

MP7100 Communication Protocol

Host (PC or ACU) send the orders and the Terminal (MP7100) responds to the orders.
 The below is the structure of the Protocol (9600BPS/8BIT/PARITY NONE/1 STOP)

HOST -> Terminal

Order	Function	Value	Byte
0	HEADER1(HD1)	0X06	1
1	HEADER2(HD2)	0X02	1
2,3	LENGTH(LEN)	Total Byte from HD1 to ENDCODE	2
4	TID	Terminal Number(1~255).	1
5	COMMAND(CMD)	Order Language	1
6	DATA	When necessary	
7	CHECKSUM	Total Amount from HEADER1 to DATA	1
8	ENDCODE	0X03	1

Terminal -> HOST

Order	Function	Value	Byte
0	HEADER1(HD1)	0X08	1
1	HEADER2(HD2)	0X04	1
2,3	LENGTH(LEN)	Total Byte from HEADER1 to ENDCODE	2
4	TID	Terminal Number(1~255)	1
5	COMMAND(CMD)	Order Language	1
6	*RESULT	Output	1
7	DATA	When necessary	
8	CHECKSUM	Total Amount from HEADER1 to DATA	1
9	ENDCODE	0X03	1

* RESULT Value (Common for all Order Language)

0X00:Commnad Successful

0X01:Command fail

0x02: Data format error

0x03: Not found ID/LOG Data

0X04:Check Sum error

0X05:Already exist ID

0X06>User ID Memory Full

0X07:Not found FP(Finger Print) Data

0X08:UnKnown Command

1.User Information Command

		HOST -> MP7100		HOST <- MP7100	
Function	CMD	LEN	DATA	LEN	DATA
ID Registration	0X10	12	*ID	9	N/A
ID Deletion(Individual)	0X11	12	*ID	9	N/A
ID Deletion(All)	0X12	8	N/A	9	N/A
All ID Reading	0X13	8	N/A	*LIST LEN	*ID LIST
All ID Number Reading	0X14	8	N/A	11	*TOTAL ID NUM

*ID:4BYTE(unsigned long data type)

Ex: ID 1-> 0X00 0X00 0X00 0X01

(Maximum number of Password is 5 digits, like 1, 99999 and among then you can set the password

*LIST LEN: 9BYTE + ID(4BYTE) * Total ID Number

*ID LIST

ID(4) + ID(4) + ...ID(4)

*TOTAL ID NUM: 2 BYTE(unsined shot data type)

Total ID Number

ID Deletion(All) executes deletion of all LOG Data as well.

Ex:

For Registering the User ID at the Terminal 1

HD1	HD2	LEN	TID	CMD	DATA	CHK SUM	END
0X06	0X02	0X00 0X0C	0X01	0X10	00 00 00 0X01	0X26	0X03

Terminal Response.

HD1	HD2	LEN	TID	CMD	RESULT	CHK SUM	END
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0X08	0X04	0X00 0X09	0X01	0X10	0X00	0X26	0X03
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ID Deletion(All) Execution Time :

For 1 User Registered 0.035 second.

For 1000 Users about 35 seconds is needed. Then the Output would be sent to Host.

2. LOG Command

		HOST -> MP7100	HOST <- MP7100	
Function	CMD	LEN	LEN	DATA(byte)
LOG Reading	0X20	8	21	*LOG DATA
LOG Resending	0X21	8	21	*LOG DATA
LOG Deletion(All)	0X22	8	9	N/A
LOG Total Number Reading	0X23	8	11	INTEGER 2 BYTE

*LOG DATA: 12 BYTE(Sending only when log data exists)

	BYTE	Remark
ID	4	Unsigned long data type(4byte)
Year	1	Y
Month	1	M
Day	1	D
Hour	1	T
Min	1	Minutes
Sec	1	Second
*Access Result	1	Identification Result and Identification Method
Function Key	1	0:Normal, 1:F1, 2:F2, 3:F3, 4:F4

. When the data from the Terminal has problem, execution of resending LOG, then it is possible to get the newest valid data

Maximum LOG DATA capacity is 4500 transactions.

*Access Result

.Senior Nibble : 0: Fail(identification fail), 1:Pass(Identification Success)

.Junior Nibble : Identification Method

0:Key, 1:Key + Fingerprint , 2:RF Card, 3:RF Card + Fingerprint, 4:Fingerprint(Free Scan)

(ID unidenfied (0X00,0X04) status LOG DATA could not be saved.

ex: 0X10: Idenfied with Key input

0X02: RF card unidenfied.

0X03: RF card idenfied but fingerprint unidenfied.

0X13: RF card + fingerprint idenfied

3. Terminal Command

		HOST -> MP7100		HOST <- MP7100	
Function	CMD	LEN	DATA(byte)	LEN	DATA(byte)
Password Initializing	0X32	8	N/A	9	N/A
Date/Time Set	0X30	14	*YMDHMS	9	N/A
Date/Time Reading	0X31	8	N/A	15	*YMDHMS
Function Key Time Set up	0X34	18	*F_TIME	9	N/A
Function Key Time Reading	0X35	8	N/A	19	*F_TIMEZONE

*Password Initializing : Terminal Manager Password Initializing.(default:1111)

*YMDHMS(6BYTE)

YearMonthDateTimeMinuteSecond

*F_TIMEZONE.(Total 10 Bytes): Function Key(F1~F4) Automatic Reflection of

Time Zone

	BYTE	Remark
H1	1	Start Time
M1	1	Start Minute
H2	1	End Time
M2	1	End Minute
Func Key1	1	Function Value 1:F1,2:F2,3:F3,4:F4
H3	1	Start Time
M3	1	Start Minute
H4	1	End Time
M4	1	End Minute
Func Key2	1	Function Value 1:F1,2:F2,3:F3,4:F4

Ex: 0X08 0X00 0X09 0X00 0X01 0X12 0X00 0X13 0X1E 0X02

At the time zone of 08:00~09:00, F1 Function Value reflected automatically

At the time zone of 18:00~19:30, F2 Function Value reflected automatically

4. Fingerprint Command

		HOST -> MP7100		HOST <- MP7100	
Function	CMD	LEN	DATA(byte)	LEN	DATA(byte)
ID+ Fingerprint Registration	0X40	492 (1EC)	*DATA	9	N/A
Registered Fingerprint Read	0X42	12 (8+ 4)	ID	489(1E9)	*FP_DATA
Fingerprint Identification part Status Checking	0X43	8	N/A	10	*STATUS

•ID+ Fingerprint Registration Command:

For identification of both ID and Fingerprint of the user.

*DATA

ID(4byte)+ FP_DATA(480byte)

*FP_DATA(480byte)

User Fingerprint Data.

When abnormal, FP_DATA is not to be sent.

•Reading the Registered Fingerprint:

It executes to send the registered data at the Terminal to Host.

return code 3 means it is not registered ID, and return code 7 means it is registered

ID but it does not have the fingerprint data.

*STATUS

0: Fingerprint identification part none available(Terminal Status is not good)

1: Fingerprint Identification available