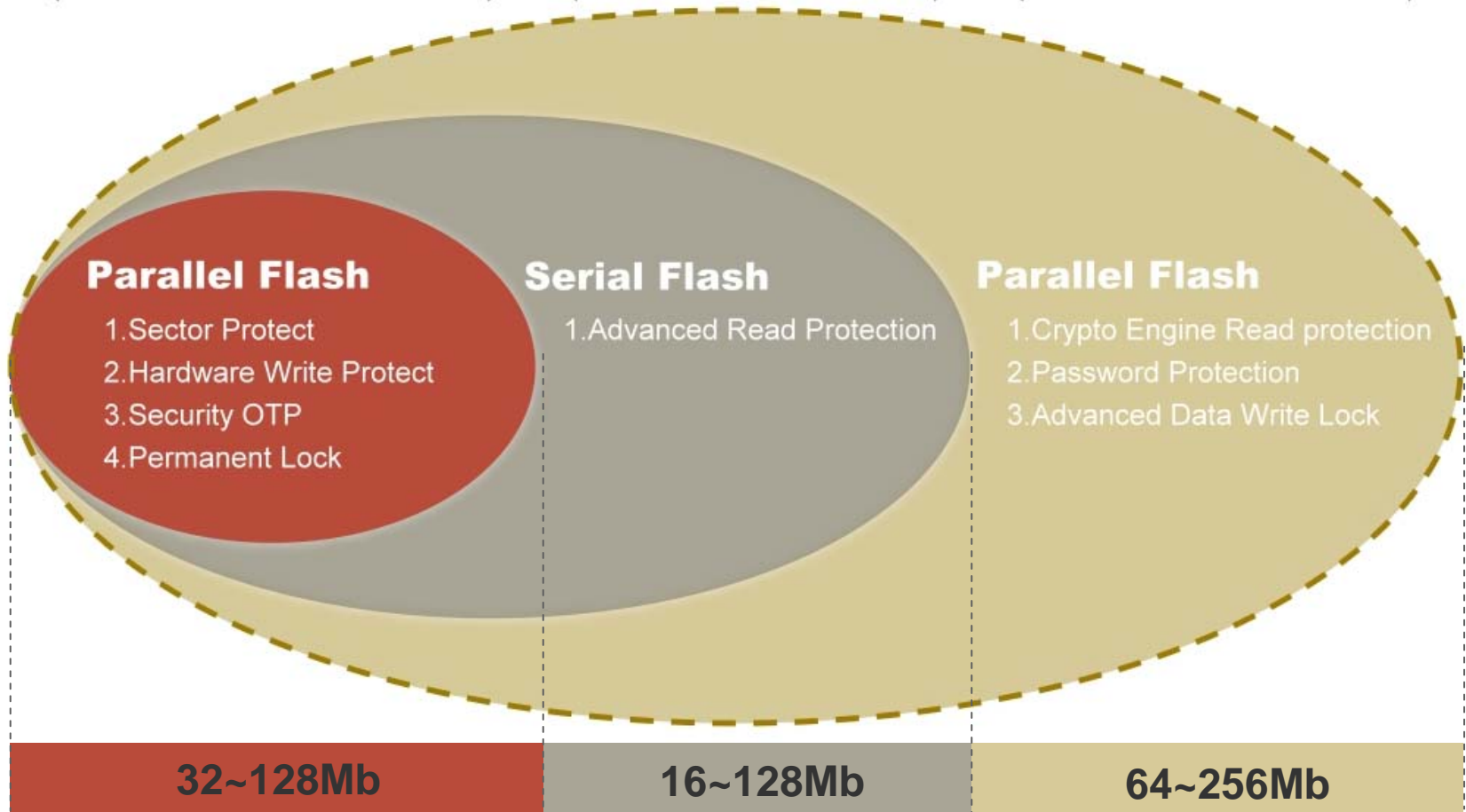
For protecting sensitive code in various applications, **Macronix** offers a wide range of **Parallel & Serial** Flash devices with increased levels of protection. The levels of security go from standard features to enhancements, to more advanced solutions, and also offers security dependent on customer's requirements as well as the application.

Flash Security Evolution



Threat \ Security Features	HW Write Protect	Sector Protect/ Permanent Lock	OTP bits	Read Lock	Password Write/read Protect	Crypto Engine
Change Security Software Code On-line	●					
Replace Entire Firmware	●	●				
Change Partial Hardware Setting Codes		●				
Change Whole Critical Settings			●	●		
Cloning the System			●		●	●

Secure Flash Features



3V Security Features



Type	Density	OTP	Write Protect					Read Lock		
		Security OTP	HW Chip Protect	SW Sector Protect	Permanent Lock	Advance Sector Protection		Read Lock	Password Protection	Crypto Engine
						Solid Protection	Password Protection			
Serial	16Mb 32Mb	512bit	Yes	Yes	Yes			Yes		
	64Mb 128Mb	4Kbit	Yes	Yes	Yes			Yes		
Parallel	32Mb 64Mb 128Mb	2Kbit	Yes	Yes	Yes					
	64Mb 128Mb 256Mb	2Kbit	Yes	Yes	Yes	Yes	Yes		Yes	Yes

Advanced Security Features (Parallel)

■ **Crypto Engine**

1. The Crypto Engine features a more advanced Secure Flash memory that can protect customers from hostile software modification, unauthorized duplication & hardware replacement on board.
2. Crypto Engine featured Flash memory is backward compatible to Macronix Secure Flash.



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For more details, please contact Macronix Sales and Representatives

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