

MANUEL LSM CARD MANAGEMENT

1.0 OVERVIEW OF CARDS

The different card types and memory segmentation used in conjunction with a SimonsVoss system are set out below:

1.1. CARD TYPES

Name	MIFARE Classic	MIFARE Classic	MIFARE Plus	MIFARE Plus
Memory	1K	4K	2K	4K
Special characteristics	16 segments of 64 bytes (48 bytes of user data)	32 segments of 64 bytes (48 bytes of user data) and 8 segments of 256 bytes (240 bytes of user data)	Reliable replacement for MIFARE Classic.	Reliable replacement for MIFARE Classic. In pipeline
Encryption	CRYPTO1	CRYPTO1	AES	AES
UID	4/7 bytes	4/7 bytes	4/7 bytes	4/7 bytes
Data storage	768 bytes	3,328 bytes	1,536 bytes	3,328 bytes

Name	MIFARE DESFire EV1	MIFARE DESFire EV1	MIFARE DESFire EV1	
Memory	2K	4K	8K	
Special characteristics				
Encryption	AES / Triple DES	AES / Triple DES	AES / Triple DES	
UID	7 bytes	7 bytes	7 bytes	

1.2. MIFARE CLASSIC DEVICE G1 VARIANTS (SMART READER)

ID variant	Name	LIDs	Access List	VN Data	Total memory	Card configuration	Description
	Basic configuration	0	0	N	48B	1K, 4K 1 segment	Configuration with transponder data

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1.3. MIFARE CLASSIC - G2 DEVICE VARIANTS

Input: segment list

ID variant	Name	LIDs	Access List	VN Data	Total memory	Card configuration	Description
33	MC Basic Basic configuration	0	0	N	48B	1K, 4K 1 segment	Configuration without locking profile, without access list, without VN. Profile release = 0
32	MC1200L Small system 1200L	1,200	0	N	192B	1K, 4K 4 segments	Small system, without access list, without VN.
34	MC1000L_AV Small system 1000L	1,000	21-42	J	528B	1K, 4K 11 segments	Small system, with access list, with VN.
31	MC3800L Medium-sized system 3800L	3,800	0	N	528B	1K, 4K 11 segments	Medium-sized system, without access list, without VN.
35	MC8000L_AV Medium-sized system 8000L	8,000	120-230	J	2,048B	4K - 8 small + 8 large segments	Medium-sized system, with access list, with VN.

1.4. MIFARE CLASSIC PREDEFINED KEY A - G2 DEVICE VARIANTS

Input: FormatKey (Key A, format, read and write), Key (Key B, read and write), segment list

ID variant	Name	LIDs	Access List	VN Data	Total memory	Card configuration	Description
33	MC Basic Basic configuration	0	0	N	48B	1K, 4K 1 segment	Configuration without locking profile, without access list, without VN. Profile release = 0
32	MC1200L Small system 1200L	1,200	0	N	192B	1K, 4K 4 segments	Small system, without access list, without VN.
34	MC1000L_AV Small system 1000L	1,000	21-42	J	528B	1K, 4K 11 segments	Small system, with access list, with VN.
31	MC3800L Medium-sized system 3800L	3,800	0	N	528B	1K, 4K 11 segments	Medium-sized system, without access list, without VN.
35	MC8000L_AV Medium-sized system 8000L	8,000	120-230	J	2,048B	4K - 8 small + 8 large segments	Medium-sized system, with access list, with VN.

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1.5. MIFARE CLASSIC PREDEFINED KEY B - G2 DEVICE VARIANTS

Input: Key (Key B, read and write), segment list

ID variant	Name	LIDs	Access List	VN Data	Total memory	Card configuration	Description
33	MC Basic Basic configuration	0	0	N	48B	1K, 4K 1 segment	Configuration without locking profile, without access list, without VN. Profile release = 0
32	MC1200L Small system 1200L	1,200	0	N	192B	1K, 4K 4 segments	Small system, without access list, without VN.
34	MC1000L_AV Small system 1000L	1,000	21-42	J	528B	1K, 4K 11 segments	Small system, with access list, with VN.
31	MC3800L Medium-sized system 3800L	3,800	0	N	528B	1K, 4K 11 segments	Medium-sized system, without access list, without VN.
35	MC8000L_AV Medium-sized system 8000L	8,000	120-230	J	2,048B	4K - 8 small + 8 large segments	Medium-sized system, with access list, with VN.

1.6. MIFARE PLUS - G2 DEVICE VARIANTS (IN PREPARATION; SUBJECT TO MODIFICATIONS)

Input: AES Transport Key, IsSCard, ProxCheck, SecLevel, segment list, TransprtSectorTrailer, WorkingSecLevel

ID variant	Name	LIDs	Access List	VN Data	Total memory	Card configuration	Description
33	MP Basic Basic configuration	0	0	N	48B	2K, 4K 1 segment	Configuration without locking profile, without access list, without VN. Profile release = 0
32	MC1200L Small system 1200L	1,200	0	N	192B	2K, 4K 4 segments	Small system, without access list, without VN.
34	MP1000L_AV Small system 1000L	1,000	21-42	J	528B	2K, 4K 11 segments	Small system, with access list, with VN.
31	MP3800L Medium-sized system 3800L	3,800	0	N	528B	2K, 4K 11 segments	Medium-sized system, without access list, without VN.
35	MP8000L_AV Medium-sized system 8000L	8,000	120-230	J	2,048B	4K - 8 small + 8 large segments	Medium-sized system, with access list, with VN.

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1.7. MIFARE DESFIRE - G2 DEVICE VARIANTS

Input: Appld (Application ID), CryptoMode (cryptography: AES or 3DES), PiccCryptoMode (cryptography: AES or 3DES), PiccMasterKey (card master key)

ID variant	Name	LIDs	Access List	VN Data	Total memory	Card configuration	Description
33	MD Basic Basic configuration	0	0	N	48B	2K-8K	Configuration without locking profile, without access list, without VN. Profile release = 0
32	MD1200L Small system 1200L	1,200	0	N	192B	2K-8K	Small system, without access list, without VN.
31	MD3800L Medium-sized system 3800L	3,800	0	N	528B	2K-8K	Medium-sized system, without access list, without VN.
30	MC4000L_AV Medium-sized system 4000L	4,000	80-150	J	1,600B	2K-8K	Medium-sized system, with access list, with VN.
29	MD10000L_AV Large system 10000L	10,000	200-400	J	3,048B	4K, 8K	Large system, with access list, with VN.
28	MD32000L_AV Maximum size system 4000L	32,000	400-800	J	7,000B	8K	Maximum size system, with access list, with VN.

1.8. MIFARE DESFIRE PREDEFINED - G2 DEVICE VARIANTS

Input: Appld (Application ID), CommunicationMode, CryptoMode (cryptography: AES or 3DES), FileNo, FileType, ReadKey, ReadKeyNo, WriteKey, WriteKeyNo

ID variant	Name	LIDs	Access List	VN Data	Total memory	Card configuration	Description
33	MD Basic Basic configuration	0	0	N	48B	2K-8K	Configuration without locking profile, without access list, without VN. Profile release = 0
32	MD1200L Small system 1200L	1,200	0	N	192B	2K-8K	Small system, without access list, without VN.
31	MD3800L Medium-sized system 3800L	3,800	0	N	528B	2K-8K	Medium-sized system, without access list, without VN.
30	MC4000L_AV Medium-sized system 4000L	4,000	80-150	J	1,600B	2K-8K	Medium-sized system, with access list, with VN.
29	MD10000L_AV Large system 10000L	10,000	200-400	J	3,048B	4K, 8K	Large system, with access list, with VN.
28	MD32000L_AV Maximum size system 32000L	32,000	400-800	J	7,000B	8K	Maximum size system, with access list, with VN.

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1.9. MIFARE CLASSIC+DESFIRE - G2 DEVICE VARIANTS

Input: segment list, Appld (Application ID), CryptoMode (cryptography: AES or 3DES), PiccCryptoMode (cryptography: AES or 3DES), PiccMasterKey (card master key)

ID variant	Name	LIDs	Access List	VN Data	Total memory	Card configuration	Description
33	MBasic Basic configuration	0	0	N	48B	1K, 4K 1 segment	Configuration without locking profile, without access list, without VN. Profile release = 0
32	M1200L Small system 1200L	1,200	0	N	192B	1K, 4K 4 segments	Small system, without access list, without VN.
34	M1000L_AV Small system 1000L	1,000	21-42	J	528B	1K, 4K 11 segments	Small system, with access list, with VN.
31	M3800L Medium-sized system 3800L	3,800	0	N	528B	1K, 4K 11 segments	Medium-sized system, without access list, without VN.
30	M4000L_AV Medium-sized system 4000L	4,000	120-230	J	1,600B	2K-8K	Medium-sized system, with access list, with VN.
35	M8000L_AV Medium-sized system 8000L	8,000	120-230	J	2,048B	4K - 8 small + 8 large segments	Medium-sized system, with access list, with VN.
29	M10000L_AV Large system 10000L	10,000	120-230	J	3,048B	4K, 8K	Large system, with access list, with VN.