

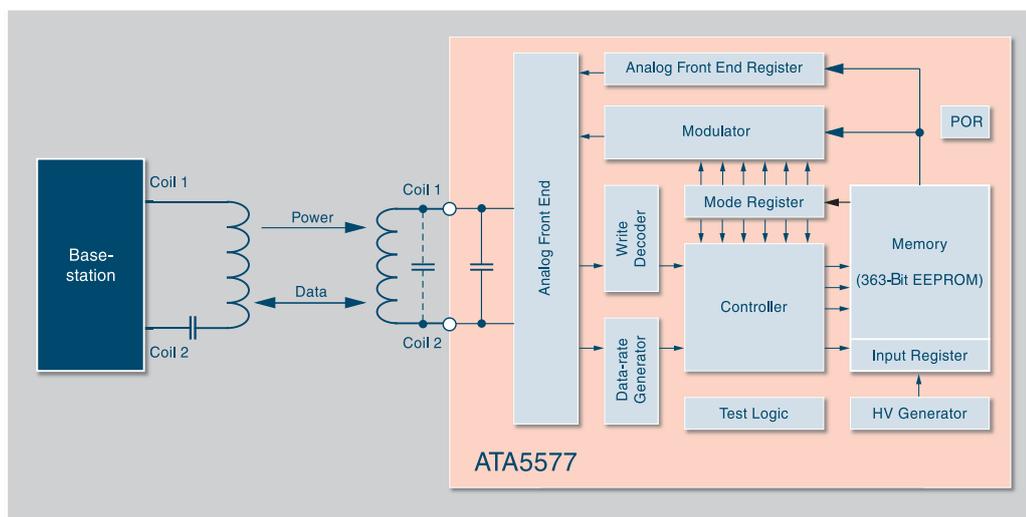


➔ Multifunctional 363-Bit Read/Write RFID IDIC ATA5577

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.

Features

- Contactless 100 kHz to 150 kHz Read/Write Identification IC (IDIC)
- Version M1 Standard Pads
- Version M2 Mega Pads
- Backwards Compatible to e5550/51 in Most Common Modes
- Backwards Compatible to T5557 and ATA5567
- On-Chip Capacitor 0 pF, 75 pF, 250 pF, or 330 pF, trimmed
- 224-Bit User Memory (7 Blocks of 32 bits Each), OTP Functionality
- 64-Bit Unique ID
- 32-Bit Analog Front End Register
- 32-Bit Configuration Register
- Binary Selectable Data Rate (RF/2 to RF/128)
- Modulation/Codings (FSK/PSK/MAN/Bi-Phase/NRZ)
- Password Mode
- Inverse Data Output
- 32-Bit Password (Protection Against Unauthorized Access)
- High Temperature Data Retention (24h at 250°C)
- Operating Range of -40°C to +85°C
- Fast Communication Protocols
- Self-Timing Downlink Protocols





Applications

- Access Control ISO Cards, Key Fobs, and Coins
- Asset Management
- Animal Identification
(Supporting ISO 11784/11785 – FDX-B)
 - Livestock Tracking
 - Pigeon Racing Tags
- Waste Management
ISO 11784/11785 (Non-Animal Mode)
- Laundry
- Manufacturing and Logistics
 - Material Handling
 - Recycling
 - Cylinder Tracking



Memory Mapping

The EEPROM is made up of two pages. Page 0 consists of 8 blocks, including configuration register and 32-bit password. Page 1 includes three blocks of 32 bits each and contains the 64-bit unique ID and the analog front end register. Each block can be protected against reprogramming via a lock bit.

Page	Block	Content	Block #
Page 1	L	Analog Front End Option Setup	Block 3
	1	Traceability Data	Block 2
	1	Traceability Data	Block 1
	L	Page 0 Configuration Data	Block 0
Page 0	L	User Data or Password	Block 7
	L	User Data	Block 6
	L	User Data	Block 5
	L	User Data	Block 4
	L	User Data	Block 3
	L	User Data	Block 2
	L	User Data	Block 1
	L	Configuration Data	Block 0

Password Mode

The memory of the ATA5577 can be protected against unauthorized access. The password mode provides write protection and – in combination with the AOR feature – read protection.

Support Tools

- Application Kits – ATAK2270, ATA2270-EK1
- Datasheet
- Application Notes
- Qual Packs

Ordering Information

Part Number	On-Chip Capacity Value pF	Package	Description
ATA5577M#	ccc	-xxx	
ATA5577M1 (Standard Pads)	000 ¹⁾ 075 ¹⁾ 250 330	DDB	6" Sawn Wafer on Foil with Ring, Thickness 150 µm (Approx. 6 mil)
		DBB	6" Sawn Wafer on Foil with Ring and NiAu Bumps 25 µm, Thickness 150 µm (Approx. 6 mil)
		DDW ¹⁾	6" Wafer, Thickness 280 µm (approx. 11 mil)
		DDT ¹⁾	Die in Waffle Pack, Thickness 280 µm (Approx. 11 mil)
		PAE ¹⁾	NOA3 Micromodule (Lead-free)
ATA5577M2 (Mega Pads)	000 ¹⁾ 075 ¹⁾ 250 330	DBB	6" Sawn Wafer on Foil with Ring and Au Bumps 25 µm, Thickness 150 µm (approx. 6 mil)
		DDT ¹⁾	Die in Waffle Pack, Thickness 150 µm (Approx. 6 mil)

¹⁾ On Request

Disclaimer: The information in this document is provided in connection with Atmel products. No license, express or implied, by estoppel or otherwise, to any intellectual property right is granted by this document or in connection with the sale of Atmel products. EXCEPT AS SET FORTH IN ATMEL'S TERMS AND CONDITIONS OF SALES LOCATED ON ATMEL'S WEB SITE, ATMEL ASSUMES NO LIABILITY WHATSOEVER AND DISCLAIMS ANY EXPRESS, IMPLIED OR STATUTORY WARRANTY RELATING TO ITS PRODUCTS INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL ATMEL BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS AND PROFITS, BUSINESS INTERRUPTION, OR LOSS OF INFORMATION) ARISING OUT OF THE USE OR INABILITY TO USE THIS DOCUMENT, EVEN IF ATMEL HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Atmel makes no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and products descriptions at any time without notice. Atmel does not make any commitment to update the information contained herein. Unless specifically provided otherwise, Atmel products are not suitable for, and shall not be used in, automotive applications. Atmel's products are not intended, authorized, or warranted for use as components in applications intended to support or sustain life.

Headquarters

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

International

Atmel Asia
Room 1219
Chinachem Golden Plaza
77 Mody Road, Tsimshatsui
East Kowloon
Hong Kong
Tel: (852) 2721-9778
Fax: (852) 2722-1369

Atmel Europe
Le Krebs
8, Rue Jean-Pierre Timbaud
BP 309
78054 St Quentin-en-
Yvelines Cedex
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

© 2008 Atmel Corporation.
All rights reserved.

Atmel®, logo and combinations thereof, IDIC®, and others are registered trademarks or trademarks of Atmel Corporation or its subsidiaries. Other terms and product names may be trademarks of others.

Rev.: 4612B-RFID-03/08/00M

