ISO14443A HF Tag Reader H1036MF

User's Manual V1.0

Contents

1. Communication Interface Specification

H1036MF reader communicates with the host (MCU, MPU,Controller) using serial interface RS232 or RS485 and complete corresponding operation according to the host's command. The communication parameter is 19200bps, 1 start bit, 8 data bits, 1 stop bit without parity check bit. In process of the communication, the least significant bit of one byte is transmitted first and the least significant byte of command data sequence is transmitted first.

2. Protocol Description

A communication procedure is sponsored by the host sending commands and data to the reader and the reader returns the result status and data to host after command execution. The following table shows the process of the host sending command:

HOST	DIRECTION	READER	COMMENT
Command Data Block	→		The interval between two consecutive bytes in the command data block should be less than 15ms. During command data block sending, synchronization will lost if the host receives any data from reader, the host should stop command sending and restart the communication after 15ms.

The command data block the host sending to the reader should conform to the format of the protocol. The block includes reader address、operation command symbol、operation control symbol、command operand and CRC-16 checksum.

The reader completes command execution within 1s (Max., not including host sending data time) after receiving host command and returns the results. During the period, it doesn't process any host data. The feedback of command execution results is as follows:

READER	DIRECTION	HOST	COMMENT
Response data block	→		The interval between two consecutive bytes in the response data block should be less than 15ms.

The response data block includes reader address, command execution result status and response data.

After the feedback, a whole communication process finishes.

3. Data Block Format

A. Command Data Block

Len	Com_adr	Cmd	State	Data[]	LSB-CRC16	MSB-CRC16

Len: Command data block length 1 byte (not including itself). The number of Len equals the length of Data[] plus 5.

Com_adr: Reader address, 1 byte. Value range is 0~254. Only will the reader conforming to the address response the command data block.. Value 255 is broadcasting address. All the readers will response to the command data block with a broadcasting address.

Cmd: Operation command symbol, 1 byte.

State: 0x10.

Data[]: Operation command parameters. There is no parameters if the LEN item equals 5.

CRC16: CRC-16 checksum, 2 bytes with least significant byte first.

B. Respone Data Block

Len	Com_adr	Status	Data[]	LSB-CRC16	MSB-CRC16

Len: Response data block, 1 byte. The number of Len equals the length of Data[] plus 4.

Com_adr: Reader address, 1 byte. Value rang is 0~254.

Status: Result status value, 1byte. Refer to following chapters for details.

Data[]: Response data. There is no this item if Len equals 4.

CRC16: CRC-16 checksum, 2 bytes with least significant byte first.

The reader won't response if any error found in command data block.

The default value of the reader address Com_adr is 0x00. The host may change it by using reader-defined command "Write Com_adr".

C. Cyclic Redundancy Check

Cyclic Redundancy Check (CRC) computation includes all data from Len. The CRC generation polynomial is 0x8408. For example, a data block is presented as follows: 0x05, 0xFF, 0x01, 0x00, LSB-CRC, MSB-CRC. CRC checksum is LSB-CRC＝0x5D，MSB-CRC＝0xB2. A reference CRC computation program is presented as follow:

C-Example:

```
#define   POLYNOMIAL 0x8408
#define   PRESET_VALUE 0xffff

int i,j;
unsigned int current_crc_value = PRESET_VALUE;

for(i=0;i<len;i++)  /*len=number of protocol bytes without CRC*/

{
    current_crc_value=current_crc_value^((unsigned int)pData[i]);
      for(j=0;j<8;j++)
```

```
        {
        if(current_crc_value&0x0001)
        {
           current_crc_value=(current_crc_value>>1)^POLYNOMIAL;
        }
        else
        {
           current_crc_value=(current_crc_value>>1);
        }
        }
    }
// LSB-CRC16
pData[i++]=(unsigned char)(current_crc_value&0x00ff);
// MSB-CRC16
pData[i]=(unsigned char)((current_crc_value>>8)&0x00ff);
```

4. List Of Command Execution Result Status

RESPONSE DATA BLOCK					STATUS	COMMENT
Len	Com_adr	Status	Data[]	CRC-16		
Legnth of Data[] +4	0xXX	0x00	…	LSB+ MSB	Success	Return status 0 to host after command is executed successfully. Data block contains result data.
4	0xXX	0x01	—	LSB+ MSB	Command operand length error	Return status 1 to host when the number of command operands doesn't conform to the command request.
4	0xXX	0x02	—	LSB+ MSB	Command not supported	Return status 2 to host when the reader does not support the command the host sends.
4	0xXX	0x03	—	LSB+ MSB	Operand out of range	Return status 3 to host when one or more operand of command data block sent by host are out of range.
4	0xXX	0x04	—	LSB+ MSB	Operation Not Availible	Return status 4 to host when the requested operation is not available for the reader.
4	0xXX	0x05	—	LSB+ MSB	Inductive field closed	Return status 5 to host when the inductive field is closed and the host sends a command.
4	0xXX	0x06	—	LSB+ MSB	EEPROM operation error	Return status 6 to host when the reader encounters error in EEPROM access.

5	0xXX	0x10	Error_code	LSB+MSB	ISO14443A Operation error	Return status 0x10 when an error occurred in command execution and the further information of the error is defined by the Error_code in response data block.

- Remark：The length (Len) of response data block when a command finished successfully will vary from command to command. Further information could be found in following detailed description of individual command.
- Remark：When the reader return status 0x10, the Error_code in response data block indicate further explanation to the error occurred in command execution. The definition of Error_code is available in the following chapter.

5. Error_Code Definition (when return status=0x10) :

ErrorCode	Description
0x10	Halt failed
0x20	No ISO14443A card in the inductive area.
0x21	select failed
0x22	authentication failed
0x23	read failed
0x24	write failed
0x25	e-wallet initialization failed
0x26	read value failed
0x27	decrement/Increment failed
0x28	transfer failed
0x29	write/read E2PROM failes
0x2A	load key failed
0x2B	checkwrite failed
0x2C	data for checkwrite error
0x2D	value operation failed
0x2E	Ultralight card write failed
0x30	Anti-collision failed
0x31	Multiple card entering inductive area forbidden
0x32	Mifare I and Ultralight collision error
0x33	Ultralight card collision failed.

6.Detailed Description Of Operation Command

6.1 Reader-Defined Commands

As to the reader-defined commands, the command symbol byte (cmd) should be "0x00" and the operation control symbol byte (state) decides which reader-defined command will be processed.

6.1.1 Get Reader Information

The host sends this command to get the reader's information including reader's address(Com_adr), firmware version, reader type(_reader_type), supported protocol(_tr_type).

Len	Com_adr	Cmd	State	Data[]	CRC-16	
0x05	0xXX	0x00	0x00	—	LSB	MSB
Len	**Com_adr**	**Status**	**Data[]**		**CRC-16**	
0x0c	0xXX	0x00	Version(2bytes),RFU(2bytes) _reader_type(1byte),_tr_type(2bytes), 0x00		LSB	MSB

The reader type is 0x10, stand for H1036MF reader; The supported protocol byte is reserved to 0x00 and 0x01 as follows:

Bit	15	14	13	12	11	10	9	8
Function	—	—	—	—	—	—	—	—
Bit	7	6	5	4	3	2	1	0
Function	—	—	—	—	—	—	—	1

6.1.2 Close RF

The host sends this command to turn off the RF output of the reader.

Len	Com_adr	Cmd	State	Data[]	CRC-16	
0x05	0xXX	0x00	0x01	—	LSB	MSB
Len	**Com_adr**	**Status**	**Data[]**		**CRC-16**	
0x04	0xXX	0x00	—		LSB	MSB

6.1.3 Open RF

The host sends this command to turn on the RF output of the reader and establish the inductive field. The RF is open when the reader is powered on.

Len	Com_adr	Cmd	State	Data[]	CRC-16	
0x05	0xXX	0x00	0x02	—	LSB	MSB
Len	**Com_adr**	**Status**	**Data[]**		**CRC-16**	
0x04	0xXX	0x00	—		LSB	MSB

6.1.4 Write Com_adr

The host sends this command to change the address(Com_adr) of the reader. The address data is stored in the reader's inner EEPROM and is nonvolatile after reader powered off. The default value of Com_adr is 0x00. The range of Com_adr is 0x00~0xFE. When the host tries to write 0xFF to Com_adr, the reader will set the value to 0x00 automatically.

Len	Com_adr	Cmd	State	Data[]	CRC-16	
0x06	0xXX	0x00	0x03	_Com_adr	LSB	MSB
Len	**Com_adr**	**Status**	**Data[]**		**CRC-16**	
0x04	0xXX	0x00	—		LSB	MSB

6.1.5 Set LED

The host can set LED's action mode such as on/off duration and flash times.

Len	Com_adr	Cmd	State	Data[]	CRC-16	
0x08	0xXX	0x00	0x07	On_duration, Off_duration, flash times	LSB	MSB
Len	**Com_adr**	**Status**	**Data[]**		**CRC-16**	
0x04	0xXX	0x00	—		LSB	MSB

6.1.6 Set Beep

The host can set Beep's action mode such as on/off duration and beeping times.

Len	Com_adr	Cmd	State	Data[]	CRC-16	
0x08	0xXX	0x00	0x08	On_duration, Off_duration, Beeping_times	LSB	MSB
Len	**Com_adr**	**Status**	**Data[]**		**CRC-16**	
0x04	0xXX	0x00	—		LSB	MSB

6.2 ISO14443A Command

6.2.1 Request

Send request command to detect if any ISO14443A card exists in the field.

Len	Com_adr	Cmd	State	Data[]	CRC—16	
0x06	0xXX	0x41	0x10	Mode	LSB	MSB
Len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x06	0xXX	0x00	tagType[] (2Byte)		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Mode=0,request all cards in area except halted status;

Mode=1, request all cards in area;

tagType[]: type of the card with Least Significant Byte first.

6.2.2 Anticoll

Process ISO14443A anti-collision operation after request command, return one tag's UID.

Len	Com_adr	Cmd	State	Data[]	CRC—16	
0x06	0Xxx	0x42	0x10	Reserved（0x00）	LSB	MSB
Len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x08	0Xxx	0x00	Data[] (4Byte)		LSB	MSB
0x05	0Xxx	0x10	Error code		LSB	MSB

Reserved = 0x00;

Data[]: Card's UID number, least significant byte first.

6.2.3 Anticoll2

Process ISO14443A anti-collision operation after request command

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x07	0xXX	0x71	0x10	Encoll,Reserved（0x00）(2Bytes)	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x08	0xXX	0x00	Data[] (4Bytes)		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Encoll = 1: enable multiple tags in the inductive area.

Encoll = 0:disable multiple tags in the inductive area. If more than one tag in the area, the reader will return a error code;

Reserved = 0x00;

Data[]: Card's UID with Least Significant Byte first.

6.2.4 ULAnticoll

Process UltraLight anti-collision operation after request command

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x06	0xXX	0x7A	0x10	Reserved	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x0B	0xXX	0x00	SN[] (7Bytes)		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Reserved = 0x00;

SN[]: 7 bytes tag's serial number with Least Significant Byte first

6.2.5 Select

Select one card with its UID and return its capacity

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x09	0xXX	0x43	0x10	UID[] (4Bytes)	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x05	0xXX	0x00	Size (1Byte)		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

UID[]:Card's UID number with Least Significant Byte first

Size: tag's capacity.

6.2.6 Anthentication

Authenticate with KEY in the reader's EEPROM. The card should be authenticated before read, write and other data sector operation.

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x07	0xXX	0x44	0x10	Mode,Addr	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04	0xXX	0x00	—		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Mode =0, authenticate with KEY A

Mode =1, authenticate with KEY B

Addr: The number of the sector (0~15) to be authenticated with the KEY from the corresponding area in reader's EEPROM

6.2.7 Anthentication2

Cross-authenticate with KEY in reader's EEPROM. The card should be authenticated before read, write and other data sector operation

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x08	0xXX	0x72	0x10	Mode, SecNr, KeyNr	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04	0xXX	0x00	—		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Mode =0, authenticate with KEY A;

Mode =1, authenticate with KEY B;

SecNr: The number of the sector to be authenticated;

KeyNr: The number of the sector in EEPROM storing the KEY.

6.2.8 AuthKey

Directly authenticate with dictated KEY. The card should be authenticated before read, write and other data sector operation

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x0D	0xXX	0x73	0x10	Mode,Addr,Key[]	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04	0xXX	0x00	—		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Mode =0, authenticate with KEY A

Mode =1, authenticate with KEY B

Addr: The number of the sector to be authenticated;

Key[]; 6 bytes KEY with Least Significant Byte first

6.2.9 Halt

Set the active card in halt status.

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x05	0xXX	0x45	0x10	—	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04	0xXX	0x00	—		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

6.2.10 Read

Read out 1 block data from the card.

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x06	0xXX	0x46	0x10	Addr (1Byte)	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x14	0xXX	0x00	Data[] (16Byte)		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Addr: Absolute block address;

Data[]: 16 bytes block data with Least Significant Byte first

6.2.11 Write

Write 1 block data in the card

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x16	0xXX	0x47	0x10	Addr,Data[]	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04	0xXX	0x00	—		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Addr: Absolute block address;

Data[]: The 16 bytes data to be written with Least Significant Byte first

6.2.12 ULWrite

Write 4 bytes data in the UltraLight card

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x0A	0xXX	0x7B	0x10	Addr,Data[] (5Bytes)	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04	0xXX	0x00			LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Addr: Absolute block address;

Data[]: The 4 bytes data to be written with Least Significant Byte first

6.2.13 InitValue

Initialize the block to value-block with designated value.

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x0A	0xXX	0x78	0x10	Addr,value[]	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04	0xXX	0x00	—		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Addr: block address to initialize;

value : 4 bytes initializing value with Least Significant Byte first

6.2.14 ReadValue

Read out the content of value-block.

Len	Com_adr	Cmd	State	Data[]	CRC—16	
0x06	0xXX	0x79	0x10	Addr (1Byte)	LSB	MSB
Len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x08	0xXX	0x00	Data[] (4Bytes)		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Addr: block address to read,the block must a value-block.

Data[]: 4 bytes value data with Least Significant Byte first.

6.2.15 Increment

Read out the content of a value-block, check its structure and add it with the value assigned, then store the result in card's internal register. The value-block should have a specific format that is defined in Mifare series cards' datasheet

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x0A	0xXX	0x48	0x10	Addr,Data[]	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04	0xXX	0x00	—		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Addr: Absolute block address;

Data[]:4 bytes value to be added with Least Significant Byte first

6.2.16 Decrement

Read out the content of a value-block, check its structure and subtract it with the value assigned, then store the result in card's internal register. The value-block should have a specific format that is defined in Mifare series cards' datasheet.

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x0A	0xXX	0x49	0x10	Addr,Data[]	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04	0xXX	0x00	—		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Addr: Absolute block address;

Data[]:4 bytes value to be subtracted with Least Significant Byte first

6.2.17 Restore

Read out the content of a value-block, check its structure and store it in card's internal register. The value-block should have a specific format which is defined in Mifare series cards' datasheet.

len	**Com_adr**	**Cmd**	**State**	**Data[]**	**CRC—16**	
0x06	0xXX	0x4A	0x10	Addr	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04	0xXX	0x00	—		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Addr: Absolute block address.

6.2.18 Transfer

Transfer the content of card's internal register to a valid value-block. The value-block should have a specific format which is defined in Mifare series cards' datasheet. This operation could only be used after increment, decrement or restore process

Len	**Com_adr**	**Cmd**	**State**	**Data[]**	**CRC—16**	
0x06	0xXX	0x4B	0x10	Addr	LSB	MSB
Len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04	0xXX	0x00	—		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Addr: Absolute block address.

6.2.19 LoadKey

Save a KEY in the reader's EEPROM.

len	**Com_adr**	**Cmd**	**State**	**Data[]**	**CRC—16**	
0x0D	0xXX	0x4C	0x10	Mode, Secnr,Key[]	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04	0xXX	0x00	—		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Mode =0, KEY A;
Mode =1, KEY B;
Addr: Sector number in EEPROM and should be less than 16;
Key[];6 bytes KEY with least significant byte first

6.2.20 CheckWrite

Compare the data written in the card with known data. In this operation, RR1036MF use the KEY in its EEPROM with the same sector number of the card data block to be checked.

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x1B	0xXX	0x53	0x10	SN[],Authmode,Addr,Data[]	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04	0xXX	0x00	—		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

SN[]:4 bytes Card's UID number, least significant byte first;
Authmode: Authentication mode;
Addr: Absolute block address;
Data[]:16 data bytes for checking with Least Significant Byte first

6.2.21 ReadE2

Read out the content of the reader's EEPROM. The address should be less than 0x80. The content of the EEPROM with the address over 0x80 is used for KEY storage and could not be read out.

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x07	0xXX	0x61	0x10	Addr,Length	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04+n	0xXX	0x00	Data[]		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Addr: Begin address of the EEPROM to be read out (less than 0x80).
Length: Byte length of the data to be read out (less than 20 bytes).
Data[]:Data being read out.

6.2.22 WriteE2

Write data in the reader's EEPROM. Data in address 0x00~0x0f are read-only product information. Data in address 0x10~0x2f are initialization data and should not be altered. Address area 0x80~0x1ff are used for KEY storage and could be written with LoadKey command

len	Com_adr	Cmd	State	Data[]	CRC—16	
0x05+n	0xXX	0x62	0x10	Addr,Length,Data[]	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04	0xXX	0x00	—		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Addr: Begin address of the EEPROM to be written (0x30-0x7e);
Length: Byte length of the data to be written (less than 20 bytes);
Data[]:Data to be written.

6.2.23 Value

Perform value-block related operation between one value block and one transfer block. The two block should both have value-block format and in the same sector. The value-block related operation includes increment, decrement and restore. Auto transfer is supported.

len	**Com_adr**	**Cmd**	**State**	**Data[]**	**CRC—16**	
0x0C	0xXX	0x70	0x10	Mode,Addr,value[],Trans_Adr	LSB	MSB
len	**Com_adr**	**Status**	**Data[]**		**CRC—16**	
0x04	0xXX	0x00	—		LSB	MSB
0x05	0xXX	0x10	Error code		LSB	MSB

Mode=0xc0, decrement ;

Mode=0xc1, increment ;

Mode=0xc2, restore ;

Addr : Absolute block address;

value[]:Value when in decrement or increment. There is not this item in restore operation;

Trans_Adr: Absolute block address of the transfer block

7. List of reader-defined command

Command			Description
cmd name	**Cmd value**	**State**	
Get Reader Information	0x00	0x00	get the reader's information including reader's address, firmware version, reader type, supported protocol.
Close RF	0x00	0x01	turn off the RF output of the reader and close the inductive field.
Open RF	0x00	0x02	turn on the RF output of the reader and open the inductive field.
Write Com_adr	0x00	0x03	change reader's address.
SetLED	0x00	0x07	control of the output of LED.
SetBeep	0x00	0x08	control of the output of Beep.

8. List of ISO14443A command

Command		Description
cmd name	**cmd value**	
Request	0x41	Check if any ISO14443A card exist in inductive area.
Anticoll	0x42	Process ISO14443A anti-collision operation after request command, return one tag's UID.
Anticoll2	0x71	Get one tag's UID with Enabling/Disabling multiple tags in the inductive area .
ULAnticoll	0x7A	Process Ultralight tag anti-collision and return one tag's UID.
Select	0x43	Select a card with known UID and return its capacity
Authentication	0x44	Authenticate with KEY in the reader's EEPROM
Authentication2	0x72	Cross-authenticate with KEY in reader's EEPROM
AuthKey	0x73	Directly authenticate with dictated KEY.
Halt	0x45	Set the active card in halt status
Read	0x46	Read out 1 block data (16 bytes) from the card.
Write	0x47	Write 1 block data (16 bytes) in the card.
ULWrite	0x7B	Write 4 bytes data in the UltraLight card
Initvalue	0x78	Initialize a block to value-block with designated value
Readvalue	0x79	Read out the content of value-block
Increment	0x48	Read out the content of a value-block, add it with the value assigned and then store the result in card's internal register.
Decrement	0x49	Read out the content of a value-block, subtract it with the value assigned and then store the result in card's internal register
Restore	0x4A	Read out the content of a value-block, check its structure and store it in card's internal register
Transfer	0x4B	Transfer the content of card's internal register to a valid value-block.
LoadKey	0x4C	Save a KEY in the reader's EEPROM.
CheckWrite	0x53	Compare the data written in the card with known data.
ReadE2	0x61	Read out the content of the reader's EEPROM
WriteE2	0x62	Write data in the reader's EEPROM.
Value	0x70	Perform value-block related operation between one value block and one transfer block