



Your Complete Solutions Provider

W74M Authentication Flash

The simplest and quickest way to add “multi-layer authentication” into your existing designs

General Description

Winbond W74M product family comes with standard HMAC-SHA-256 crypto accelerator and 4 separate Monotonic Flash Counters that are HMAC-signed by individual secret keys. System utilizing each Monotonic Flash Counter can not only verify the integrity and authenticity of the counter values, but also add a timestamp to the message/information transmitted with the resistance to replay attacks. W74M enables system designers to strengthen code/data storage as well as delivers increased security for the emerging IoT demanding multi-layered authenticity.

Applications

- Emerging IoT demanding multi-layered authenticity
- Mobile accessories
- Home automation
- Industrial control
- Smart home

Use Cases

- PCBA anti-copy
- Anti-cloning to module and the whole design
- IP/Software Protection
- Root of trust

Key Differentiated Features

- Proven Flash memory technology
- Advance security with multi-layered authenticity capability
 - HMAC-SHA-256 standard crypto algorithm
 - 4 sets of 256-bit OTP Root Key
 - 4 sets of 256-bit volatile HMAC Key
 - 4 sets of 32-bit Monotonic Flash Counter
- Power supply:
 - 3V/3.3V: available NOW
 - 1.8V: available NOW
- > 100,000 erase/program cycles
- > 20 years data retention
- Standard package
 - SOIC8
 - WSON
- Temperature grade
 - Industrial (-40 to 85°C): available
 - Automotive: Upon request

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Package Information

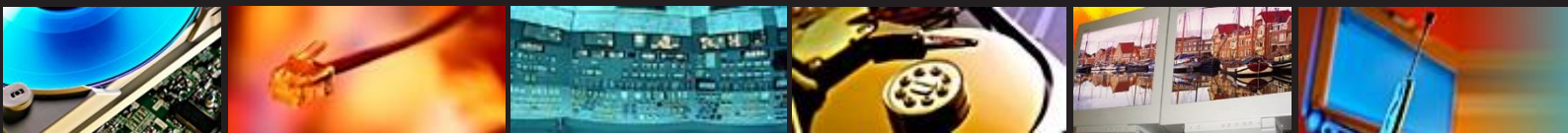
Voltage	Flash Density	Part number	Package
3V	1Gb	W74M01GV	WSON 8X6-mm
	512 Mb	W74M51GV	WSON 8X6-mm
	256 Mb	W74M25JV	WSON 8X6-mm
	128 Mb	W74M12JV	WSON 8X6-mm / WSON 6X5-mm / SOIC8 208-mil
	64 Mb	W74M64JV	SOIC8 208-mil
	32 Mb	W74M32FV	SOIC8 208-mil
	0Mb	W74M00AV	SOIC8 208-mil / SOIC8 150-mil
1.8V	256 Mb	W74M25JW	WSON 8X6-mm / WSON 6X5-mm
	128 Mb	W74M12JW	WSON 8X6-mm / WSON 6X5-mm / SOIC8 208-mil
	64 Mb	W74M64JW	SOIC8 208-mil
	32 Mb	W74M32FW	SOIC8 208-mil
	0Mb	W74M00AW	SOIC8 208-mil / SOIC8 150-mil

Owned Logic and Memory Technology

Winbond Electronics Corp. is an Integrated IC Company engaged in IC design, manufacturing and sales services. From product design, research and development, wafer fabrication to marketing of brand name product, Winbond endeavors to provide its global clientele top quality of low to medium density memory solutions.

Owned 12-inch Fab

Winbond specializes in the design of high-performance, low-power memory, and riding on the strength of having a 12-inch fab, offers a whole series of SLC code storage NAND flash memory and Mobile DRAM. The in house wafer fabrication provides customers with full commitment in capacity support as well as delivery flexibility.



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