



## ➔ Multifunctional 64-/128-bit OTP RFID IDIC ATA5575M1

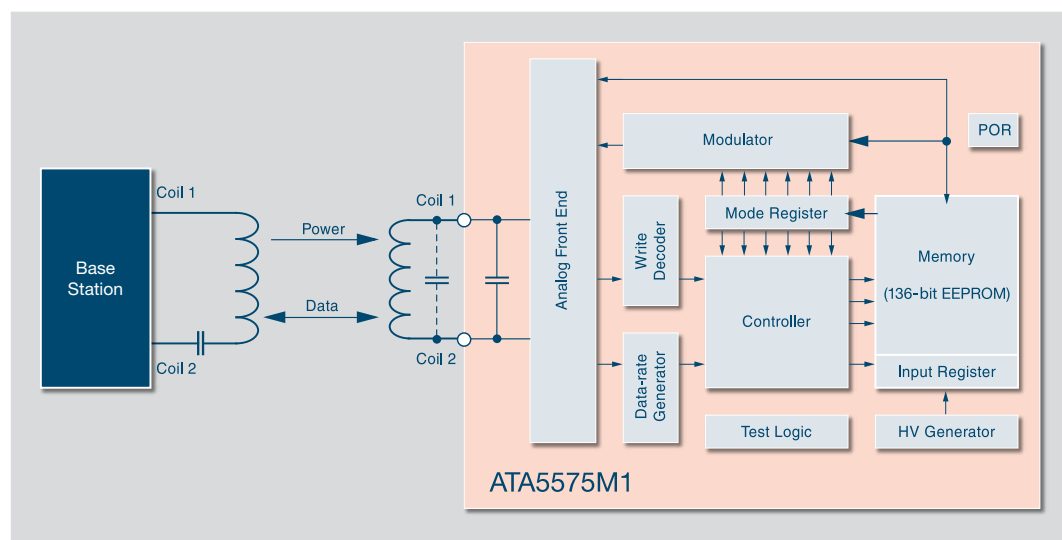
Atmel® offers a broad range of RFID devices for contactless read/write RF identification systems, delivered as die on wafer, die in tray, die on tape, micromodule, or complete transponder in a plastic package. Our low-frequency IDIC® products (100 to 150 kHz) with different security levels are flexible for all kinds of applications, easy to design-in and well-matched.

The LF transponder IDIC ATA5575M1 is a new member of Atmel's broad RFID transponder family, and has been optimized for next-generation access control systems as used in hotel rooms, engineering departments, offices, time recording systems and parking lots as well as for customer loyalty and membership cards.

The ATA5575M1 provides OTP (one-time programmable) functionality which simplifies the production process and reduces time-to-market.

### Features

- Contactless 100 kHz to 150 kHz Identification IC (IDIC)
- OTP (One-time Programmable) Functionality
- Mega Pads with/without Gold Bumps
- Compatible Unique Format
- On-chip Capacitor 250 pF or 330 pF, Trimmed
- 64-/128-bit User Memory
- 64-bit Unique ID, Pre-programmed Twice in Memory, Overwritable
- Data Rate RF04/64
- ASK Modulation, Manchester Coding
- Operating Range of  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$



## Applications

- All Applications Using Unique Format
- Access Control ISO Cards, Key Fobs, and Coins
- Asset Management
- Manufacturing and Logistics
  - Material Handling
  - Recycling
  - Cylinder Tracking

## Unique Structure

'1'	'1'	'1'	'1'	'1'	'1'	'1'	'1'	'1'	9 Header Bits
bit 1	Digit 0	D00	D01	D02	D03	PR0	even row parity bit per digit		
byte 0 to 3	Digit 1	D10	D11	D12	D13	PR1			
	Digit 2	D20	D21	D22	D23	PR2			
	Digit 3	D30	D31	D32	D33	PR3			
byte 4 to 7	Digit 4	D40	D41	D42	D43	PR4	even column parity bits		
	Digit 5	D50	D51	D52	D53	PR5			
	Digit 6	D60	D61	D62	D63	PR6			
	Digit 7	D70	D71	D72	D73	PR7			
	Digit 8	D80	D81	D82	D83	PR8			
	Digit 9	D90	D91	D92	D93	PR9			
		PC0	PC1	PC2	PC3	'0'			
		even column parity bits				bit 64			



## Memory Mapping

1.....8	Configuration Data	Byte 16
	User Data	Byte 15
	User Data	Byte 14
	User Data	Byte 13
	User Data	Byte 12
	User Data	Byte 11
	User Data	Byte 10
	User Data	Byte 9
	User Data	Byte 8
	User Data	Byte 7
	User Data	Byte 6
	User Data	Byte 5
	User Data	Byte 4
	User Data	Byte 3
	User Data	Byte 2
	User Data	Byte 1
	User Data	Byte 0

Not transmitted

## Support Tools

- Application Kit ATA2270-EK1
- Datasheet
- Qual Packs

## Ordering Information

Part Number	On-Chip Capacity Value pF ccc	Package	Description
ATA5575M1ccc-xxx	250/330	-xxx	
		DDB	6" Sawn Wafer on Foil with Ring, Thickness 150 µm (Approx. 6 mil)
		DBB	6" Sawn Wafer on Foil with Ring and Au Bumps 25 µm, Thickness 150 µm (Approx. 6 mil) Plus 25 µm Bumps
		DDW <sup>1)</sup>	6" Wafer, Thickness 280 µm (Approx. 11 mil)
		DDT <sup>1)</sup>	Die in Waffle Pack, Thickness 280 µm (Approx. 11 mil)
		DBN <sup>1)</sup>	Die with Au Bumps 25 µm on Sticky Tape, Thickness 280 µm (Approx. 11 mil)
		DBQ <sup>1)</sup>	Die with Au Bumps 25 µm on Blister Tape, Thickness 280 µm (Approx. 11 mil)

<sup>1)</sup> On request

### Headquarters

**Atmel Corporation**  
2325 Orchard Parkway  
San Jose, CA 95131  
**USA**  
Tel: (1) 408 441-0311  
Fax: (1) 408 487-2600

### International

**Atmel Asia**  
Unit 01-05 & 16, 19F  
BEA Tower, Millenium City 5  
418 Kwun Tong Road  
Kwun Tong, Kowloon  
**Hong Kong**  
Tel: (852) 2245-6100  
Fax: (852) 2722-1369

### Atmel Europe

Le Krebs  
8, Rue Jean-Pierre Timbaud  
BP 309  
78180 Montigny-le-Bretonneux  
**France**  
Tel: (33) 1-30-60-70-00  
Fax: (33) 1-30-60-71-11

### Atmel Japan

9F, Tonetsu Shinkawa Bldg.  
1-24-8 Shinkawa  
Chuo-ku, Tokyo 104-0033  
**Japan**  
Tel: (81) 3-3523-3551  
Fax: (81) 3-3523-7581

### Product Contact

**Product Line**  
rfid@atmel.com

**Literature Requests**  
www.atmel.com/literature

**Web Site**  
www.atmel.com

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