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Your Complete Solutions Provider

## Authentication Flash Product Brief

# 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
- Single power supply:
  - 3V/3.3V: available NOW
- > 100,000 erase/program cycles
- > 20 years data retention
- Standard package in small form factor
  - SOP8-208
  - WSON 6x5
- Temperature grade
  - Industrial (-40 to 85°C): available
  - Automotive: Upon request

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# Package Information

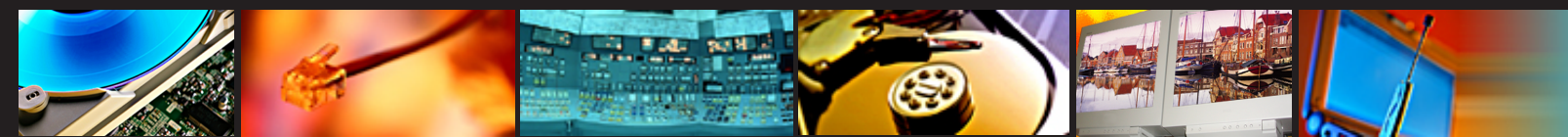
Flash Density	Part number	Package
1Gb	W74M01GVZEIG	WSON 8*6
256 Mb	W74M25JVZEIQ	WSON 8*6
128 Mb	W74M12FVZPIQ	WSON 6*5
128 Mb	W74M12FVSSIQ	SOP8-208 mil
64 Mb	W74M64FVSSIQ	SOP8-208 mil
32 Mb	W74M32FVSSIQ	SOP8-208 mil
0 Mb	W74M00AVSSIG	SOP8-208 mil
0 Mb	W74M00AVSNIG	SOP8-150 mil

## Self-owned Logic and Memory Technology

Winbond Electronics Corp. is a 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.

## Self-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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Corporate Headquarter

No. 8, Keya 1st., Daya Dist., Taichung City 428, Taiwan, R.O.C.  
Tel: 886-4-25218168

Americas

United States- San Jose  
Tel : 1-408-943-6666

Israel- Herzliya  
Tel : 972-9-866-0700

Taiwan- Jhubei  
Tel : 886-3-5678168

Asia

China- Suzhou  
Tel : 86-512-8163-8168

Japan- Yokohama  
Tel : 81-45-478-1881

China- Hong Kong  
Tel : 852-27513126

Taiwan- Taipei  
Tel : 886-2-81777168



[www.winbond.com](http://www.winbond.com)