Mifare Keys

Relevant Devices

This application note applies to the following devices
CM015B-1, CM015M-1, CM025B, CM025M, CM030, CM031, CM032, CM018

Introduction

Each sector of Mifare 1k/4k has a sector trailer containing the
- secret keys A and B (optional)
- the access conditions for the four blocks of that sector, which are stored in bytes 6...9, the access bits also specify the type (read/write or value) of the data blocks
- if key B is not needed, the last 6 bytes of block3 can be used as data bytes.

Default sector trailer of new cards

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Key A						Access Bits				Key B					
FF	FF	FF	FF	FF	FF	FF	07	80	69	FF	FF	FF	FF	FF	FF

KeyA: is not readable (return 0 when be read), can be changed and has all power (read, write, increment, decrement)
KeyB: is readable, can't serve for authentication

About "Write Master Key" command

This command is only for someone who just use KeyA and never consider KeyB.
If want write the sector trailer (offset block 3) accurately, please via "Write a data block" command

Sample for use both KeyA and KeyB

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Key A						Access Bits				Key B					
						08	77	8F	00						

KeyA: is not readable, can be changed and has power to read and write block
KeyB: is not readable, can be changed and has all power