
Replacing ATA5567/T5557/TK5551 with ATA5577

ATA5577

The ATA5577 is designed to be backwards compatible with the existing versions ATA5567/T5557 and TK5551 (most common modes).

It offers the customer an improved R/W performance and enables more flexibility for advanced applications by using the features of the Analog Front-End (AFE) option register.

In the initial state from production the AFE features of the ATA8888 are set to default values, making the ATA5577 performing similar to ATA5567, T5552 and TK5551.

Figure 1. ATA5577 Analog Front-End (AFE) Block 0, Page 1 Initial Configuration

		MSB																														LSB					
Trans.-Order		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32				
Content HEX	0	0				0				0				0				0				0				0											
Content BIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Function	Lock Bit	Option Key				Soft Modulation				Clamp Voltage		Modulation Voltage		Clock Detection threshold		Gap Detection threshold		Write Damping		Demodulation Delay		Downlink Protocol		Reserved													

Compatibility check:

The ATA5577 compatibility was checked using the ATAk2270 RFID kit for the operation modes supported by the kit:

- Standard write
- Protected write
- Answer-ON-Request (AOR)
- Direct access
- Standard read page 0/1 for RF/32, Manchester and Biphase

Both tag version ATA5567/T5557/Tk5551 and ATA5577 have the same initial configuration for block 0 after leaving production.

Please consider that the operation mode for replacing, specified by block 0 set, is differently named in the datasheets of these transponder types.

For ATA5577 the setting is called “Basic Mode”

For ATA5567/T5557/TK5551 the setting is called “Compatible Mode”

Most of existing applications with the older versions can easily be replaced by ATA5577. But, there are some functional differences which may restrict the replacement for special applications.

Note: For any further questions about functional differences as listed by [Table 1](#), please contact our local Atmel® sales office or distributor.

Table 1. Functional Differences within Basic Mode

Transponder Type Function	ATA5577/ATA5567/T5557	TK5551/T5551
Sequence terminator at Maxblock = 0	No	Yes
Block terminator	No	Yes
Stop Mode command	No	Yes
Block-read Mode (direct access) with terminator	Yes	No
Modulation stage	One	Two
After programming	Enters Block-read Mode	Enters Regular-read Mode
After reset or direct access	Precedes a “0” bit once	Precedes no bit

1. Revision History

Please note that the following page numbers referred to in this section refer to the specific revision mentioned, not to this document.

Revision No.	History
4991B-RFID-05/15	• Put document in the latest template



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