

Led Mini Board communication Agreement

[...communication Protocol]

VER1.00

1.communication format:

38400,8,n,1 undirection communication ,but,need [???]to send back the code at once,to insure the display exist[exist] or not!

[1.Communication Format]

[The format of communication port is set to 38400,8,n,1, and it's only single direction communication]

2.communication rule:

when communication ,take 64 byte as one batch.Till the communication is over,write into the memory directly

[2. Communication mode]:

[There're 64 bytes data in one package when communication, and the data will be write into the eeprom memory directly]

3. The digital board's memory organization

[The eeprom memory structure (Turbo C Language format)]

0x0000-0x05ff , 1.5K, system font, english 12*8 lattice , 0x00-0x7f, (12 bytes x 128)

[Address: 0x0000 – 0x05ff, 1.5k bytes, Matrix Font Area, there're 128 ASCII characters in it, from 0x00 to 0x7f]

0x0600-0x0dff, 2.0K, act sectin has 8 page , 256 fonts long in each page,the seventh & eighth page are icons.they can become animations !They are same as the before six in fact.The max length is 125 Chinese Characters ,250 English characters

[Address: 0x0600-0x0dff, 2k bytes, There're 8 text files in this area, and there're 256 bytes every file]

0x0e00-0x3fff, 12.5K take 24C128 as 16K,so it has 11K contents. One character has 24 bytes,so it can store 533 word model

[Address: 0x0e00-0x3fff, 12.5k bytes, Temporary Matrix Font Area, The PC will send the Matrix Font of special character like Chinese, Japanese, and images to this area, and the matrix of every special character is 12 x 12 pixels, occupy 24 bytes of memory space, there're maximal 533 special characters in it]

4. file format: attention[Notice]: files are fix up in some places intently!

```
uchar CurrFile[0x100];
struct File
{
    uchar Speed;
    uchar FileName;
    uchar Action;
```

```
uchar Chars[250];
uchar CheckSum;
};
```

5. parameter save EEPROM structure [\[Parameters Define\]](#)

```
unsigned char BriSave; \[Brightness\]
unsigned char SpeedSave; \[Speed\]
unsigned char MsgSave; \[Message\]
unsigned char ProgramIdSave; \[Program Byte\]
unsigned char LeftModeSave;
unsigned char DisplayHeadSave;
unsigned char Bias0Save;
```

6. action ways [\[Action Mode Define\]](#)

```
#define HOLD 'A'
#define ROTATE 'B'
#define SNOW 'C'
#define FLASH 'D'
#define HOLDFRAME 'E'
```

7. program content

1) <0X80 are the normal ASCII code

2) 0xff,0x80 .are the normal font

0xff,0x81 Wide-body

0xff,0x82,others are not use in here

3) 0x80,xx are Chinese Characters , Korean or Japanese or pictures are word-wide angle.

0xc0,xx ICON is a word picture.

0xe0,xx Is a high-end ASCII code

8. communication process

1.Any operation, more than 1 second over did not respond, as the end of the communication,exit at the moment.

2. after the communications of Bytes 69, we should wait a moment to write a successful memory.

3. The first time have to wait longer, for exiting from other proceedings

9.comunication agreement

1.format

02,command ,ADDR1,ADDR0,64bytes,CHECKSUM.

Checksum are an order to all the data conecting, data communications, with a total of 69 bytes.

2.order

'1' shows the first sending data

'2' shows the second sending data (not daily used)

'3' END OF SEND, there is a program parameter behind it ,use bit to show which need to implement the program02,'3',PROGRAM,CHECKSUM

For example:perform file 0,1,3,the progrmme value b"00001011"

3.file

02,RunSeq1,RunSeq0(NoUse),File1,...File5...,CheckSum,0x03,0xff

File: 0x31+Speed, '1', 'A'+Action,StringLong,CharList...

4. Encryption Rules: Omitted

5.Because of the indirection communication ,when the screen after receiving , checksum correct, to be shown in the right direction or not.

6.data: Fixed line forms, documents show Protocol 1 - document 5, check.

0x31,32,33,34,35 stands for some informations

0x36,stands for MSG1-MSG5

In order compatible with the N721A, send 2 bytes

7. while(1 program agreement, the agreement shows 2, 3 program agreement, the agreement shows 4, 5 program agreement)

SPEED , FILENAME , Action, the length of the text, text

1) SPEED : Character'1 ','2','3 ','4','5 'corresponds to the speed of the above-mentioned option.

2) FILENAME , '1 ','2','3 ','4','5 'Corresponds to the above-mentioned 5 content of the banner. 7"8""6 'for the picture file is actually three words.

3) Action way: 'A', 'B', 'C',..... way corresponds to the above-mentioned actions.

4) length of the text, a byte 0-250

A hold,B rotate,C scroll,D snow,E sparkle,F falsh

5) text, using clearly show