



JetFileII Ver2.8.7

Contents

UPDATE RECORD	8
PART I: COMMUNICATING PROTOCOL	12
I.Outline	12
1.The 1 st communicating format	13
2.The 1 st echo communicating format	13
3.The 2 nd communicating format	14
4.The 2 nd echo communicating format	15
5.Examples of the two formats:	16
\coprod .Explanation of the 1^{ST} communicating.	17
1. Text File Write-in	17
2. String File Write-in	18
3. Picture File Write-in	19
4. Array Picture File Write-in	20
5. Operation of deleting the message	21
6. Operation of playing the list	22
7. Set the default display mode	23
8. Read time Set time	26
(1)Read back the time	26
(2).Set the time	27
9. Read the basic information of the system	28
Ⅲ.EXPLANATION OF THE 2 ST COMMUNICATING	30
1. Reading data (0x01)	30
(1).Read the Absolute Address Data(0x0101)	30
(2).Read System Files (0x0102)	31
(3).Read Font Library (0x0103)	33
(4).Read Text File (0x0104)	34
(5).Read String File (0x0105)	36
(6).Read Picture File (0x0106)	37
(7).Read Array Picture File (0x0107)	39
(8).Read Files on Designated Path (0x0108)	40
(9).Read the playing Log (0x0109)	41
(10).Read System Arg. Command (0x010A)	44
(11).Read the Current System Status (0x010B)	45
(12).Read System SN & MAC Structure (0x010C)	47
(13).Read Flash write-in status(Not available now)	48
(14).Read cabinet working status(0x010E)	50
(15).Check the CPU update status (0x010F)	51
(16).Read the Default Display Style (0x0110)	52
(17).Read a File on Designated PathExtension(0x0111)	54



(18).Read System Information(0x0112)	.55
(19).Read Error Log(0x0113)	.56
(20). Read the current temperature of the cabinet (0x0114)	.58
(21).Read the playing log(0x0115)	. 60
(22).Read the information of brightness (0x0116)	.61
(23).Report the status information of the system (0x0117)	.63
(24).Read back the multi-win parameters of 5800 (0x0118)	.64
2.Information Write-in(0x02)	.65
(1). Absolute address data write-in (0x0201)	.65
(2).System File Write-in(0x0202)	. 66
(3).Font Library File Write-in(0x0203)	. 67
(4).Text File Write-in (0x0204)	. 68
(5).String File Write-in(0x0205)	.69
(6).Picture File Write-in(0x0206)	. 70
(7).Array Picture File Write-in(0x0207)	.71
(8).Write a file to a designated path(0x0208)	. 72
(9).Emergency Information Write-in (0x0209)	. 74
(10).Brightness Control Block Write-in(0x020A)	. 74
(11). SN&MAC Write-in (0x020B)	. 75
(12). Default Display Style Write-in (0x010C)	. 76
(13).Write a File to a Designated Path—Extension(0x020D)	.77
(14).Write CRC file into the display to save (0x020E)	. 78
(15).Write form configuration of 5800(0x020F)	.79
(16). Modify the percentage of pixel detection manually and then save to the screen (0x0210) \dots	.81
3.Test Command(0x03)	.81
(1). Connection Test (0x0301)	.81
(2). Auto Test (0x0302)	.83
(3). All Bright Test (0x0303)	.84
(4).All Red Test (0x0304)	.84
(5).All Green Test (0x0305)	.85
(6).All Blue Test (0x0306)	.86
(7).Horizontal scanning in All Bright Condition (0x0307)	. 87
(8).Vertical scanning in All Bright Condition (0x0308)	
(9).End Test Status (0x0309)	
(10).Gray Scale Test (0x030A)	.89
(11).Color Test (0x030B)	.90
(12).Have the Test on the Srceen (0x030C)	.91
(13). Test mode of designated area (0x030D)	.93
4. Black Screen Command (0x04)	.94
(1).Start the display of black screen (0x0401)	.94
(2).End the Black Screen (0x0402)	.94
(3).Reset the System (0x0400)	.95
(4).Command for Switching Off the LED Sign(0x0403)	.96
(5).Command for Switching On the LED Sign(0x0404)	. 97



(6).Reading Status of the LED sign (0x0405)	97
(7).Dynamically revise the data of screen(0x0406)	99
(8).Brightness adjusting command (0x0407)	100
(9).Setting the Ethernet test command (0x0408)	101
(10).Command of reading the Ethernet test setting (0x0409)	102
(11).Communicating command of the indicator (0x040A)	103
(12).Command of reading the status of the indicator (0x040B)	104
5.Time command (0x05)	106
(1).Read the time (0x0501)	106
(2).Adjust Time (0x0502)	108
(3).Temperature and humidity processing (0x0503)	109
(4).Adjust Time Extension (0x0504)	110
(5).Speed limit value put in command (0x0505)	111
6. Play control command (0x06)	112
(1).Replay the file list (0x0601)	112
(2).Replay the current file (0x0602)	112
(3).Pause playing (0x0603)	113
(4).Continue the play (0x0604)	114
(5).Play the next file (Skip the current file) (0x0605)	114
(6). Play a designated file with priority (Play immediately)(0x0606)	115
(7).Read the current file (name, content)(0x0607)	116
(8).Read the next file (name, content) (0x0608)	117
(9).Play the previous file (Skip the current file) (0x0609)	118
(10).Play forward(0x060A)	119
(11).Play backward (0x060B)	119
(12).Play next frame (0x060c)	120
(13).Read the current play file (0x060D)(extension)	121
(14).Read the next play file (name or content)(0x060E) (extension)	123
(15).Control the Sound (0x060F)	124
(16).Start countdown/counting (0x0611)	125
(17).Stop countdown/ counting (0x0612)	125
(18). Pause countdown/ counting (0x0613)	126
(19). Continue countdowm/counting (0x0614)	127
7. File control command (0x07)	128
(1).FDISK partition (0x0701) (No longer supported)	128
(2).FORMAT (0x0702)	128
(3).Creating a new folder (0x0703)	128
(4).RENAME (0x0704)	129
(5).Move a file (0x0705)	130
(6).Delete a file (0x0706)	131
(7). Delete all Text File in a designated section (0x0707)	131
(8).Del all String File in a designated partition. (0x0708)	132
(9).Del all Picture File in a designated partition (0x0709)	133
(10).Del all Array Picture File files in a partition (0x070a)	



(11).List the files in the designated folder (0x070b)	134
(12).List the files in the designated folder (extension) (0x070C)	137
(13).Obtaining disk information (0x070D)	139
(14).Checking the existence of the designated file (0x070E)	140
8. Unlimited connection display communication (0x08)	141
(1).To enter into connection display status (0x0801)	141
(2).To terminate connection display status (0x0802)	142
(3).To check reception status (0x0803)	143
(4).Data download command (0x0804)	144
9. Non Word-wrap play (0x09)	145
(1).Entering into non word-wrap play mode (0x0901)	145
(2).Terminating non word-wrap display Status (0x0902)	146
10. Log-In operation (0x0A)	147
(1).Log-In operation (0x0A01)	147
(2).Log-Out operation (0x0A02)	147
(3).Changing password (0x0A03)	148
11. Pixel Detecting Command (0x10)	149
(1).Trigger Pixel Detecting Operation (0x1001)	149
(2).Read the Result of Pixel Diagnosis (0x1002)	150
12、FTP/HTTP Switch (5800 mainboard) Command(0x11)	151
(1).FTP/HTTP Write Switch Command (0x1101)	151
(2).FTP/HTTP Read Switch Command (0x1102)	152
13. Operational order of VPU3400 (0x34)	152
(1). Choose video input channel (0x3401)	152
(2). Set display mode (0x3402)	153
(3). Set display scale of video window (0x3403)	154
(4).Set DVI window (0x3404)	155
(5) .Set video window (0x3405)	156
(6). Set the video parameter (0x3406)	157
(7). Read configuration files (0x3407)	158
(8). Obtain input signal status (0x3408)	160
(9).Set system type (0x3409)	161
(10) .Set start line of slave computer (0x340A)	161
(11).Set temperature color of screen (0x340B)	162
(12). Set brightness of screen (0x340C)	163
(13). Obtain brightness status of screen (0x340D)	164
(14).Set Gamma value of screen (0x340E)	165
(15). Set quantity of LDU (0x340F)	166
(16). Set coordinates of LDU (0x3410)	167
(17).Obtain VPU version information (0x3411)	167
(18). Set pixel mode (0x3412)	169
(19). Obtain hardware ID of VPU (0x3413)	169
(20). VPU License Write-in (0x3414)	171
PART II: FILE FORMAT	171



I . Text File Format	172
1. Explanation of the Text File format	172
2. List for Control Character	172
[File end character]: it stands for the end of the file	172
[Format transfer character] : 1 bytes format	172
[Flash control character]: 2 Bytes format	172
[Line space control character]: 2Bytes format	172
[Pattern control character]: 3 Bytes format; 'I'= In pattern, 'O'=Out pattern	173
[Special character]: 2 Bytes format	173
[Frame change]: 1 Bytes format, Start a new page	174
[Line feed]: 1 Bytes format, Start a new line	174
[Frame pause time]:	174
[Speed]: 2 Bytes format (7 speed levels)	175
[String File nest invoke]: 3 Bytes format/6 Bytes format	175
[Picture file nest invoke]: 3 Bytes format	175
[Whole screen/line background color control character]:5 Bytes format	175
[Marquee control character]:3 Bytes format	175
[Insert Extended ASCII]:2 Bytes format	176
[Protocol-extended character]: N Bytes format	176
[Title control character]: 3 Bytes format	179
[Font & size]: 2 Bytes format	179
[Disposal modes]: 3 Bytes format	180
[Font color]: 2 Bytes format	180
[background color of the font]: 2 Bytes format	180
[Align horizontal]: 2 Bytes format	181
[Align Vertical]: 2 Bytes format	
[1/2 space]	181
3. Explanation of all the character zones	181
II .String File Format	
Explanation of String File Format	
III.PICTURE FILE FORMAT	
IV.Array Picture File Format	
Explanation of Array Picture File format	
2. Explanation of Array Picture File data arrangement	
V .FLW FORMAT FILES (ANIMATION FORMAT)	
Explanation of Animation (FLW) File Format	
VI.CONFIGURATION FILES (CONFIG.SYS)	
VII.PLAY LIST (SEQUENT.SYS)FORMAT	
1. Play List format	
Play List format (extended)	
VIII.LOGO FILE FORMAT	
APPENDIX I CORRESPONDENCE RELATIONS OF TIME ZONES AND VALUES	
APPENDIX II VERSION COMPATIBILITY TEST COMMAND AND RETURN FORMAT	
APPENDIX III VALID FILE LABELS	198





APPENDIX IV STATUS CODES AND THEIR MEANINGS	. 199
APPENDIX V EXPLANATION OF TERMS	. 202
APPENDIX VI SAMPLE FUNCTION	. 203



Update Record

Version	Protocol Update Contents & Cause (What and Why)	Whom	Date
	Changed to use Data length to record the length of the following data		
	2. Changed to use the first 2B as the source address. In the second 2B, the		
	first byte means (GG) and the second byte means (UU). Both GG & UU		
	are of decimal denotation and of not ASCII.		
	3. Changed the Packet Serial numbers from 4 bits to 2 bits		
	4. Outgoing data prefix is 0x55 0xa7		
	5. Returning data prefix is 0x55 0xa8	1	
	6. Changed the parameters length from 2 bytes to 1 byte. The last byte is		
	reserved for future use		
V 04	7. The format of feedback data & sending data is the same. The first 16		40.00.0005
Ver2.1	outgoing bytes are the same as the received data. The others bytes are	Lei	12. 30.2005
	decided by actual application.		
	8. There are two formats: return data format & error feedback format. If the		
	data is received successfully, the user should receive feedback to make		
	sure bilateral data communication		
	9. In reading system configuration parameters, there are 16 bytes. Packet		
	size data and packet serial numbers are all put into parameters. But the		
	data segment is left blank.		
	10. The file name is changed to 12 bytes providing room for future long file		
	names.		
Ver2.1.1	Use the Rev. data files as flag to mark whether feedback data is needed or not.	Lei	12. 30.2005
	The data feedback codes table is changed.		
	2. Changed to ignore the flag mark in reading information command major		1. 3.2006
Ver2.1.2	category. Because every sending data would have feedback.	Lei	
Ver2.1.2	3. Moved the command of reading a file on a designated path after the array	Lei	1. 3.2000
	picture file reading commands. Moved the file write-in to designated path		
	command to after the array picture file writing commands.		
	Make the F Disk invalid for commands. Because F Disk commands may		
Ver2.1.3	cause many unreliable problems and the user can only use other default	Lei	4 44 0000
Ver2.1.5	sections for operation.	Lei	1. 11. 2006
	The data feedback codes table is updated		
	Add the command for non word-wrap display status commands. These are		
Ver2.1.4	the so-called Category IX commands.	Lei	1. 13. 2006
Vei2.1.4	2. Change on the format of feedback of system parameter reading	Lei	1. 13. 2000
	commands. The last two bytes are reserved for GGUU .		
Ver2.1.5	Add a mark before display log file	Lei	1. 16.2006
VO12.1.0			
VOIZ.1.0	Changed the return codes for unlimited connection display. Changed the		
Ver2.1.6	Changed the return codes for unlimited connection display. Changed the meanings of the two return codes (feedback codes) 8301 & 8302. And the	Lei	1. 17. 2006



	being displayed in the system.		
	Change the unlimited connection display return codes		
	Delete error code 9003. When the address is wrong, no return data is		
Ver2.1.7	given.	Lei	1. 18. 2006
VG12.1.1	Add the non word-wrap status to the Command Quick Check Sheet	LOI	1. 10. 2000
	Revision 1:		
	Two commands are added:		
	One command to read SN, MAC structure body (0x1000)		
Ver2.1.8	2. One command to write SN, MAC structure body (0x2000)	YL	2.06. 2006
VC12.1.0	Revision 2:	12	2.00. 2000
	One command is added to the first communication format. This command is to		
	delete all files. The command is E\$.		
	1. Command 020c was deleted. Configuration system initial status was		
	g ,		
	placed in configuration files. 2. Some ADP compatible commands were added (to enhance the first		
	communication format)		
Ver2.1.9	Corrected some spelling errors and misleading expressions.	YL	4.01.2006
	Modified "open connection test" command, and added an option to allow		
	selection of data format for sending.		
	· ·		
	,		
	Length of parameter in read command return format changed from 2 bytes to 4 bytes		
Ver2.1.10	to 4 bytes.	YL	4 14 2006
ver2.1.10	One command DIR(070c) was added to allow reading by package. Partitioning code in deletion command abanded to the model (4.3.2 and the first product (4	Y L	4.14.2006
	3. Partitioning code in deleting command changed to two modes(1,2,3or		
	C,D,E)		
	Two commands were added in play control, being 1)read current play file		
	name and contents by package, and 2) read next play file name and		
	contents by package.		
	The following error codes were added: Out 7004 (Farmential of failed)		
	0x7201(Formatting failed)		
	0x9012(file writing failed)		
	0x2102(Space on disk not enough)		
	0x7401(Renaming file failed)		
	0x7402(Wrong path in renaming)	24	4 00 0000
Ver2.1.11	0x6702(failure in opening a display file)	YL	4.26.2006
	0x6703(Current file oversize. Please use extended reading command)		
	0x9030(Please log in first. If password is required but operation is		
	attempted without logging in, the software will return back).		
	0x9031(Password not correct).		
	0x9032(User name not correct)		
	0x903(Old password not correct)		
	0x9034(Password has been changed successfully)		
	0x7D01 //Disk reading failed (Disk not existing or wrong disk name)		
	3. A restriction was set in writing by package. Packages have to be sent by		



	order.					
	4. A major category command 0x0A was added for login.					
	5. A file control command 070D is added for reading disk information.					
	6. Modified "open connection test" command, and added an option to allow					
	format for sending data(meaning of revolving values 1 and 0).					
	7. A command (010D) for reading Flash writing status was added.					
	A command was added for reading cabinet work status.					
Ver2.1.12	2. A return error code (0x9035) was added.	YL	5.23.2006			
	Add one CMD to decide update whether success					
Ver2.2	2. ADD repose code	YL	6.03.2006			
Ver2.2.1	ADD one CMD for read humidity.	SOAR	6.17.2006			
Ver2.3	Modify first one communication format	SOAR	7.07.2006			
Ver2.3.1	Delete something for self	SOAR	7.25.2006			
	modify "Brightness Control Block Write-in(0x020a)" CMD's Arg					
	modify "Reading Current System Status Command(0x010B)"CMD's					
	3. Arg. Add humidity					
	4. Reading System Arg. Command(0x010A) [2 bytes]type →[2					
	bytes]:protocol version					
Ver2.3.2	5. delete cmd E\$A	SOAR	8.22.2006			
	6. modify cmd read/write to Designated Path E.g. To "D:\T\WELCOME.NMG".					
	7. Verify Table2.7.2 Default Value fields W and V.					
	8. Two reading and writing default commands were added(0x0110and					
	0x020C)5					
	Two commands were added for reading large files(>80M). One command is to					
Ver2.3.3	read designated path extension.	SOAR	10.31.2006			
Ver2.3.4	A command was added to read system information.	SOAR	11.27.2006			
	Modified log file recording format.					
Ver2.3.5	A pair of commands were added for switching ON and OFF the sign.	SOAR	12.30.2006			
Ver2.3.6	A command was added to read power-off status.	SOAR	1.10.2007			
Ver2.3.7	A command was added to test gray scale.	SOAR	1.17.2007			
Ver2.3.8	Command 0119 was added for reading system error log.	SOAR	1.22.2007			
	A control buzzer command was added to play control.					
	In protocol, remarks were given about which-for-which among various kinds					
	of control boards.					
Ver2.3.9	Appendix XI was added glossary and definitions. All appendices were	SOAR	2.10.2007			
	updated.					
	apados.					
Ver2.3.10	control buzzer command was be modified	TONY	4.03.2007			
Ver2.4.0	Correct the language mistakes in Ver2.3.10		5.14.2007			
Ver2.5	Modify: combine the file format and the display protocol into this file.	SOAR	6.09.2007			
Ver2.5.1	Correct the language mistakes	SOAR	6.25.2007			
Ver2.5.2	Correct the arrange mistakes	SOAR	6.25.2007			
Ver2.5.3	Correct the "sequent.sys" file discription	SOAR	8.14.2007			
Ver2.5.4	Add command 0x0504(Time Adjuest)	SOAR	2007-11-2			
V GI Z. J.4	Aud command oxocott (mine Aujuest)	JUAR	2001-11-2			



Ver2.5.5	Add font shodaw	SOAR	2008-1-2
Ver2.5.6	Modify: font and size character	FireBolt	2008-3-18
Ver2.5.7	Add +3:30 and +4:30 timezone	FireBolt	2008-6-17
Ver2.5.8	Add 5st playlist format	FireBolt	2008-7-15
Ver2.5.9	Modify Text file format	FireBolt	2008-7-18
Ver2.6.0	Add color test command and the speed controller character.	Lei	2008-12-12
Ver2.7.0	Add communication command of VPU3400(0x34)	QYJ	2009-03-19
Ver2.7.1	Add dynamic settings to display parametric command (0406)	Lei	2009-04-01
	1.Modify current state of the system and read the returned format of the		
Ver2.7.2	command	Lei	2009-06-20
	2.Add command of reading the cabinet temperature		
Ver2.7.3	1.Add brightness adjustment instructions	Lei	2009-06-23
Ver2.7.4	Add proportional font control character	Lei	2009-09-05
Ver2.7.5	Add a new play log to read command structure	Lei	2009-10-13
Ver2.7.6	Add a new Array picture/extent RYGW color control character		2010-01-12
Ver2.7.7	Add image detection(real time)command	Lei	2010-01-23
Ver2.7.8	Add operation of line flash to Array	Lei	2010-01-29
Ver2.7.9	Add the entire screen brightness adjustment instructions	Lei	2010-03-03
Ver2.8.0	Add Ethernet reset detection	Lei	2010-04-10
Ver2.8.2	5800FTP/HTTP switch control command	Neil	2010-09-11
Ver2.8.3	A short way back to the system status information(0X1117)	Lei	2010-09-11
Ver2.8.4	Add CRC and check mode	Lei	2010-12-18
Ver2.8.5	Add QS5800 read and write command window		2011-05-28
Ver2.8.6	Add clear message command	Neil	2011-7-21
Ver2.8.7	Check and range	Lei	2011-7-22



Part I: Communicating Protocol

I.Outline

Brief introduction

There are two kinds of communicating formats in JetFileII: the 1st communicating format is rather simple and it is suitable for some basic industry applications while the 2nd communicating format is more systematic and powerful in function but rather complicated.

Comparison of the two formats:

- 1st communicating format:
 - 1. Support the written-in of Text file, String file, Picture file and Array picture file;
 - 2. No read-back command;
 - 3. No delete designated file command
 - 4. Maximum length of the file name: 2 characters
 - 5. Do not support to send in dividing package;
 - 6. No corresponding checksum;
 - 7. Support the display mode of mission scheduling only

2nd communicating format:

- 1. Support all written-in and read-back of Text File, String file, Picture file, Array picture file, Fonts, Configuration, etc.
- 2. Support deletion of any file;
- 3. Support sending in dividing package (it can send more than 1024 bytes file);
- 4. Corresponding checksum (Enhancing the communication);
- 5. Support multi-displaying modes (such as mission scheduling, Non word-wrap display and so on)

This protocol can be based on the communication of TCP/IP, UDP/IP, COM, GPS etc.

Explanation of the file format:

- 1. <0x> represents that the value of the character is hexadecimal. "/" those enclosed in bracket are characters or strings, and the rest is decimal.
- 2. Unless special remarks were given, all commands in the files are available for QS0712, QS5006, QS5003 and QS0925.
- 3. The data rank in the file is in Little End Format: it means what is saved in low address is the low byte of character data, what is saved in high address is the high byte of character data. For example, the rank of 0x11223344 in the memory is:



0			3
44	33	22	11

4. In this system, File name in upper and lower case are differentiated, but not for path or drive.

1.The 1st communicating format

This format is mainly used for saving Text file, String file, Picture file, Array picture file in the related catalogue. The format is shown in the following Table1.1:

Table1.1 1st communicating format

<soh></soh>	<rev></rev>	Sign Addres	S <stx></stx>	Command Code	File Label	Data Field	<eot></eot>
	Address Code Eaber Field						
Name	Size	Offset	Description				
<soh></soh>	1 Byte	0	Start symbol of	of the comma	nd, <s< td=""><td>OH> valu</td><td>ie =0x01</td></s<>	OH> valu	ie =0x01
<rev></rev>	1 Byte	1	Fixed. Fill in as 'Z'				
Sign Address	2 Bytes	2	Unit address of the sign range from 00-99. 00 is broadcast address. e.g.: 00 address is showed as 0x30, 0x30.				
<stx></stx>	1 Byte	4	Start address of the command. All the characters behind this character are the Command code. <stx> value=0x02</stx>				
Command Code	1 Byte	5					
File Label	1 Byte	6	File name. Please refer to the file name list for further information.				
Data Field	N Bytes	7	The size is determined by the data. Please note that the size can't exceed 1024 Bytes				
<eot></eot>	1 Byte	7+data	End command, <eot> value =0x04 or 0x03 0x04: In-echo, 0x03: echo</eot>				

2.The 1st echo communicating format

Echo data format after successful operation (if required)

		Echo character								
Name	Size	Description								
Echo data	2 Bytes	Value of successful operation: 'OK' The related status code will be echoed if the operation fails (For detailed info please refer to the explanation in the 1 st communicating format.)								



3. The 2nd communicating format.

This format is used for complicated data communication. Table1.2 explains the format of this type.

Table1.2 2nd communicating format

						ommunicating format											
SYN	Check	Data	Source	Destination	Packet	Main	Sub	Arg.			_						
Code	Sum	Len	Address	address	Serial	CMD	CMD	Len	Flag	Arg.	Data						
		<u> </u>	- 1		<u> </u>	<u> </u>	<u> </u>	' 	<u> </u>	:	•						
Α	В	С	D	E	F	G	Н	İ	J	K	L						
Name	Na	ıme	Offse	et Size	е		D	escrip	tion								
	SYN	Code			Syn	chronic	chara	cter.	Value	=0x55	0xa7or						
Α			0	2	0x5	5 0xa3,	0x55 a	7is the	e com	mon ch	necksum						
				Byte	s and	cksum.											
					Cald	culation:	Starts 1	from th	ne firs	t byte o	f the						
					sum	n-check	and end	ds at ti	ne last	t byte.	Γhe						
					valu	ie is sav	ed in W	ORD	forma	t while	the part						
D D	Chas	le Coma		2	that	exceed	s WOR	D will	be del	leted. (t	:his						
В	Chec	k Sum	2	Byte	s valu	e does	not hav	e the	symbo	l calcul	ation),						
											Cald	culation	functior	expr	essed	in C la	nguage
					can	be foun	d in Ap	pendix	c. CRC	C: pleas	se refer						
					to th	to the CRC Calculation function in Appendix.											
С	Data	a Len	4	2	Length of the data.												
Ŭ	Buil		_	Byte	s	Longer or and data,											
D		urce	6	2	Source address												
	Add	lress		Byte	:S												
						pre-dat	•			•							
	Desti	nation				while the post-data represent the Unit address.											
E	add	Iress	8	2Byt	as	Value scope is [0-254], There are 254											
						addresses in total and 0 is the broadcast											
						address. GG: Group address; UU: Unit address.											
						serial n		-									
				2					•		iod. The						
F	Packe	t Serial	10	Byte		applicat				•							
				Dyte		ket echo											
G	Main	CMD	12	1 By		n comm			to till	y value.	•						
			_														
Н	Sub	CMD	13	1 By		ordinate			•	a a 41	C						
						_		11 IS 4	umes	as the v	value of						
	۸	l an	4.4	4.0		Arg.Len	•										
	Arg.Len		14	1 By	_		_1 +h-	Ara f	اماط اح	nath-1	* 1						
						en value	:−i, trie	Aig. I	eid ie	ngui=1	4						
					Byte	es											



				When value=2, the Arg. field length=2 * 4
				Bytes
J	Flag	15	1 Byte	1 = Echo
J	i lay	2	1 Dyte	0 = In-echo
K	۸ra	16	4*N	It is determined by the length of the Arg.Len
K	Arg.	16	Bytes	field. Empty value is allowed
			N	Transforming data. The definition varies with
L	Data 16+N	Bytes	the command. The length is decided by the	
			bytes	Data Len. Empty value is allowed

4. The 2nd echo communicating format.

Format of the 2nd echo communicating format (if required for echoing or reading back)

SYN Check Data Source Destination Packet Main Sub Arg. Flag Arg. Data Code Sum Len Address address Serial CMD CMD Len С Е G Н Α D Name Name Offset Size Description SYN Code Synchronic data. (1)0x550xa8 represents common 2 Α 0 checksum, corresponding to 55A7 Bytes (2) 0x55 0xa4 represents CRC checksum, corresponding to 55A3 Calculation: Starts from the first byte of the sum-check and ends at the last byte. The value is saved under WORD format. The common checksum manner: the part that 2 exceeds WORD will be deleted(These value В CheckSum 2 Bytes does not have the symbol calculation); Calculation function expressed in C language can be found in Appendix. CRC: pls refer to the CRC Calculation function in Appendix. 2 С Data Len 4 Length of the data Bytes 2 D Source Address 6 Source address Bytes The pre-data represent the Group address, Destination while the post-data represent the Unit Ε address 8 2Bytes

Table 1.3 General Communication Echo Data Format.

address. Value scope is [0-254], There are

254 addresses in total and 0 is the



				broadcast address.
				GG: Group address; UU: Unit addresses.
F	Packet Serial	10	2	Same as the received packet serial number,
-	Packet Seliai	10	Bytes	showing which packet is echoed
G	Main CMD	12	1 Byte	Same as the received main command type
Н	Sub CMD	13	1 Byte	Same as the subordinate command type
				The Arg. field length is 4 times as the value
				of the Arg.Len.
				E.g.:
1	Arg.Len	14	1 Byte	When value=1, the Arg. field length:1 * 4
				Bytes
				When value=2, the Arg. field length:2 * 4
				Bytes
	Floo	15	1 Durto	If the value = 1, it is the echo code,
J	Flag	15	1 Byte	If the value = 0, it is the data.
K	Ara	16	4*N	The length is determined by the types.
	Arg.	10	Bytes	Empty value is allowed
			NI	Transforming data. The definition varies with
L	Data	16+N	N	the command. The length is decided by the
			Bytes	Data Len. Empty value is allowed

5. Examples of the two formats:

Send a Text File named '0' to the default disk. Its content is "This is a sample".

The 1st communicating format:

<0x01>Z00<0x02>A0<0x06>This is a sample<0x04>

Meaning:

<0x01>: Start symbol of the command

Z : Fixed

00 : Broadcast address

<0x02>: Start address of the command
A :Command for write in Text File

0 :File label

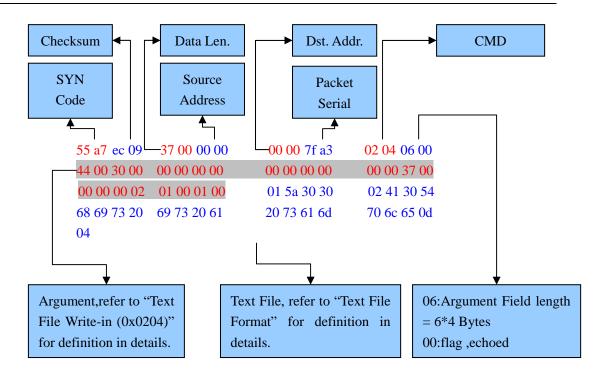
<0x06>: If without this control character, under the 1st communication of Jetfile II display protocol, the system will use the ADP2.0 display protocol.

This is a sample: Content

<0x04>: End command, In-echo.

The 2nd communicating format: Communicating data as bellow, which are all hexadecimal





II. Explanation of the 1st communicating

1. Text File Write-in

It is used for writing the TEXT FILE to the default disk or the T catalogue in the designated disk. The format as the following table:

Table2.1.1 Command format of writing in Text File

	Table 2 Command format of thinking in Toxic 1													
400115	∠DE	١ /১	S	Sign	ign		Comman	d File	Data	4FOTs				
<soh></soh>	<re< td=""><td>.v></td><td>Ad</td><td>dress</td><td><,</td><td>STX></td><td>Code</td><td>Labe</td><td>el Field</td><td><eot></eot></td></re<>	.v>	Ad	dress	<,	STX>	Code	Labe	el Field	<eot></eot>				
Name	;	Siz	ze	Offse	t			Descri	ption					
<soh< td=""><td>></td><td>4.5</td><td></td><td>_</td><td></td><td>Start</td><td>symbol</td><td>of the</td><td>comma</td><td>ind, <soh></soh></td></soh<>	>	4.5		_		Start	symbol	of the	comma	ind, <soh></soh>				
		1 B	yte	0	0		value=0x01							
<rev></rev>	>	1 B	yte	1		Fixed. Fill in as 'Z'								
Sign						Unit address of the sign ranging from 00-99. 00								
Addres	SS	2 By	/tes	2	2		is broadcast address. E.g.: 00 address is							
		,				showed as 0x30, 0x30.								
<stx></stx>	>						ymbol of th		nand					
		1 B	yte	4	4 <stx> value=0x02</stx>									
0	1					ÜIX	Talue OX							
Comma	na	1 B	vte	5		Comm	and code	value	= 'A'					
Code			,			Command code, value = 'A'								
File		1-5B	ytes	6		File name								



Label			1.If the 1 st character ≠<0x0F>, this filed will have
			one file name only and be saved in the default
			disk.
			2.If the 1 st data=<0x0F>, it represents a path,
			with the format:<0x0F> <disk< td=""></disk<>
			Number> <catalogue><file bytes<="" name(2="" td=""></file></catalogue>
			long)>
			E.g.: <0x0F>DTT1
			D D drive
			T T folder
			T1 File name
Data	N Bytes	7/11	Text File data. Please note that the size can't
Field			exceed 1024 Bytes
			Note:this Text File only has data field ,not
			including File head field and EOF field. Pls refer
			to Text File format for more information.
<eot></eot>	1 Byte	7/11+N	End code
			1. If Value=0x04, In-echo
			2. If Value=0x03, Echo.

Note of Echo: when the <EOT> value= 0x04, no data will be echoed back. When <EOT> value =0x03 and operate successfully, the data is echoed as 'OK'. Status code will appear when the operation fails.

2. String File Write-in

It is used to write the String File to the default disk or the S catalogue in the designated disk.

The format as the following table:

Table 2.2.1 Command Format of writing in String File

<soh></soh>	<re< td=""><td>\/></td><td>,</td><td>Sign</td><td colspan="2">ı <stx></stx></td><td>Comma</td><td>and</td><td>File</td><td>Data</td><td><eot></eot></td><td></td></re<>	\/>	,	Sign	ı <stx></stx>		Comma	and	File	Data	<eot></eot>			
\30H>	>KE	V –	Ad	ddress		31//	Code)	Label	Field	\			
											_			
Name		Siz	ze .	Offset)escripti	on				
<soh></soh>		4 D.		0		Start	symbol	of	the	comman	d, <soi< td=""><td>H></td></soi<>	H>		
		1 By	yte	U	0		value=0x01							
<rev></rev>		1 By	yte	1	1		Fixed. Fill in as 'Z'							
Sign						Unit address of the sign ranging from 00-99. 00 is								
Address	;	2 By	tes	2		broadc	ast addre	ess.	E.g. 00	address is	showed	as		
						0x30, 0	x30.							
<stx></stx>		4.0.		4		Start sy	mbol of t	the c	comman	ıd				
		1 By	yte	4		<stx> value=0x02</stx>								
Comman	d	1 By	yte	5		Command code, Value='G'								



Code								
File Label	1-5Byte	6	File name 1.If the 1 st character ≠<0x0F>, this filed will have one file name only and be saved in the default disk. 2.If the 1 st character =<0x0F>, it represents a path, with the format: <0x0F> <disk number=""><catalogue><file bytes="" long)="" name(2=""> E.g.:<0x0F>DST1 D D drive S S folder T1 File name</file></catalogue></disk>					
Data	N	7/11	String File data. Please note that the size can't					
Field	Bytes		exceed 1024 Bytes					
<eot></eot>	1 Byte	7/11+N	End code					
			1.If Value=0x04, In-echo 2.If Value=0x03,					
			Echo.					

Special usage:

Send several String File under one command and use<0x02> as the partition:

<0x01>Z00<0x02>GaThis is string file a<0x02>G<0x0F>ESaaThis is string file a<0x02>G<0x0F>ESVgThis is string file Vg<0x02>GcThis is string file vg<0x02>GcThis is string file vg<0x02>GcThis is string file vg<0x02>GcThis is string file vg<0x04>

The above command equals to the following 4 commands:

- <0x01>Z00<0x02>GaThis is string file a<0x04>
- <0x01>Z00<0x02>G<0x0F>ESaaThis is string file aa<0x04>
- <0x01>Z00<0x02>G<0x0F>ESVgThis is string file Vg<0x04>
- <0x01>Z00<0x02>GcThis is string file c<0x04>

Note of Echo: when the <EOT> value= 0x04, no data will echo back. When <EOT> value =0x03 and operate successfully, data echoes as 'OK'. Status code will appear when the operation fails.

3. Picture File Write-in

It is used to write the Picture File to the default disk or the P catalogue under the designated disk. This command does not support packet dispatching. Only the small pictures can be sent. If large pictures are used, please use the 2nd communicating format. The format as the following table:

Table2.3.1 Command format of writing in Picture File

<soh></soh>	<re< td=""><td>:V></td><td colspan="2">Sign</td><td colspan="2"><stx></stx></td><td>Comma</td><td>nd</td><td>File Label</td><td>Data</td><td><eot></eot></td><td></td></re<>	:V>	Sign		<stx></stx>		Comma	nd	File Label	Data	<eot></eot>	
			Ad	Address		ess		Code		Field		
Name	Э	Siz	ze	Offse		Description			ion			
<soh< td=""><td> ></td><td>1 B</td><td>yte</td><td colspan="2">0</td><td>Start</td><td>symbol</td><td>of</td><td>the</td><td>comman</td><td>d, <soi< td=""><td>۲></td></soi<></td></soh<>	>	1 B	yte	0		Start	symbol	of	the	comman	d, <soi< td=""><td>۲></td></soi<>	۲>



			value=0x01
<rev></rev>	1 Byte	1	Fixed. Fill in as 'Z'
Sign Address	2 Bytes	2	Unit address of the sign range from 00-99. 00 is broadcast address. E.g.: 00 address is showed as 0x30, 0x30.
<stx></stx>	1 Byte	4	Start symbol of the command <stx> value=0x02</stx>
Command Code	1 Byte	5	Command code, value='l'
File Label	1-5Bytes	6	File name 1.If the 1 st character ≠<0x0F>, this filed will have one file name only and be saved in the default disk. 2.If the 1 st character =<0x0F>, it represents a path, with the format: <0x0F> <disk number=""><catalogue><file bytes="" long)="" name(2=""> E.g.:<0x0F>DPT1 D D drive P P folder T1 File name</file></catalogue></disk>
Data	N Bytes	7/11	Picture File data. Please note that the size can't
Field			exceed 1024 Bytes
<eot></eot>	1 Byte	7/11+N	End code 1.If Value=0x04, In-echo 2.If Value=0x03, Echo.

Note of Echo: when the <EOT> value= 0x04, no data will be echoed back. When <EOT> value =0x03 and operate successfully, the data is echoed as 'OK'. Status code will appear when the operation fails, see the Appendix.

4. Array Picture File Write-in

It is used to write the Picture File to the default disk or the A catalogue under the designated disk. Since this command doesn't support sending in dividing packets, user can send some small pictures, and if user wants to send big pictures, please use the second communication format. The format as the following table:

Table 2.4.1 Command format of writing in Array Picture File

400115	4DE	٠ / ١	S	Sign		OTV-	Command	File	Data	4EOT	
<soh></soh>	<re< td=""><td>:V></td><td>Ad</td><td>dress</td><td colspan="2"><stx></stx></td><td>Code</td><td>Label</td><td>Field</td><td><eot></eot></td><td></td></re<>	:V>	Ad	dress	<stx></stx>		Code	Label	Field	<eot></eot>	
•					•						U
Name	Э	Siz	ze	Offse	et	Description					
<soh< td=""><td> ></td><td>1 B</td><td>yte</td><td>0</td><td></td><td>Start s</td><td>symbol of the</td><td>e comm</td><td>and, <s0< td=""><td>OH>value</td><td>is</td></s0<></td></soh<>	>	1 B	yte	0		Start s	symbol of the	e comm	and, <s0< td=""><td>OH>value</td><td>is</td></s0<>	OH>value	is



			=0x01
-DEV	4.0.1		
<rev></rev>	1 Byte	1	Fixed, fill in as 'Z'
Sign			Unit address of the sign range from 00-99. 00 is
Address	2 Bytes	2	broadcast address. E.g.: 00 address is showed
			as 0x30, 0x30.
<stx></stx>	4 D: 44	4	Start symbol of the command
	1 Byte	4	<stx> value=0x02</stx>
Command		_	
Code	1 Byte	5	Command code, the value ='K'
			File name
			1.If the 1 st character ≠<0x0F>, this filed will have
			one file name only and be saved in the default
			disk.
		6	2.If the 1 st data=<0x0F>, it represents a path,
File	1-5Bytes		with the format:<0x0F> <disk< td=""></disk<>
_			
Label			Number> <catalogue><file bytes<="" name(2="" td=""></file></catalogue>
			long)>
			E.g.: <0x0F>DAT1
			D D drive
			A A folder
			T1 File name
Data	N Bytes	7/11	Array picture Data, the size is decided according
Field			to the actual data. but the size of data + the size
			of protocol packet cannot exceed 1024 Bytes
<eot></eot>	1 Byte	7/11+N	End code
			1.lf Value=0x04, In-echo
			2.lf Value=0x03, Echo.

Note of Echo: when the <EOT> value= 0x04, no data will be echoed back. When <EOT> value =0x03 and operate successfully, the data is echoed as 'OK'. Status code will appear when the operation fails.

5. Operation of deleting the message

This command is used to delete all the Text Files and all the String Files etc. But it doesn't support deleting file by name. If the user wants to delete the designated file, please use the second communication format. The format as the following table:

Table 2.5.1 Command format of deleting

<soh></soh>	<f< td=""><td colspan="2"><rev></rev></td><td colspan="2">Sign Address</td><td><stx></stx></td><td>Command Code</td><td>Arg.</td><td><eot></eot></td><td></td></f<>	<rev></rev>		Sign Address		<stx></stx>	Command Code	Arg.	<eot></eot>		
Name Siz		Size	Offset			Description					
<soh></soh>		1 Byt	е	0		Start symbol of the command, <soh> value is=</soh>					



			0x01					
<rev></rev>	1 Byte	1	Fixed, fill in as 'Z'					
Sign			Unit address of the sign ranging from 00-99. 00 is					
Address	2 Bytes	2	broa	dcast addr	ress. E.g.: 00 address is showed			
			as 0	x30, 0x30.				
<stx></stx>	1 Byte	4	Start symbol of the command					
	1 Dyte	4	<st.< td=""><td>X> value=0</td><td>0x02</td></st.<>	X> value=0	0x02			
Command	1 Byte	5	Command code, the value is='E'					
Code	i byte	7						
				ʻT' D	Delete Text File			
				'S' D	Delete String File			
				'P' D	Pelete Picture File			
Ara	1-2	6	'S'	ʻQ' D	Pelete Play List			
Arg.	Bytes	O	3	'R' D	Pelete Run time table			
				'A' D	Pelete all			
				If no this	field, the function is the same as			
				'A'				
<eot></eot>	1 Bytes	7/8	Symbol of the end of a command					
			1.lf \	/alue=0x04	4, In-echo			
			2.lf \	/alue=0x03	3, Echo.			

Note of Echo: when the <EOT> value= 0x04, no data will be echoed back. When <EOT> value =0x03 and operate successfully, the data is echoed as 'OK'. Status code will appear when the operation fails.

6. Operation of playing the list

It is used to operate the Play List. The format as the following table:

Table 2.6.1 Command format of the playing List

<soh> <</soh>	REV>	Sign Address	<stx></stx>	Command Code	Arg.	File List	<eot></eot>			
			_							
Name	Size	Offset		De	scription					
<soh></soh>	4.5.4		Start syn	nbol of the co	mmand, t	the val	ue of <soh></soh>			
	1 Byte	0	=0x01	=0x01						
<rev></rev>	1 Byte	1	Fixed, fill	Fixed, fill in 'Z'						
Sign			Unit add	ress of the sig	gn rangin	g from	00-99. 00 is			
Address	2 Bytes	2	broadcast address. E.g.: 00 address is showed							
			as 0x30, 0x30.							
<stx></stx>	4.5.4	_	Start symbol of the command							
	1 Byte	4	<stx> v</stx>	<stx> value=0x02</stx>						
Command	1 Duto	_	Command and a the value in (E)							
Code	1 Byte	5	Command code, the value is: 'E'							



Arg.	3 Byte	6	The value = ".SL"
			File name List
	N Byte		If the file name is<0x0F>, it means the following
			is a path.
			E.g.:02<0x0F>DTAB1, it means the following
File List		9	list:
			1. File named 0 in Default disk,
			2. File named 2 in Default disk,
			3. D:\T\AB,
			4. File named 1 in Default disk.
<eot></eot>	1 Byte	9+N	Ending symbol of Command
			1.lf Value=0x04, In-echo
			2.lf Value=0x03, Echo.

Note for special usage(deleting Play List):

Table2.6.2 Command format of deleting playing List

							_				
<soh< td=""><td colspan="2">SOH> <rev></rev></td><td>/></td><td colspan="2">> Sign Address</td><td><stx></stx></td><td>Command Code</td><td><eot></eot></td><td></td></soh<>	SOH> <rev></rev>		/>	> Sign Address		<stx></stx>	Command Code	<eot></eot>			
Name	Name Size			set			Descriptio	n			
<soh></soh>	1	Byte	(O	Start =0x0	Start symbol of the command, the v		, the value of	<soh></soh>		
<rev> 1 Byt</rev>		Byte	,	1	Fixed	Fixed, fill in 'Z'					
Sign					Unit address of the sign ranging from 00-99. 00						
Address	2	Bytes	2	2		is broadcast address. E.g.: 00 address is showed					
					as 0x30, 0x30.						
<stx></stx>	1	Durto		4	Start symbol of the command						
	ı	Byte		4	<stx> value=0x02</stx>						
Command	,	Dista	,	_	Carra		the velve is	" — "			
Code	_	2 Byte		5	Command code, the value is: "E."						
<eot></eot>	1	Byte	7	7	Ending symbol of Command						
					1.If Value=0x04, In-echo						
					2.If V	alue=0x03,	Echo.				

For example, the following command means deleting the Play List:

<0x01>Z00<0x02>E.<0x04>

7. Set the default display mode

It is used to set the default display parameter of the LED sign, E.g.: setting the size of the default characters, if the control characters are not used in font selection in the Text File, the default character will be used. The format as the following table:

Table 2.7.1 Command format of setting the default display mode



<soh></soh>	<r< td=""><td colspan="2">EV></td><td colspan="2">Sign Address</td><td>STX></td><td>Command Code</td><td>Arg.</td><td>Default Value</td><td><eot></eot></td><td></td></r<>	EV>		Sign Address		STX>	Command Code	Arg.	Default Value	<eot></eot>		
				1								
Name	Name Si		е	Offse	t			Descrip	tion			
<soh></soh>	<soh> 1 By</soh>		te	0		Start symbol of the command, the value <soh> =0x01</soh>					of	
<rev></rev>	<rev> 1 By</rev>		te	1		Fixed,	fill in as 'Z'					
Sign	Sign					Unit address of the sign range from 00-99. 00 is						
Address		2 Byt	es	2		broadcast address. E.g.: 00 address is show				is showed	I	
						as 0x30, 0x30.						
<stx></stx>		1 Dv	1 Byte			Start symbol of the command						
		гву	le	4		<stx> value=0x02</stx>						
Comman	d	1 Dv	to	5		Command code, the value ='E'						
Code		1 By	ıe	5								
Arg.		1 By	te	6		The va	llue is '#'					
Default		N. D. a		7		List of	default dis	play m	odes, ple	ease refer	to	
Value		N By	ies	7		Table2	.7.2 for more	meanii	ngs			
<eot></eot>		1 By	te	7+N		The ending symbol of a command						
						1.If Va	lue=0x04, In-	echo				
						2.If Va	lue=0x03, Ed	cho.				

Table2.7.2 Explanation of Default Value field

Default Value Field For	Default Value Field Format:							
Default Variab	le	Value						
Default Variable		Value						
'B'	Backgroun	d color						
	'1' = Red	'2' = Green '3' = Yellow '4' = Black (Fact	ory					
	default)							
, C ,	Primary co	lor						
	'1' = Red	(Factory default) '2' = Green '3' = Yellow '4	' =					
	Black							
'D '	Default Driv	Default Drive						
	'E' = RAM (random access drive – volatile)							
	'D' = Flash (non-volatile) memory (Factory default)							
	'F' = Nor Flash (non-volatile) or CFCARD memory							
'H'	Horizontal	Justification						
	'C'= Center	r 'T'= Top 'B'= Bottom 'F'= Fill (Factory						
	default)							
	Line spacir	ng						
'L'	'1' = 1 pixe	(Factory default) '2' = 2 pixel '3' = 3 pixel						
	'4' = 4 pixe	'5' = 5 pixel ETC.						
'F'	Default For	nt						
	'0' = Norma	al 5 '1' = Normal 7 (Factory default) '2' = Normal 7	nal					



	14								
	14	[5] D.U.44							
	'3' = Normal 15 '4' = N								
	'6' = Bold 15 '7' = B	010 16							
	In Mode / Out Mode								
	'a' = rotate								
	'b' = hold	'1' = squigle							
	'c' = flash	'2' = radar							
	'd'=random(Factory	'3' = fan open							
	default)	'4' = fan close							
	'e'= move left	'5' = rotate right							
	'f' = move right	'6' = rotate left							
	'g' = move up	'7' = center2corner							
	'h' = move down	'8' = corner2center							
	'I' = scroll o/c	'9' = center2allsz							
	'j' = scroll o/r	'A' = alls2center							
	'k' = scroll o/l	'B' = fourblock2cor							
	'l' = unveil in	'C' = fourblock2cen							
'M'/'O'	'm' = unveil up/in	'D' = fourblockout							
, 0	'n' = unveil up	'E' = fourblockin							
	'o' = unveil down	'F' = leftcorrectin							
	'p' = unveil up/out	'G' = rightcorrectin							
	'q' = splice acros	'H' = Ibottomrecti							
	'r' = splice verti	'l' = rbottomrecti							
	's' = fall left	'J' = Iftcodiagonal							
	't' = fall right 'u' = veretian hor	'K' = rtcodiagonali 'L' = lbtmdiagonal							
		P = leπzrtupcor							
	·								
	<u> </u>								
'S'	· ·								
	•	·							
	•	•							
	· ·	d (Factory default) '6'= Fast Speed							
	'7'= Fastest Speed								
'T'	Time for the Message to	o stay on the display							
	0-9 in Seconds 3 sec	onds is Factory default. E.g. '99' = 99							
	second								
'W'	Word-wrap mode								
	'0'= OFF Text will move	across face from left to right							
	'1'= On (Factory default	'v' = veretian ver w' = rain x' = materialize z' = twinkle Q' = rit2lftupcor R' = grow up Presentation Speed 1'= Slowest Speed 3'= Medium Slow Speed 5'= Medium Fast Speed (Factory default) 5'= Fastest Speed Fime for the Message to stay on the display 1'= Second 1' = veretian ver 1' M' = rbtmdiagonal 1'N' = lft2rtdowncor 2' = rt2lftdowncor 2' = left2rtupcor 2' = Slow Speed 3' = Medium Speed 3' = Medium Speed 4' = Medium Speed 6' = Fast Speed Fime for the Message to stay on the display 1' = second							
'V'	Vertical Justification								



'R'= Right	'L'= Left	'C'= Center (Factory default)
i v i vigili	L LCII	o ocitici (i dotory deladit)

Note of Echo: when the <EOT> value= 0x04, no data will be echoed back. When <EOT> value =0x03 and operate successfully, the data is echoed as 'OK'. Status code will appear when the operation fails.

Note for special usage:

If there is no value in Default value field, it means the settings of factory is renewed, for example:

1. Set the default display mode: the character color is red; the default disk is E; the default character is normal 7, the in-mode and out-mode are "Jump Out". The command is as follow:

<0x01>Z01<0x02>E#C1DEF1MbOb<0x04>

2. Renew the settings of factory, the command is as follow:

<0x01>Z01<0x02>E# <0x04>

The default value of factory is:

Font Color: RED Back Ground Color: Black Font Size: Normal7.FNT(7x5)

Line Space : 1 pixelStay Time : 3 secondsSpeed : 3rd speedHorizontal Justify : CenterVertical Justify: FillWord-wrap : OnIn Mode : RandomOut mode : RandomDefault Drive: D:

8. Read time | Set time

(1)Read back the time

It is used to read back the date, time and week of the system. The format as the following table:

Table 2.8.1.1 Command format of Reading Time

	J									
<soh> <</soh>	REV>	Sign Address	<stx></stx>	Command Code	Arg.	<eot></eot>				
						-				
Name	Size	Offset		De	scription					
<soh></soh>	4 D. 4a	0	Start syr	mbol of the	command,	the value of				
	1 Byte	0	<soh> =0x01</soh>							
<rev></rev>	1 Byte	1	Fixed, fill	Fixed, fill in as 'Z'						
Sign			Unit addr	ess of the sig	n range from	00-99. 00 is				
Address	2 Bytes	2	broadcast address. E.g.: 00 address is showed							
	_		as 0x30, 0x30.							
<stx></stx>	4.5.4	_	Start symbol of the command							
	1 Byte	4	<stx> value=0x02</stx>							
Command	4.5.4	_								
Code	1 Byte	5	Command code, the value = 'E'							
Arg.	1 Byte	6	The value	e= 'A '						



<eot></eot>	1 Byte	7	The ending symbol of a command, 0x04

Note of echo: If the command is carried out successfully, the data will be echoed. And its format is as the following Table2.8.1.2.

Table 2.8.1.2 Echoed data format of Reading Time command

SYN Head	Return Size	Year	Month	Day	Hour	Minute	Week	Time Zone		
Nam	е	Size	Description							
SYN h	ead	2 Bytes	Filling va	Filling value=0x55 0xa6						
Return	Size	2 Bytes	Filling value=0x08							
Year		2 Bytes	0x2006, means the Year 2006							
Mont	:h	1 Byte	0x01, means JAN							
Day	1	1 Byte	0x11,means the Day 11							
Hou	r	1 Byte	0x12,means twelve o'clock							
Minu	te	1 Byte	0x22,me	eans 22 m	ninutes					
Wee	k	1 Byte	0x5,means Friday,0x00 = SUN 0x06 = SAT.							
Time z	one	0x1,means GMT-11:00 (Referring to the appendix for								
			time zone value)							

(2). Set the time

It is used for adjusting system date, time, week etc. The format as the following table: Table2.8.2.1 Command format of setting Time

Sign Command <SOH> <REV> <STX> <EOT> Arg. Time Address Code Size Description Name Offset <SOH> Start symbol of the command, the value of 1 Byte 0 <SOH>=0x01 <REV> Fixed, fill in as 'Z' 1 Byte 1 Unit address of the sign range from 00-99. 00 is Sign Address 2 Bytes 2 broadcast address. E.g.: 00 address is showed as 0x30, 0x30. <STX> Start symbol of the command 1 Byte 4 <STX> value=0x02 Command Command code, the value is= 'E' 1 Byte 5 Code The value = 'B' Arg. 1 Byte 6 Time field 7 Time 8 Bytes [2 Bytes] Year E.g. 0x2006 (2006) [1 Bytes] Month E.g. 0x06 (6)



			[1 Bytes] Day E.g. 0x06 (6)
			[1 Bytes] Hour E.g. 0x11 (11 o'clock) [1 Bytes] Minute E.g. 0x30 (30)
			[1 Bytes] Week E.g. 0x03 (TUE.) 0x01 = SUN 0x07 = SAT.
			[1 Bytes] Time zone E.g. 0x01 (See Appendix 1)
<eot></eot>	1 Byte	15	Ending symbol of a command 1.If the value=0x04, In-echo 2.If the value =0x03, Echo.

Note of echo: when the <EOT> value= 0x04, no data will be echoed back. When <EOT> value =0x03 and operate successfully, the data is echoed as 'OK'. Status code will appear when the operation fails.

9. Read the basic information of the system

It is used to read back the basic information of the system, for example the GGUU, the version No. etc. The format as the following table:

Table 2.9.1 Command Format of Reading the Basic Information of the System

<soh></soh>	<re< td=""><td>\/></td><td></td><td>Sign ddress</td><td><stx></stx></td><td>Command Code</td><td>Arg.</td><td><eot></eot></td></re<>	\/>		Sign ddress	<stx></stx>	Command Code	Arg.	<eot></eot>					
		1											
Nam	е	Size	9	Offset		D	escription						
<soh< td=""><td>- ></td><td>4.5.</td><td></td><td>^</td><td>Start sy</td><td>mbol of the</td><td>e command, th</td><td>ne value of</td></soh<>	- >	4.5.		^	Start sy	mbol of the	e command, th	ne value of					
		1 Byt	te	0	<soh></soh>	=0x01							
<rev< td=""><td>/></td><td>1 Byt</td><td>te</td><td>1</td><td>Fixed, fi</td><td colspan="7">Fixed, fill in as 'Z'</td></rev<>	/>	1 Byt	te	1	Fixed, fi	Fixed, fill in as 'Z'							
Sigr)	2			Unit add	lress of the s	ign ranging from	00-99. 00 is					
Addre	ss	_		2	broadca	s showed as							
		Byte	S		0x30, 0x	0x30, 0x30.							
<stx< td=""><td>(></td><td>4 D. 4</td><td>١</td><td>4</td><td>Start syr</td><td colspan="7">Start symbol of the command</td></stx<>	(>	4 D. 4	١	4	Start syr	Start symbol of the command							
		1 Byt	te	4	<stx></stx>	value=0x02							
Comma	and	4 D. 4		_	Camma								
Code	е	1 Byt	ιe	5	Comma	nd code, the	value = F						
Arg.	•	1 Byt	te	6	fill in as '0'								
<eot< td=""><td>></td><td>1 Byt</td><td>te</td><td>7</td><td colspan="7">The ending symbol of a command</td></eot<>	>	1 Byt	te	7	The ending symbol of a command								
					Value=0	x03, Echo.							

Note of echo: If the command is carried out successfully, the data will be echoed. And its format is as the Table2.9.2.

Table 2.9.2 Echoed data format of Reading the System Setting command



SYN head	size		PU	TCF Vers		File system version	FPGA Version	Len	Width	Туре	Rev					
Na	ime		Siz	ze .			De	escriptio	n							
SYN	SYN head 2 Bytes					Filling value: 0x55 0xa6										
Si	ize		2 Byt	es	Filli	Filling value: 0x10										
CPU \	ersion	1	2 Byt	es	E.g	E.g. 8013 etc.										
TCP/IP	versio	n	2 Byt	es	Dec	Decide according to actual situation										
File syste	m vers	sion	2 Byt	es	Dec	cide accord	ing to actu	ıal situa	tion							
FPGA	versio	n	2 Byt	es	Dec	cide accord	ing to actu	ıal situa	tion							
Length o	f the s	ign	2 Byt	es	Dec	cide accord	ing to actu	ıal situa	tion							
Width of	Vidth of the sign 2 Bytes					cide accord	ing to actu	ıal situa	tion							
Type 2 Bytes					Decide according to actual situation											
Rev. 2 Bytes				es	Dec	cide accord	ing to actu	ıal situa	tion							



J

K

L

Flag

Arg.

Data

III. Explanation of the 2st communicating

1. Reading data (0x01)

(1).Read the Absolute Address Data(0x0101)

15

16

24

This command is for some special operations. The command format and parameters as the following table:

SYN Check Data Source Destination **Packet** 01 01 Flag Data Arg. Address address Code Sum Len Serial Len В С F G Н Κ D Е J Offset **Size Description** Item **Name** Α SYN Code 0 2 Bytes В Check Sum 2 2 Bytes Please refer to Table 1.2 for definition in С Data Len 4 2 Bytes D Source Address details 6 2 Bytes Ε Destination address 8 2 Bytes F Packet Serial 10 2 Bytes G Main CMD 12 Data read-back, the value = 0x011 Byte Н Sub CMD 13 1Byte Read absolute address, the value = 0x01Τ Arg. Len 14 1 Byte Parameter of 8 bytes, fill in as 2

In the reading data commands, this Flag

[2 Bytes]:Read numbers (not more than

1024 bytes each time)

Table 3.1.1.1 Reading Absolute Address Data

If the operation is successful, the data will be echoed. And its format is as the following Table 3.1.1.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

1 Byte

4*2Bytes

0 Byte

is invalid

No data

[4 Bytes]: Read address

[2 Bytes]: Reserved. Fill in 0



Table3.1.1.2 Echoed data format after reading absolute address command is performed successfully

							•					
SYN	Check	Data	Sou		Destination	Packe	01	01	Arg.	Flag	Arg.	Data
Code	Sum	Len	Addı	ress	address	Serial			Len	Ŭ		
	1	ŀ	- 1		ł	ŀ	1	ł	ł	ł	-	- !
Α	В	С)	Е	F	G	Н	- 1	J	K	L
						•						
Item	Na	me	(Offse	t Size	9			Desc	riptior	1	
Α	SYN	Code		0	2 Byt	es						
В	Chec	k Sum		2	2 Byt	es						
С	Data	Len		4	2 Byt	es						
D	Source	Addres	s	6	2 Byt	es	Please	refer t	to <u>Tab</u>	le 1.3	for defi	nition in
Е	Desti	nation		8	2 Put	00	details					
<u> </u>	add	ress		0	2 Byt	C S						
F	Packe	t Seria	ı	10	2 Byt	es						
G	Main	CMD		12	1 By	te						
Н	Sub	CMD		13	1 By	te						
I	Arg.	Len		14	1 By	te	No para	amete	r need	ed. Fil	I in as	0
J		20		15	1 Dv	to	The va	alue is	0. It	mean	s the	echoed
J	Г	ag		15	1 By	l C	data.					
K	Aı	rg.		16	0 By	te	No Arg					
L	Da	ata		16	N Byt	es	Data re	ad-ba	ck			

(2).Read System Files (0x0102)

♣ This command is used to read system files like "CONFIG.SYS", "SEQUENT.SYS". The format as the following table:

Table3.1.2.1 Reading System Files

				abico		teaaiii	y System	111100				
SYN	Check	Data	Source I Address		tination	Packet	01	02	Arg.	Flag	Arg.	Data
Code	Sum	Len	Address	ad	ldress	Serial	01	02	Len	Tiag	Aig.	Data
1	ł	1	ł		1	1	ł	-	i	1	-	-
Α	В	С	D		Е	F	G	Н	- 1	J	K	L
Item	Na	ame	Of	fset	Siz	ze			Descri	iption		
Α	SYN	l Code			2 By	/tes						
В	Che	ck Sum		2	2 By	/tes						
С	Dat	ta Len		4	2 Bytes		Please r	rofor to	Toblo	. 1 2 f	or dofin	aition in
D	Source	Addres	ss	6	2 By	/tes	details	eiei io	Iable	: 1.2 1	or delli	IIIIOII III
Е	Dest	tination		0	2 B _\	too	uetalis					
E	ad	dress	l 8		2 D)	/168						
F	Packe	et Seria	al ′	10	2 By	/tes						
G	Mair	n CMD		12	1 B	yte	Data rea	ıd-back	. Valu	e= 0x0)1	



Н	Sub CMD	13	1Byte	Read system files. Value= 0x02
I	Arg. Len	14	1 Byte	Need 16 bytes parameter. Fill in as 4
J	Flag	15	1 Byte	In reading data command, this Flag is invalid.
К	Arg.	16	4*4Byte	[12 Bytes]: the file name is "CONFIG.SYS" or "SEQUENT.SYS", Fill in as 0 behind the name if there are less than 12 Bytes [2 Bytes]: Packet size [2 Bytes]: Packet serial number of reading. (Counted from 1)
L	Data	32	0 Byte	No Data

If the operation is successful, the data will be echoed. And its format is as the following Table3.1.2.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

Table3.1.2.2 Echoed data format of reading System Files command

SYN	Check	Data	So	urce			Packe	t			Arg.		Δ	Data
Code	Sum	Len	Add	ress add		dress	Serial)1	02	Len	Flag	Arg.	Data
<u> </u>	<u> </u>	<u> </u>		1		:	<u> </u>		:	i	<u> </u>	1	-	•
Α	В	С		D		E	F	(G	Н	i i	J	K	L
Item	Na	ame		Off	set	Si	ze				Desc	ription	1	
Α	SYN	l Code				2 By	ytes							
В	Chec	eck Sum 2			2	2 By								
С	Dat	Data Len 4			4 2 B									
D	Source	urce Address 6			3	2 By	ytes .	Ple	ase	refer	to Ta	ble 1.3	3 for d	efinition
Е	Destinati	stination address			3	2 By	ytes .	in d	leta	ils				
F	Packe	et Seria	al	1	0	2 By	ytes .							
G	Mair	n CMD		1	2	yte								
Н	Sub	CMD		1	3	1 B	yte							
- 1	Arg	. Len		1	4	1 B	yte	Nee	ed 8	3 byte:	s para	neter.	Fill in a	as 2
J		log		1	5	1 D	vto	The	e va	alue is	s 0. It	mean	s the	echoed
J	Г	lag			5	ID	yte	data.						
							[2	Ву	tes]: F	ile siz	е			
K	А	Arg. 16		6	4*1 E	Bytes	[2	Ву	tes]: F	Packet	serial	numbe	er	
							[4	Ву	tes]: F	ile siz	e(usec	for big	g files)	
L	Data 16		6	N B	ytes	Dat	a re	ead-ba	ack					



(3).Read Font Library (0x0103)

This command is used to read the font library. The format as the following table:

Table3.1.3.1 Command format of Reading Font Library

	N Check Data															
SYN			Soi	ırce	Dest	ination	Packet	0.1	02	Arg.	El	Α	D.			
Cod	e	Sum	Len	Ado	lress	ado	dress	Serial	01	03	Len	Flag	Arg.	Data		
-		-	- 1	•	:		<u> </u>	- 1	- 1	ŀ	1	-	- 1	<u> </u>		
Α		В	С	[)		E	F	G	Н	- 1	J	K	L		
Ite		Na	ame		Off	set	Si	ze			Desc	riptio	1			
m																
Α		SYN	Code		()	2 B	ytes								
В		Chec	k Sum		:	2	2 B	ytes								
С		Data	a Len			4	2 B	ytes	Please refer to Table 1.2 for definition in							
D	,	Source	Addres	s	(3	2 B	ytes	detail							
Е	De	Destination address Packet Serial			;	3	2 B	ytes	7							
F					1	0	2 B	ytes								
G		Main CMD			1	2	1 E	Byte	Data read-back. Value= 0x01							
Н		Main CMD Sub CMD			1	3	1B	yte	Read font files. Value= 0x03							
I		Arg	. Len		1	4	1 E	Byte	Need 16 Bytes parameter. Fill in as 4							
J		F	lag		1	5	1 E	Byte	In read	ding da	ta cor	nman	ds, this	Flag is		
К	Arg.				1	6	4*4E	Bytes	name. FONTL file by I names behind Bytes. [2 Bytes]	The I IST.LS read its can be the nai es]: Par	ist file T. Rea file na found me if t ckage Packe	e namad on ame (E in fon there a size	ne is in e spec Differen It list), f	font file fixed as cific font t font file ill in as 0 than 12		
L	Data				3	2	0 E	Byte	No data	а						

If the operation is successful, the data will be echoed. And its format is as the following Table 3.1.3.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.



		lable	e3.1.3.	2 Echoed	l data format	ot	readi	ng Fo	nt Fil	es com	mand			
	SYN Code	Check Sum	Data Len	Source Address	Destination address		acket erial	01	03	Arg.	Flag	Arg.	Data	
L	- ;	-	1	1	l		i	i	<u> </u>	<u> </u>	<u> </u>	1	- 1	,
	Α	В	С	D	Е		F	G	Н	- 1	J	K	L	
	Item		Nam	ne	Offset		Siz	ze		[Descri	ption		
	Α		SYN C	ode	0		2 By	/tes						
	В		Check	Sum	2	2 Bytes		<u>s </u>						
	С		Data L	₋en	4		2 Bytes							
	D	Sc	ource A	ddress	6		2 By	/tes	Pleas	se refe	er to	Table	1.3	for
	E	Des	Destination address 8				2 By	/tes	defin	ition in	details			
	F	Р	acket :	Serial	10		2 By	/tes						
	G		Main C	CMD	12		1 B	yte						
	Н		Sub C	MD	13		1 Byte							
	I		Arg. L	_en	14		1 B	yte	Need 8 Bytes parameter. Fill in 2.					2.
	J		Flag	a	15		1 B	vte	The	value	is 0.	It m	eans 1	the
			1 14	9	10		, ,	yıc	echo	ed data	١.			
									[2 Bytes]:File size					
	K		Arg	I	16		4*	2	[2]	Bytes]: I	Packet	serial	numbe	r
			, "9		10		Byt	es	_	Bytes]:	File s	ize(use	d for	big
									files)					
	L		Data		20		N		Read	ling the	data f	rom Fo	nt libra	iry
						Byt	es							

Table3.1.3.2 Echoed data format of reading Font Files command

(4).Read Text File (0x0104)

This command is used to read Text Files in designated section. The format as the following table:

Source SYN Check Data Destination Packet Arg. 01 04 Flag Arg. Data Code Sum Len Address address Serial Len ł i ł l i i i В С D Ε G Н J K Offset Size **Description Item Name** SYN Code Α 0 2 Bytes 2 В Check Sum 2 Bytes Please refer to Table 1.2 for definition in С Data Len 4 details 2 Bytes D Source Address 6 2 Bytes

Table3.1.4.1: Reading Text File format



E	Destination address	8	2 Bytes	
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	Data read-back. Value= 0x01
Н	Sub CMD	13	1Byte	Read Text file. Value= 0x04
I	Arg. Len	14	1 Byte	Need 20 Bytes parameter. Fill in as 5
J	Flag	15	1 Byte	In reading commands, this flag is invalid
К	Arg.	16	4*5 Bytes	[1 Byte]:Disk section code(C、D、E) [3 Bytes]:Reserved [12 Bytes]:TEXT FILE LABEL [2 Bytes]: Packet size [2 Bytes]:Packet serial number of reading (Counted from 1)
L	Data	36	0 Byte	No data

→ If the operation is successful, the data will be echoed. And its format is as the following Table3.1.4.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

Table3.1.4.2 Echoed data format of reading Text File command

		Ia	bies. i.	4.2 EU	ioeu data it	ormat or rea	uiiig	TEXT FII	e con	manu				
	SYN Code	Check Sum	Data Len	Source			01	04	Arg. Len	Flag	Arg.	Data		
	-	<u> </u>	<u> </u>	1	<u> </u>		- 1	<u> </u>	<u> </u>	<u> </u>	1			
	Α	В	С	D	Е	F	G	Н	- 1	J	K	L		
I	ltem	1	Name		Offset	Size			D	escrip	tion			
	Α	SY	/N Code	Э	0	2 Bytes	;							
	В	Ch	eck Sur	m	2	2 Bytes	;							
	С	D	ata Len		4	2 Bytes	;	Diagon	rofo	r to	Toblo	1.2 for		
	D	Sour	ce Addr	ess	6	2 Bytes	;	Please refer to Table 1.3 for definition in details						
	E	Destina	ation ad	dress	8	2 Bytes	;	deliniii	OH III	uetalis				
	F	Pacl	ket Se	rial	10	2 Bytes	;							
	G	Ма	in CM	D	12	1 Byte								
	Н	Su	ıb CMI)	13	1 Byte								
	I	Aı	rg. Ler)	14	1 Byte		Need 8	8 Byte	s para	meter.	Fill in 2		
	J		Elaa		15	1 Duto		In rea	ding	data c	omma	nds, this		
	J		Flag		10	1 Byte		Flag is	invali	d				
								[2 B	sytes]:	File si	ze			
	K		Arg.		16	4*2 Byte	16	[2 Bytes]: Packet serial number				l number		
			Aig.		10	4*2 Bytes		[4 Bytes]: File size(used for big				ed for big		
										files)				
	L		Data		24	read size		Т	ext file	Data	read-b	ack		



(5).Read String File (0x0105)

♣ This command is used to read String Files in a designated section. The format as the following table:

Table3.1.5.1: Command format of Reading String File

					idila lollila							
SYN	Check	Data	Source	Destinati	on Packet	01	05	Arg.	Til	Δ	Data	
Code	Sum	Len	Address	address	Serial	01	03	Len	Flag	Arg.	Data	
- 1	i	- 1	- 1	- 1	- 1	ŀ	i	i	i	- 1	- 1	
Α	В	С	D	Е	F	G	Н	- 1	J	K	L	
Item		Name		Offset	Size			Desc	riptio	า		
Α	S	YN Cod	de	0	2 Bytes							
В	Cł	neck Su	ım	2	2 Bytes							
С		Data Le	n	4	2 Bytes	Please refer to Table 1.2 for definition i						
D	Soul	rce Add	ress	6	2 Bytes	details	S					
Е	Destin	ation a	ddress	8	2 Bytes							
F	Pac	cket Se	erial	10	2 Bytes							
G	Ma	ain CN	1D	12	1 Byte	Data ı)x01					
Н	S	ub CM	D	13	1Byte	Read	String f	ile. Va	lue=0	x 05		
1	Α	rg. Le	n	14	1 Byte	Read 20 Bytes parameter. Fill in as 5						
J		Flag		15	1 Byte	In reading data commands, this Fla						
К		Arg.		16	4*5Bytes	[3 B [12 By [2 B [2 By	ytes]:Re ytes]:ST ytes]: P	eserve RING acket Packe	d FILE size t seri	LABEL al nun	nber of	
L		Data		36	0 Byte	No da						

If the operation is successful, the data will be echoed. And its format is as the following Table3.1.5.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

Table3.1.5.2 Echoed data format of Reading String File command

SYN	Check	Data	Source	Destination	Packet	01	05	Arg.	Flag	Ara	Data		
Code	Sum	Len	Address	address	Serial	01	0.5	Len	riay	Arg.	Dala		
- 1	- 1		i	ŀ	ŀ		- 1				- 1		
Α	В	С	D	E	F	G	Н	- 1	J	K	L		
ltem	Name			Offset	Size		Description						
Α	SYN Code			0	2 Byte	2 Bytes		Please refer to Table 1.3 for					
B Check Sum			n	2	2 Byte	2 Bytes		definition in details					



С	Data Len	4	2 Bytes	
D	Source Address	6	2 Bytes	
E	Destination address	8	2 Bytes	
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	
Н	Sub CMD	13	1 Byte	
	Arg. Len	14	1 Byte	Read 8 Bytes parameter. Fill in
ı	Aig. Leii	14	1 Dyte	as 2
J	Flag	15	1 Byte	The value is 0. It means the
3	i iay	10	1 Dyte	echoed data.
				[2 Bytes]: File Size
				[2 Bytes]: Packet serial
K	Arg.	16	4*2 Bytes	number
				[4 Bytes]: File size(used for
				big files)
L	Data	24	Read Size	Reading String file Data

(6).Read Picture File (0x0106)

♣ This command is used to read Picture File in designated section. The format as the following table:

Table3.1.6.1 Read Picture File Format

				abico. 1.0											
SYN Code	Check Sum	Data Len	Source Addre			Packet Serial	01	06	Arg.	Flag	Arg.	Data			
<u> </u>	1	1	1	- 1		1	1	1	1	1	1	:			
Α	В	С	D	Е		F	G	Н	1	J	K	L			
Item		Name		Offset	S	Size			Desci	riptior	1				
Α	SY	/N Cod	е	0	2 E	Bytes									
В	Ch	eck Su	m	2	2 E	Bytes									
С	D	ata Len	1	4	2 E	Bytes	Please	refer t	o Tabl	e 1.2	for defi	nition in			
D	Sour	ce Addr	ess	6	2 Bytes		details								
E	Destina	ation ad	ldress	8	2 Bytes										
F	Pac	ket Se	rial	10	2 E	Bytes									
G	Ма	in CM	D	12	1	Byte	Data re	ead-bac	k. Valu	ıe= 0x	:01				
Н	Su	ıb CMI	D	13	1	Byte	Read F	Picture	File. Va	alue= (0x 06				
ı	А	rg. Ler	ı	14	1	Byte	Read 2	20 Byte:	s para	neter.	Fill in 5	5			
J		Flag		15	1	Byte	In read	ding da	ita cor	nmand	ds, this	Flag is			
К		Arg.		16		4*5 ytes	[1 Byte]: Drive section code (D、E [3 Bytes]:Reserved								



				[12 Bytes]:PICTURE FILE LABEL [2 Bytes]: Packet size [2 Bytes]: Packet serial number of reading. (Counted from 1)
L	Data	36	0 Byte	No data

If the operation is successful, the data will be echoed. And its format is as the following Table3.1.6.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

Table3.1.6.2 Echoed data format of reading Picture File command

		00.1.0		Jeu uala ioi	mat or read	Totalo	1 110 00	mman	<u> </u>			
SYN	Check	Data	Sourc	e Destinati	on Packet			Arg.				
Code	Sum	Len	Addres	ss address	s Serial	01	06	Len	Flag	Arg.	Data	
<u> </u>	· .	<u> </u>	1	<u> </u>	1	<u> </u>	-	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
Α	В	С	D	Е	F	G	Н	- 1	J	K	L	
Item	1	Name		Offset	Size			D	escrip	otion		
Α	SY	/N Code	Э	0	2 Byte	s						
В	Ch	eck Sur	n	2	2 Byte	s						
С	D	ata Len		4	2 Byte	s						
D	Sour	ce Addr	ess	6	2 Byte	s	Diago		4	Tabla	10 fam	
Е	Destina	ation ad	dress	8	2 Bytes		Please refer to Table 1.3 for definition in details					
F	Pacl	ket Se	rial	10	2 Bytes		deminion in details					
G	Ма	in CM	D	12	1 Byte							
Н	Su	ıb CMI	0	13	1 Byte	•						
I	Aı	rg. Ler	1	14	1 Byte		Need	8 Byte	s para	meter.	fill in 2	
J		Elaa		15	1 Duto		The	value	is 0.	It me	ans the	
J		Flag		10	1 Byte	;	echoe	ed data	١.			
							[2 B	ytes]: I	ile siz	:e		
К		Arg.		16	4*2 Byte	20	[2 B	ytes]: I	Packet	serial	number	
IX.		Αig.		10	7 Z Dyt		[4 B	ytes]:	File si	ze(use	d for big	
							files)					
L		Data		24	Read si	ze	F	Readin	g Pictu	re file [Data	



(7). Read Array Picture File (0x0107)

♣ This command is used to read Array Picture files in designated section. The format as the following table:

SYN Check Data Source Destination Packet Arg. 01 07 Flag Arg. Data Code Sum Len Address address Serial Len ł į i i i ŀ i ŀ ŀ ŀ i ŀ В С D Ε G Н Α K

Table3.1.7.1 Reading Array File Format

Item	Name	Offset	Size	Description
Α	SYN Code	0	2 Bytes	
В	Check Sum	2	2 Bytes	
С	Data Len	4	2 Bytes	Please refer to Table 1.2 for definition in
D	Source Address	6	2 Bytes	details
Е	Destination address	8	2 Bytes	
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	Read Data. Value= 0x01
Н	Sub CMD	13	1 Byte	Read Array Picture File. Value=0x07
I	Arg. Len	14	1 Byte	Read 20 Bytes parameter. Fill in 5
J	Flag	15	1 Byte	In reading data commands, this Flag is invalid
К	Arg.	16	4*5Bytes	[1 Byte]:Drive section code (D、E) [3 Bytes]:Reserved [12 Bytes]:ARRAY PICTURE FILE LABEL [2 Bytes]: Packet size [2 Bytes]: Packet serial number of reading. (Counted from 1)
L	Data	36	0 Byte	No data

If the operation is successful, the data will be echoed. And its format is as the following Table 3.1.7.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

Table3.1.7.2 Echoed data format of read Array File command

					_									
	SYN	Check	Data	Source	Destination	on	Packet	01	07	Arg.	Flag	Ara	Dat	
	Code	Sum	Len	Address	address	3	Serial	01	07	Len	riay	Arg.	Dat	a
	i	i	- 1	- 1	- 1		i	- 1	i	i	-	i	i	
	Α	В	С	D	Е		F	G	Н	- 1	J	K	L	
	Item		Name	•	Offset		Size			D	escrip	otion		
	Α	S	SYN Co	de	0		2 Bytes	;	Please	refe	r to	Table	1.3	for
	В	С	heck S	um	2		2 Bytes	;	definition	on in d	details	1		



С	Data Len	4	2 Bytes	
D	Source Address	6	2 Bytes	
E	Destination address	8	2 Bytes	
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	
Н	Sub CMD	13	1 Byte	
I	Arg. Len	14	1 Byte	Need 8 Bytes parameter. Fill in 2
J	Flag	15	1 Byte	The value is 0. It means the echoed data.
К	Arg.	16	4*2Bytes	[2 Bytes]: File size[2 Bytes]: Packet serial number[4 Bytes]: File size(used for big files)
L	Data	16	Read size	Array file Data read-back

(8).Read Files on Designated Path (0x0108)

This command is used to read files the names and paths you already know. Command format as following table:

Table3.1.8.1 Reading File on Designated Path Command Format

								<u>,</u>	ou i ui					
SYN	Check	Data	So	urce	Des	stination	Pac	cket	0.4		Arg.			
Code	Sum	Len	Ado	dress	ac	ddress	Se	rial	01	08	Len	Flag	Arg.	Data
:	<u> </u>	ļ		!		į		!	i	!	<u> </u>	į	!	<u> </u>
A	В	C		D.		Ē	F	=	G	Н	Ė	J	K	L
- / \						_				• • •	•			_
Hom	Nia			044	4	Ci-c)	n4: o n		
Item		ame		Offs		Size					Descri	ption		
Α	SYN	Code		0		2 Byte	es							
В	Chec	k Sum		2		2 Byte	es							
С	Data	a Len		4		2 Byte	es							
D	Source	Addres	ss	6		2 Bytes		Please refer to Table 1.2 for definition						nition in
_	Dest	ination						deta	ails					
E	ado	dress		8		2 Bytes								
F	Packe	et Seria	al	10)	2 Bytes								
G	Main	CMD		12	2	1 Byt	е	Dat	a reac	d-back	. Value	e= 0x0	1	
		21.15				4.5.4		Rea	ad a	file	on	desig	gnated	path.
Н	Sub	CMD		13	3	1 Byt	е	Valu	ue=0x	80				·
	Λ	Lon		4.4		4 D. 4		Dec	cided b	by the	path le	ength	of the	
1	Arg	. Len		14	•	1 Byte		par	amete	r field				
		log		4.5		1 Pyto		In reading data commands, this Flag						Flag is
J		lag		15)	1 Byte		inva	alid					
K	Α	ırg.		16	3	N Byte	es	[2 Bytes]: Packet size						



				[2 Bytes]: Read serial number packet
				serial number. (Counted from 1)
				[Path and File name]:The name and path
				of the file, E.g. "D:\T\WELCOME.NMG"
				Notes: Path ends with Null (0). File name
				in upper and lower case differentiated.
L	Data	16+N	0 Byte	No Data

If the operation is successful, the data will be echoed. And its format is as the following Table3.1.8.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

Table3.1.8.2 Echoed data format of reading file on designated path command

				Torriat or re	<u> </u>								
SYN	Check	Data	Source	Destination	Packet	01	08	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Address	address	Serial	01	00	Len	riay	Aig.	Dala		
_	i	ł	į	ł	1	-	ŀ	ł	ŀ	ŀ			
Α	В	С	D	Е	F	G	Н	- 1	J	K	L		
Item		Name	е	Offset	Size	Э			Descri	ption			
Α		SYN Co	ode	0	2 Byt	es							
В	C	Check S	Sum	2	2 Byt								
С		Data Le	en	4	2 Byt	es							
D	Sou	urce Ad	dress	6	2 Bytes			Please refer to Table 1.3 fo					
E	Desti	nation a	address	8	2 Byt	definition in details							
F	Pa	icket S	Serial	10	2 Byt								
G	N	/lain Cl	MD	12	1 By								
Н	5	Sub CN	MD	13	1 By	te							
I	,	Arg. Le	en	14	1 By	te	Para	meter	of 8 E	lytes, fi	II in as 2		
J		Flag		15	1 By	te		value ed da		It me	eans the		
К		Arg.		16	4*2 Bytes		[2 num	Byt ber Bytes	-	Packe	t serial		
L		Data	ı	24	Read	size	Reading the content of the file						

(9). Read the playing Log (0x0109)

This command is used to read the playing log of system. The format as the following table:

Table3.1.9.1 Format of Read Play Log



SYN	Check	Data	Sou	rce	Dest	ination	Packet		\1	00	Arg.	T21	Α.	D (
Code	Sum	Len	Add	ress	ad	dress	Serial)1	09	Len	Flag	Arg.	Data
-	ļ	-	ŀ			1	ļ		:	- 1	- 1	i	i	<u> </u>
Α	В	С)		Е	F	(G	Н	1	J	K	L
Item	N	lame		Off	set	Si	ze				Desci	riptior	1	
Α	SY	N Code		()	2 B	ytes							
В	Che	ck Sum	1	2	2	2 B	ytes							
С	Da	ata Len		2	1	2 B	ytes							
D	Sourc	e Addre	ess	6	3	2 B	ytes	Ple	ase	refer t	o Tabl	e 1.2	for def	inition in
Е	Des	stination	1	8	3	2 B	ytes	deta	ails					
_	ac	ddress				2 0								
F	Pack	et Ser	ial	1	0	2 B	ytes							
G	Mai	n CME)	1	2	1 B	yte	Read Data. Value= 0x01						
Н	Sul	b CMD)	1	3	1 B	syte	Rea	ad d	lisplay	log. Va	lue= 0	x09	
I	Ar	g. Len		1	4	1 B	yte	Nec	ed 4	Bytes	param	eter. fi	II in 1	
J	ı	Flag		1	5	1 B	syte	In reading data commands, this F invalid						Flag is
K		Arg.		1	6	4*1 E	Bytes	[2 [2	В		Packe	t seri	al nui	mber of
L	Γ	Data		2	0	0 B	syte		ding data	g. (Cou a	nted fro	om 1)		

♣ If the operation is successful, the data will be echoed. And its format is as the following Table 3.1.9.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

Table3.1.9.2 Echoed data format of Reading display log command

SYN	Check	Data	Source	Destina	tion	Packet	01	09	Arg.	Floor	Ara	Doto
Code	Sum	Len	Address	addres	SS	Serial	UI	09	Len	Flag	Arg.	Data
-	-	-		1		i	- 1	-	-	-	1	<u> </u>
Α	В	С	D	E		F	G	Н	- 1	J	K	L
				_								
Item		Name		Offset		Size			Des	cripti	on	
Α	S'	YN Cod	е	0 2		2 Bytes						
В	Ch	eck Su	m	2	2	2 Bytes						
С	D	ata Ler	1	4	2	2 Bytes						
D	Sour	ce Addr	ess	6	2	2 Bytes	Plea	Please refer		to T	able	1.3 for
_	De	estinatio	n	0	,) D. 4	defi	nition	in deta	ails		
E	a	address		8	4	2 Bytes						
F	Pac	ket Se	rial	10	2	2 Bytes						
G	Ma	ain CM	D	12		1 Byte						



Н	Sub CMD	13	1 Byte	
I	Arg. Len	14	1 Byte	Need 8 Bytes parameter, fill in as2
J	Flag	15	1 Byte	The value is 0. It means the echoed data.
К	Arg.	16	4*2 Bytes	[2 Bytes]: File size[2 Bytes]: Packet serial number[4 Bytes]: File size(used for big files)
L	Data	24	N Bytes	Please refer to the following table file format

♣ Declaration of Log file format

Table3.1.9.3 Log file format declaration

		1			- 5			Jaration							
Flag	Cnts	time	Rea	d File	locati	on	File	File		Rec	Rec				
i iag	Onto	unic	Flag	counts	100011	011	path1	path2		1	2	•••			
	Nam	ie		Size				С)efini	tion					
	Flaç	9		2 Byte	s	Th	e head ı	mark of	the lo	g file,	its valu	ıe="L(G"		
	Cour	nts		2 Byte	s	Record the record numbers in file.									
						Time when the log starts									
						(1	Byte) Y	ear							
						(1	IByte) M	lonth							
	Starting	time		6 Byte	s	(1	Byte) D	ay							
						(1	IByte) H	our							
						(1	IByte) M	linute							
						(1Byte) Second									
	Read	flan		1 Byte	<u> </u>	If the log file has been read, the value is 1,									
	Neau	iiay		1 Byte			otherwise it is 0								
	File co	unte		1 Byte			is Byte	indicate	s the	item o	counts	of val	lid		
	1 110 00	runto		1 Byte			e Path.								
Re	cording	locatio	n	2 Byte	s	Location of current writing.									
	File pa	ath 1		32 Byte	es	lt r	ecords p	oath of p	olay f	iles.					
	File pa	ath 2		32 Byte	es	lt r	ecords p	oath of p	olay f	iles.					
	File pa	ath 3		32 Byte	es	lt r	ecords	oath of p	olay f	iles.					
						Th	e file pa	ths in to	tal a	e 128.					
						[1	Byte]:	Record	the lo	ocation	of the	path	of		
						the	e current	t play file	€.						
						[1 Byte]: Record play time. 0-23 hours.							rs.		
						1stands for the play record at 1 o'clock.									
	Play re	ecord 1		8 Byt	es	[2 Bytes]: Record date when file was									
						played.									
							e forma	t is:							
							[0 – 4] [5 - 8] [9 – 15] (bit)								
							Day	Month	Ye	ar (sta	rting f	rom th	he		



		Voor 1080, anding by 2107)
		Year 1980, ending by 2107)
		[2 Bytes]: How many times file was
		played.
		[2 Bytes]: Duration of play time (unit:
		second)
		[1 Bytes]: Record location of the path of
		the current play file.
		[1 Bytes]: Record play time. 0-23 hours.
		1stands for 1play record.
		[2 Bytes]: Record date when file was
		played. The format is:
Play record 2	8 Bytes	[0 – 4] [5 - 8] [9 – 15] (bit)
		Day Month Year (starting from
		year 1980, ending by 2107)
		[2 Bytes]: How many times file was
		played.
		[2 Bytes]: Duration of play time (unit:
		second)
	8 Bytes	N th record

Note: If you want to write in the new play file list, please read the play log first, otherwise the previous play log will be replaced.

(10).Read System Arg. Command (0x010A)

♣ This command is used to read system hardware Arg. Command format as following table:

Table3.1.10.1 Format of Reading System Hardware Arg.

SYN Code	Check Sum	Data Len	Sourc		nation ress	Packet Serial	01	0A	Arg.	Flag	Arg.	Data
Code	Suili	Len	Addit	auc	1033	Seriai			Len			•
	į	i	i			į	i	i	i	į	į	<u> </u>
Α	В	С	D	1	Ξ	F	G	Н	- 1	J	K	L
Item		Name		Offset	,	Size			Desci	riptior	1	
Α	SY	/N Code	е	0	2	Bytes						
В	Ch	eck Sur	n	2	2	Bytes						
С	D	ata Len		4	2	Bytes	Diago	n rafar t	a Tabl	- 1 O f	ior dofir	sition in
D	Sour	ce Addr	ess	6	2	Bytes	details		.0 1801	e 1.21	or delli	nition in
Е	_	stinatio ddress	n	8	2	Bytes	uetalis	•				
F	Pac	ket Se	rial	10	2	Bytes						
G	Ма	in CM	D	12	1	Byte	Read	Data. V	/alue=(0x01		
Н	Su	ıb CMI)	13	1	Byte	Read	system	paran	neter. '	Value=	0x0A



I	Arg. Len	14	1 Byte	No parameter needed, fill in as 0
J	Flag	15	1 Byte	In reading data commands, this Flag is invalid
K	Arg.	16	0 Byte	No parameter.
L	Data	16	0 Byte	No Data

If the operation is successful, the data will be echoed. And its format is as the following Table3.1.10.2. If it fails, the status code would be echoed. The status code information in details can be found in Appendix.

Table3.1.10.2 Echoed Data Format of Read System Arg. Command

		ı												
SYN	Check	Data	Sou	ırce	Destir	ation	Packe	t 01	0A	Arg.	Flag	Arg.	Data	
Code	Sum	Len	Add	ress	addr	ess	Serial		071	Len	i iag	7 ti g.	Data	
	i	- 1	ŀ		i		- 1	ŀ	ł	ŀ	ł	ł	<u> </u>	
Α	В	С	0)	E		F	G	Н	1	J	K	L	
Item	Na	ame		Off	fset	Si	ze			Desci	ription	1		
Α	SYN	l Code			0	2 B	ytes							
В	Chec	k Sum		:	2	2 B	ytes							
С	Dat	a Len		4		2 B	ytes							
D	Source	Addres	ss	6		2 B	ytes	Please refer to Table 1.3 for defir					-:4: :	
Е		ination		8		2 B	ytes	details	reter t	o iabi	e 1.31	or detii	nition in	
		dress	_	10										
F		et Seria	al			-	ytes							
G		CMD			2		yte	_						
Н	Sub	CMD		1	3	1 B	yte							
I	Arg	. Len		1	4	1 B	syte	Need 1						
J	F	lag		1	5	1 B	syte	The va data.	lue is	0. It	mean	s the	echoed	
								[2 Bytes	s]:CPL	J Versi	ion, lik	e 0x80	13	
								[2 Bytes	s]: TCF	P/IP V	ersion	numbe	er	
								[2 Bytes	s]: File	Syste	m Ver	sion N	umber	
								[2 Bytes	s]: FP(GA Ve	rsion N	lumbei	ſ	
K	А	rg.		1	6	4*4E	Bytes	[2 Bytes	s]: Wic	Ith of L	_ED Si	gn		
								[2 Bytes	s]: Hei	ght of	LED S	Sign		
								[2 Bytes	s]: Pro	tocol v	ersion	1		
								[1 Bytes]: Group Address						
								[1 Bytes]: Unit Address						
L	D	ata		3	32	0 B	syte	No Data	a					

(11).Read the Current System Status (0x010B)

This command is used to read current system status, like temperature & display status, etc. The format as the following table:



L

Data

16

		Table	3.1.11	.1: Fo	orma	t of	Readin	g Syster	n's Cur	rent S	tatus														
										1															
SYN	Check	Data	Sourc	e D	estina	tion	Packet	01	0B	Arg.	Flag	Arg.	Data												
Code	Sum	Len	Addre	SS	addres	SS	Serial	01	OD	Len	Tiug	rug.	Data												
i	i		ł		1		-	i	į	į	į	ļ	ŀ												
Α	В	С	D		Е		F	G	Н	- 1	J	K	L												
Item		Name		Offs	set	9	Size	Description																	
Α	S	YN Cod	е	0		2 Bytes																			
В	Ch	neck Su	m	2		2	Bytes																		
С		ata Ler	ı	4		2 I	Bytes	Divi		.	406														
D	Sour	ce Add	ress	6	i	2 I	Bytes	Please	reter to	lable	9 1.∠ 1	or aetir	lition in												
E	De	estinatio	n	8		2 Bytes		details																	
_	á	address																							
F	Pac	ket Se	rial	10)	2	Bytes																		
G	Ma	ain CM	D	12	2	1	Byte	Data re	ad-bac	k. Valu	ie=0x0	01													
Н	Sı	ub CM	D	13	3	1	Byte	Read s	ystem (current	statu	s. Value	e=0x0B												
I	Α	rg. Lei	า	14	4	1	Byte	No para	ameter	neede	d.														
		Пол		4.5		4	Durka	In read	ing dat	a com	mand	s, this	Flag is												
J		Flag		15		1 Byte		e invalid																	
K		Arg.		16	3	0 Byte		0 Byte		0 Byte		0 Byte		0 Byte		0 Byte		0 Byte		No para	ameter.				
					_																				

♣ If the operation is successful, the data will be echoed. And its format is as the following Table3.1.11.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

No data

0 Byte

Table3.1.11.2 Echoed data format of Reading current system's status command

SYN Code	Check	Data Len	Source Addres		Destination address		01	0B	Arg.	Flag	Arg.	Data
	į.	Len	l	- :	<u> </u>		<u> </u>	:	Len	į	!	į
A	В	C	D	-	E		G	H	İ	J	K	Ĺ
Item		Name	Э	Offset	Size				Descr	iption		
Α	5	SYN Co	de	0	2 E	Bytes						
В	С	heck S	um	2	2 E	Bytes						
С		Data Le	en	4	2 E	Bytes						
D	Sou	ırce Ad	dress	6	2 E	Bytes	Please refer t		to Tab	le 1.3	for de	finition
E	Destin	nation a	address	8	2 E	Bytes	in details					
F	Pa	cket S	erial	10	2 E	Bytes						
G	M	lain Cl	MD	12	11	3yte						
Н	S	Sub CN	ЛD	13	11	3yte						
I	1	Arg. Le	en	14	1 I	3yte	Need 8	B Bytes	Arg. I	-illed i	n as 2	



J	Flag	15	1 Byte	The value is 0. It means the echoed data.
К	Arg.	16	4*2 Bytes	[1 Byte]: System status Assignment scheduling status = 0 Emergency message display status = 1 Black screen = 2 Remote control Status = 3 Test mode = 4 Unlimited Connection display mode = 5 Non Word-wrap = 6 [1 Bytes]:In-cabinet temperature (°C). If there isn't any, it should be 0xff [1 Bytes]:Out-of-cabinet temperature(°C).If there isn't any, it should be 0xFF [1 Bytes]: Auto ON/OFF. 1=Enable; 0=Disable [1 Bytes]: humidity,value:0 %-100% [3 Bytes]: Reserved
L	Data	24	0 Byte	No data

(12).Read System SN & MAC Structure (0x010C)

♣ This command is used to read structure such as system SN & MAC addresses. Command format as following table:

Table3.1.12.1 Reading Command Format of System SN & MAC Addresses

							-							
SYN	Check	Data	Source	e Destin	ation	Packet	01	0C	Arg.	Flag	Ara	Data		
Code	Sum	Len	Addres	s addr	ess	Serial	01	UC	Len	riag	Arg.	Data		
-	- 1	- ;	į	ŀ		- 1	- 1	i	į	- 1	- ;	- 1		
Α	В	С	D	E		F	G	Н	- 1	J	K	L		
Item		Name		Offset	S	ize		ı	Descri	iption				
Α	S'	YN Cod	е	0	2 E	Bytes								
В	Ch	eck Su	m	2	2 E	Bytes								
С	D	ata Ler	1	4	2 E	Bytes	Diagon	rofor to	Toble	. 10 f	ar dafir	sition in		
D	Sour	ce Addı	ess	6	2 Bytes		Please	reier to	Table	1.21	or deiir	iilion in		
Е		estination address		8	2 E	Bytes	details							
F	Pac	ket Se	rial	10	2 E	Bytes								
G	Ма	ain CM	D	12	1 [3yte	Data rea	ad-back	k. Valu	e=0x0	1			
Н	Sı	ub CMI	D	13	13 1 1		Read sy 0x0C	stem S	SN & N	IAC ac	ddress.	Value=		
-	A	rg. Ler	ı	14	11	3yte	No para	meter i	neede	d				



J	Flag	15	1 Byte	In reading data commands, this Flag is invalid
K	Arg.	16	0 Byte	No parameter
L	Data	16	0 Byte	No Data

♣ If the operation is successful, the data will be echoed. And its format is as the following Table3.1.12.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

Table3.1.12.2 Echoed data format of reading system SN & MAC structure bodies command

SYN	Check	Data	Sourc			Packet	01	0C	Arg.	Flag	Arg.	Data
Code	Sum	Len	Addre	ss addres	SS	Serial			Len			_
i	i	i	i	i		i	i	i	i	i	i	<u> </u>
Α	В	С	D	Е		F	G	Н	- 1	J	K	L
Item		Name		Offset		Size			Des	cription	on	
Α	S	YN Cod	е	0	2	2 Bytes						
В	Ch	eck Su	m	2	2	2 Bytes						
С	D	ata Ler	1	4	2	2 Bytes						
D	Sour	ce Addı	ess	6	2	2 Bytes	Dia		ofor	to T	able ´	lo for
Е	De	estinatio	n	8	2	2 Bytes	Plea	nition			able	1.3 for
_	а	address							۵٥	2110		
F	Pac	ket Se	rial	10	2	2 Bytes						
G	Ma	ain CM	D	12	1 Byte							
Н	Sı	ıb CM	D	13		1 Byte						
I	А	rg. Ler	า	14		1 Byte	No parameter Needed					
J		Elag		15		1 Byto	The	The value is 0. It means the ech				echoed
J		Flag		13		1 Byte	data.					
K		Arg.		16	C) Bytes	No	param	eter			
							[12 Bytes]:SerialNo					
L		Data		16	22 Bytes		[4 Bytes]:Reserved					
							[6	3ytes]	:MAC	addres	ss	

(13).Read Flash write-in status(Not available now)

♣ This command is used to read status of flash write-in, which is used to judge whether the write-in is successful or not. The format as the following table:

Table3.1.13.1 Reading the format of Flash write-in



			•						1				
SYN	Check	Data	Source	Destina	Destination address		01	0D	Arg.	Flag	Arg.	Data	
Code	Sum	Len	Address	addre	SS	Serial	01	0D	Len	Tiug	rug.	Data	
i	ŀ		i	i		i	- 1	- 1	- 1	- 1	- 1	i	
Α	В	С	D	Е		F	G	Н	- 1	J	K	L	
Item		Name	!	Offset		Size			Desc	riptio	n		
Α	S	YN Cod	de	0	2	Bytes							
В	CI	neck Su	ım	2	2	Bytes							
С		Data Le	n	4	2	Bytes	Pleas	e refer	to Ta	ble 1.	2 for d	efinition	
D	Sou	rce Add	Iress	6	2	Bytes	in det	in details					
E	Destin	ation a	ddress	8	2	Bytes							
F	Pac	cket Se	erial	10	2 Bytes								
G	M	ain CN	1D	12	1	Byte	Data	read-ba	ack. Va	alue=0)x01		
		b. ON	<u> </u>	40		1D. 4-	Read	Flas	h wr	ite-in	statu	s, the	
Н	5	ub CM	טו	13		1Byte	value	=0x0D					
ı	A	rg. Le	n	14	1	Byte	No pa	aramete	er need	ded			
		Elec		15	4	Duto	In rea	ading da	ata coi	mman	ds, this	Flag is	
J		Flag		15		Byte	invali	d					
K		Arg.		16	C) Byte	No pa	aramete	er				
L		Data		16	C) Byte	No Da	ata					

If the operation is successful, the data will be echoed. And its format is as the following Table3.1.13.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

Table 3.1.13.2 Echoed format of Reading Flash write-in status command

Tables. 1: 10.2 Echoca format of recading Flash write-in status command											
	SYN Check Data Source										
SYN	Che	ck Data	Source	Destination	Packet	01	0D	Arg.	Flag	Arg.	Data
Code	Sun	n Len	Address	address	Serial	01	OD	Len	i iag	Λιg.	Data
-	- 1	1	ļ	-	-	ŀ	1	i	- 1		-
Α	В	B C D		Е	F	G	Н	- 1	J	K	L
Item		Name		Offset	Si	ze		D	escrip	otion	
Α		SYN Code		0	2 By	/tes					
В		Che	ck Sum	2	2 By	/tes					
С		Da	ta Len	4	2 By	/tes					
D		Sourc	e Address	6	2 By	ytes	Plea	se ref	er to	Table	1.3 for
Е		Destinat	ion address	8	2 By	2 Bytes		ition ir	n detai	ls	
F		Pack	et Serial	10	2 By	2 Bytes					
G		Mai	n CMD	12	1 B	yte					
Н		Sul	CMD	13	1 B	yte					
I		Ar	g. Len	14	1 B	yte	0 By	tes pa	ramete	er, fill ir	n as 0



J	Flag	15	1 Byte	The value is 0. It means the echoed data.
K	Arg.	16	0 Byte	No parameter
L	Data	16	4 Bytes	[1 Byte]: 0=successful write-in; otherwise, failure [3 Bytes]:Reserved

(14).Read cabinet working status(0x010E)

♣ This command is used to read the cabinet working status and check the working status of the LED sign. The operation of Black screen is needed before this command, otherwise, the status read-back is not accurate. The format as the following table:

Table 3.1.14.1 Format of reading cabinet working status

		Tal	7ICO. 1.	14.1 FOII	nat 0	readin	Gabine	St WOIKI	ng sta	lus					
SYN Code	Check Sum	Data Len	Source			Packet Serial	01	0E	Arg.	Flag	Arg.	Data			
	-	-	1			-		<u> </u>	<u> </u>	<u> </u>	-				
Α	В	С	D	E		F	G	Н	- 1	J	K	L			
Item	1	Name		Offset	9	Size	Description								
Α	SY	'N Code	е	0	2	Bytes									
В	Ch	eck Sur	m	2	2	Bytes									
С	D	ata Len		4	2	Bytes	Dloos	n rofor t	o Tabl	0 1 2 f	or dofin	nition in			
D	Sour	ce Addr	ess	6	2	Bytes	Please refer to Table 1.2 for definition in details								
Е		stinatio ddress	n	8	2 Bytes		uctans	•							
F	Pacl	ket Se	rial	10	2	Bytes									
G	Ма	in CM	D	12	1	Byte	Data r	ead-ba	ck, the	value	e =0x01				
Н	Su	ıb CMI)	13	1	Byte	Read cabinet working status, value=0x0E								
I	A	rg. Ler	1	14	1	Byte	No pa	ramete	r						
J		Flag		15	1	Byte	In reading data commands, this Flag					Flag is			
K		Arg.		16	16 0		invalid No parameter								
L		Data		16		Byte	No da								

If the operation is successful, the data will be echoed. And its format is as the following Table3.1.14.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

Table3.1.14.2 Echoed Format of reading cabinet working status command



SYN	Check	Data	Source	Destinatio	n Packet	01	0E	Arg.	Flag	Arg.	Data	
Code	Sum	Len	Address	address	Serial	01		Len	riug	/ li g.	Data	
				- 1								
Α	В			Е	F	G	Н	- 1	J	K	L	
Item		Name		Offset	Size			Des	scripti	on		
Α		SYN Code		0	2 Bytes							
В	(Check Sum		2	2 Bytes							
С		Data Len		4	2 Bytes							
D	Sc	Source Address		6	2 Bytes	P	lease	refer	to T	able	1.3 for	
E	Dest	tination	address	8	2 Bytes	d	definition in details					
F	Pa	acket S	Serial	10	2 Bytes							
G	ı	Main C	MD	12	1 Byte							
Н		Sub C	MD	13	1 Byte							
I		Arg. L	.en	14	1 Byte	Ν	o para	meter,	fill in a	as 0		
		Eloc	,	15	1 Duto	Т	he va	lue is	0. I	t mea	ns the	
J		Flag		15	1 Byte	е	echoed data.					
K		Arg		16	0 Byte	Ν	o para	meter				
		Det		16	400 Duda		heck o	data, p	lease	refer	to Can	
L		Data	a	16	400 Bytes	S C	ommur	ication	file			

NOTE: This command is used only under special circumstances where the control board QS5006 is installed.

(15). Check the CPU update status (0x010F)

♣ This command is for checking whether the CPU updating is successful, if it is successful, the status code is 0x9000, if not, the status code is 0x1F01. The format as the following table:

Table3.1.15.1 Format for checking whether CPU updating is successful

						1			•		
SYN	Check	Data	Source	Destinati	on Packet	01	0F	Arg.	Elec	Ana	Data
Code	Sum	Len	Address	address	Serial	01	UF	Len	Flag	Arg.	Data
			-	1							-
Α	В	С	D	Е	F	G	Н	- 1	J	K	L
Item		Name	!	Offset	Size			Desci	riptior	1	
Α	S	YN Coc	de	0	2 Bytes						
В	C	heck Su	ım	2	2 Bytes						
С		Data Lei	n	4	2 Bytes	Please refer to Table 1.2 for defi			for defir	nition in	
D	Sou	rce Add	ress	6	2 Bytes	details	3				
Е	Destin	ation a	ddress	8	2 Bytes						
F	Pad	cket Se	erial	10	2 Bytes						



G	Main CMD	12	1 Byte	Data read-back, the value =0x01
Н	Sub CMD	13	1 Byte	Checking CPU updating status, the value =0x0F
1	Arg. Len	14	1 Byte	No parameter
J	Flag	15	1 Byte	In reading data commands, this Flag is invalid
K	Arg.	16	0 Byte	No parameter
L	Data	16	0 Byte	No data

♣ If the CPU updating is successful, the status code is 0x9000. If not, the status code is 0x1F01. If the update operation is not carried out, the status code is 0x1F03, if the updating is undergoing, the status code is 0x1F02.

(16). Read the Default Display Style (0x0110)

This command is used to read the system default style, which is for controlling display mode, color and so on (if there is no display mode control in the display file, the default style works. The format as the following table:

Destination **SYN** Check Data Source Packet Arg. 01 10 Flag Data Arg. Sum Address Code Len address Serial Len Ŧ I l Ĭ ı ı ı ŧ ı ı A В С D Ē F G н K Ī J L **Item** Name Offset Size **Description** SYN Code 0 Α 2 Bytes В Check Sum 2 2 Bytes С Data Len 4 2 Bytes Please refer to Table 1.2 for definition Source Address D 6 2 Bytes in details Destination address Ε 8 2 Bytes F **Packet Serial** 10 2 Bytes G Main CMD 12 Data read-back, the value =0x01 1 Byte Sub CMD Н 13 1Byte Read default style, the value=0x10 14 ı Arg. Len 1 Byte No parameter needed. In reading data commands, this Flag is J Flag 15 1 Byte invalid Κ 16 0 Byte No parameter. Arg. 16 No data. Data 0 Byte

Table3.1.16.1 Reading System Default style

If the operation is successful, the data will be echoed. And its format is as the following Table3.1.16.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

Table 3.1.16.2 Echoed Format of reading System Default Configuration command



SYN	Check	Data	Source	Destination	n F	Packet		0.4	40	Arg.		Δ	Data
Code	Sum	Len	Address	address	;	Serial	(01	10	Len	Flag	Arg.	Data
	- 1			1		1		1			-	-	
Α	В	С	D	Е		F		G	Н	- 1	J	K	L
Item		Nam	ne	Offset		Size				De	scripti	on	
Α		SYN C	ode	0	2	Bytes							
В	(Check S	Sum	2	2	Bytes							
С		Data L	_en	4	2	Bytes							
D	So	ource Ad	ddress	6	2	Bytes		Ple	ease	refer	to T	able	1.3 for
Е	Dest	ination	address	8	2	Bytes		def	finitior	n in de	tails		
F	Pa	acket S	Serial	10	2	Bytes							
G	ľ	Main C	CMD	12	1	Byte							
Н	,	Sub C	MD	13	1	Byte							
I		Arg. L	.en	14	1	Byte		No	parar	neter.			
J		Flag	,	15	1	Byte		Th	e val	ue is	0. I	t mea	ns the
J		ιιας	9	13		Бую		ecl	noed (data.			
K		Arg	-	16	0	Bytes		No	parar	neter			
L		Data	a	16	16	i Bytes		Not ava Ver	UWO UBYT UBYT UBYT UBYT UBYT UBYT UBYT UBYT	TE Time TE Ddri TE Dbac TE Dfor TE Dho TE Dlin TE Dfor TE Din TE Dsta TE Dsta TE Dwr T_SET T_SET T_SET T yListLo or up.	ListLoc; Pre0En; ve; ck_color nt_color; r_just; r_just; e_space; nt; mode; t_mode; y_time; ap; cc & T th firmv Control	;//pre 0 ///default ;; TimePre vare of '	drive OEn are Ver8736, QS0925



(17).Read a File on Designated Path--Extension(0x0111)

→ This command is used to read a known file on a known path. It is an extension of the command 0x0108. it can read the file which is larger than 64MB. The format as the following table:

Table3.1.17.1 Format of Reading the Designated File on a Designated Path (Extension)

	Check Data Source Destination Pa							3 1 110 011	u Doc	ngriati	Ja 1 at	T (Exto	1101011)		
SYN	Check	Data	Sou	ırce	Destinatio		Packe	et 04	44	Arg.	Ela a	Δ	Dete		
Code	Sum	Len	Addı	ress	address		Seria	01	11	Len	Flag	Arg.	Data		
			-			1	- 1		$\overline{}$	1	- 1	-			
Α	В	С	С)		Е	F	G	Н	- 1	J	K	L		
Item	N	lame		Off	Offset Siz		:e			Desci	ription	1			
Α	SY	N Code	;	(tes								
В	Che	eck Sun	n	:	2		tes								
С	Da	ata Len			4	2 By	tes	Disease		- T-61	- 406	C.	. 141 1		
D	Sourc	e Addre	ess	(6	2 By	tes	Please details	reter t	o iabi	e 1.21	or detir	nition in		
Е	De	stinatior	า		8	2 By	rtos	uetalis							
	a	ddress		,	<u> </u>	Z Dy	ics								
F	Pack	ket Ser	ial	1	0	2 By	tes								
G	Ма	in CMI)	1	2	1 Byte		Data re	ad-ba	ck, the	value	=0x01			
Н	Su	b CME)	1	3	1 Byte		Read value=0		signat	ed la	rge fil	e, the		
1	Ar	g. Len		1	4	1 By	yte	Arg. Len = ([Arg.]+3)/4							
J		Flag		1	5	1 B	yte	In reading data commands, this Flag							
К		Arg.		1	6	N By	rtes	[2 Byt [2 Byt [4 By readin [Path & E.g.: "I Note: I name charact	es]: R tes]: g (Coo File D:\T\W ath e with	eserve Packe unted e]: Pa /ELCC nds w upper	ed. It seria Ifrom 1 Ith an OME.N Iith NU	al num) d file MG" LL(0),	and file		
L		Data		1	6	0 By	yte	No data	1						

If the operation is successful, the data will be echoed. And its format is as the following Table3.1.17.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

Please refer to Table 1.3 for

To read data contents.



С

D

L

Ε

address

Data Len

Source Address

Data

SYN Check Data Source Destination **Packet** Arg. 01 11 Flag Data Arg. Code Sum Address address Serial Len Len Ĭ ı В С D Ē F G Н J K Α L **Item Name** Offset **Size Description** Α SYN Code 0 2 Bytes Check Sum 2 В 2 Bytes

2 Bytes

2 Bytes

4

6

Table3.1.17.2 Echoed format of Reading a File on a Designated Path command

Е **Destination address** 8 2 Bytes definition in details F 10 **Packet Serial** 2 Bytes G Main CMD 12 1 Byte Н Sub CMD 13 1 Byte Parameter of 8 Bytes required. Fill I 14 Arg. Len 1 Byte in as 2 The value is 0. It means the J Flag 15 1 Byte echoed data. [4 Bytes]:Packet serial number K 4*2 Bytes Arg. 16 [4 Bytes]:File size

Read size

This command is not valid on control board QS0925. Note:

24

(18).Read System Information(0x0112)

This command is used to read system information. Details of the information are decided by Firmware. The format as following:

Table3.1.18.1 Format of Reading System Information SYN Check Data Source Destination **Packet** Arg. 01 12 Flag Data Arg. Code Sum Address address Serial Len Len ı ı Ĭ Ĭ Ē Α В С D G Н K Item Offset Size **Description** Name Α SYN Code 0 2 Bytes В Check Sum 2 2 Bytes С 4 Please refer to Table 1.2 for definition in Data Len 2 Bytes D Source Address 6 details 2 Bytes Destination

2 Bytes

8



F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	Data read-back, the value =0x01
Н	Sub CMD	13	1Byte	Read system parameters, the value= 0x12.
1	Arg. Len	14	1 Byte	No parameter
J	Flag	15	1 Byte	In reading data commands, this Flag is invalid.
K	Arg.	16	0 Byte	No parameter
L	Data	16	0 Byte	No data

If the operation is successful, the data will be echoed. And its format is as the following Table3.1.18.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

Table3.1.18.2 Echoed Format of System Information Reading Command

				T Offilat of	- ,				,				
SYN	Check	Data	Source	Destination	n Packet	01	12	Arg.	Elog	Ara	Data		
Code	Sum	Len	Address	address	Serial	UI	12	Len	Flag	Arg.	Dala		
- 1				- 1	- 1								
Α	В	С	D	Е	F	G	Н	- 1	J	K	L		
Item		Name		Offset	Size		Description						
Α		SYN Code		0	2 Bytes								
В		Check Sum		2	2 Bytes								
С		Data L	.en	4	2 Bytes								
D	Sc	ource A	ddress	6	2 Bytes	PI	Please refer to Table 1.3				1.3 for		
Е	Dest	tination	address	8	2 Bytes	de	definition in details						
F	Pa	acket S	Serial	10	2 Bytes								
G	ı	Main C	MD	12	1 Byte								
Н		Sub C	MD	13	1 Byte								
I		Arg. L	.en	14	1 Byte	No	parar	neter,	the va	lue=0			
J		Elac	,	15	1 Dyto	The value is 0. It me			t mea	ns the			
J		Flag	9	15	1 Byte	ec	hoed o	data.					
K		Arg		16	0 Byte	No	o parar	neter					
L		Data	3	16	N Bytos	Sy	/stem	inform	nation	data a	all is in		
L		Dali	a	10	N Bytes	th	e form	of cha	aracter	string.			

(19).Read Error Log(0x0113)

♣ This command is used to read the log data of system errors. The contents of the data are dependent on the FIRMWARE. The format as the following table:

Table3.1.19.1 Format of Reading System Errors



SYN Code	Check Sum	Data Len	Source			Packet Serial	01	13	Arg.	Flag	Arg.	Data
	-	1	1			1	:	1	1	;	:	:
Α	В	С	D	E		F	G	Н	÷	J	K	Ĺ
Item		Name		Offset	S	ize			Desc	riptio	n	
Α	S	/N Cod	е	0	2 B	ytes						
В	Ch	eck Su	m	2	2 B	ytes						
С	D	ata Len		4	2 B	ytes	Please	e refer	to Ta	ble 1.2	2 for de	efinition
D	Sour	ce Addr	ess	6	2 B	ytes	in details					
E	Destina	ation ad	dress	8	2 B	ytes						
F	Pac	ket Se	rial	10	2 B	ytes						
G	Ma	ain CM	D	12	1 E	Byte	Data r	ead-ba	ack, th	e valu	e =0x0	1
Н	Sı	ıb CMI	D	13	1E	Byte	Read t			of syst	em err	ors, the
I	А	rg. Ler	1	14	1 E	Byte	No par	ramete	er			
J		Flag		15	15 1 E		In read	•	ata co	mman	ds, this	Flag is
K		Arg.		16	16 0 E		No parameter.					
L		Data	_	16	0 E	Byte	No dat	No data				

If the operation is successful, the data will be echoed. And its format is as the following Table3.1.19.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

Table3.1.19.2 Echoed Format of System Error Log Information command

					T Gyotom E						
SYN Code	Check Sum	Data Len	Source Address	Destination address		01	13	Arg.	Flag	Arg.	Data
			!	!	!	1	<u> </u>	!	<u> </u>	!	•
Α	В	С	D	Ė	F	G	Н	i	J	K	Ė
Item		Nan	ne	Offset	Size			Des	scripti	on	
Α		SYN C	ode	0	2 Bytes						
В		Check	Sum	2	2 Bytes						
С		Data I	_en	4	2 Bytes						
D	S	ource A	ddress	6	2 Bytes	F	Please refer to Table 1			1.3 for	
Е	Des	tination	address	8	2 Bytes	d	definition in details.				
F	Р	acket	Serial	10	2 Bytes						
G		Main C	CMD	12	1 Byte						
Н		Sub C	MD	13	1 Byte						
I		Arg. L	₋en	14	1 Byte	١	lo parar	neter			
J		Fla	g	15	1 Byte	Т	he val	ue is	0. I	t mea	ns the



K Arg. 16 0 Byte No parameter Echoed data structure forma	
Echoed data structure forma	
[2 Bytes]: ID	(bit) it) n year errors

Note: This command is not valid on control board QS0925.

(20). Read the current temperature of the cabinet (0x0114)

This command is used to read the data of the current temperature of the cabinet. Only QS5003 can support this function at present. The format as the following table:

Table3.1.20.1 the format of reading the current temperature of the cabinet

										•					
SYN Code	Check Sum	Data Len	Sou					acket erial	01	14	Arg. Len	Flag	Arg.	Data	
						1								<u> </u>	
Α	В	С)		Е		F	G	Н	- 1	J	K	L	
Item	N	lame		Offs	et	Size		Description							
Α	SY	N Code	!	0		2 Byte	s								
В	Che	eck Sun	1	2		2 Bytes									
С	Da	ata Len		4		2 Bytes		Dloo	sa rat	for to	Table	1 2 fc	or dofin	nition in	
D	Sourc	e Addre	ess	6		2 Byte	s	deta		iei io	Iable	1.2 10	n deili	IIIIOII III	
Е	Des	stinatior	1	8	•	2 Byte		u c la	IIO						
	a	ddress		0	8 Z Byle		3								
F	Pack	ket Ser	ial	10	10 2 B		s								
G	Ма	in CMI)	12		1 Byte	•	Data	read-	-back,	the va	lue =0)x01		



Н	Sub CMD	13	1 Byte	Read the temperature of the cabinet, value = 0x14
I	Arg. Length	14	1 Byte	Parameter of 8 Bytes required. Fill in as 2
J	Flag	15	1 Byte	In reading data commands, this Flag is invalid.
К	Arg.	16	8 Byte	[2 Bytes]:the beginning cabinet number(logic, Counted from 0) [2 Bytes]:reading the QTY of cabinet [4 Bytes]: Reserved.
L	Data	24	0 Byte	No data

♣ If the operation is successful, the data will be echoed. And its format is as the following Table3.1.20.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

Table3.1.20.2 Echoed format of Reading temperature of the cabinet on a Designated Path command

SYN	Check	Data	Source	Destination	on	Packet	0	1	14	Arg.	Flag	Arg.	Data	
Code	Sum	Len	Address	address	3	Serial		'	14	Len	i iag	Aig.	Dala	
													<u> </u>	
Α	В	С	D	Е		F	(G	Н	- 1	J	K	L	
Item		Nan	ne	Offset		Size				Des	scripti	on		
Α		SYN C	ode	0	2	2 Bytes								
В		Check Sum		2	2	2 Bytes								
С		Data Len		4	2	2 Bytes								
D	S	Source Address		6	2	2 Bytes		Please refer to Table 1.3						
Е	Des	Destination address		8	2	2 Bytes		def	inition	in det	tails			
F	Р	Packet Serial		10	2	2 Bytes								
G		Main CMD		12		1 Byte								
Н		Sub C	MD	13		1 Byte								
I	,	Arg. Le	ength	14		1 Byte		Parameter of 8 Bytes required in as 2				red. Fill		
J		Fla	g	15		1 Byte			vali		0. I	t mea	ns the	
К		Arg.		16		8 Byte		[2 E [2B cab in t	Bytes]: ytes]: inets he pad	curren which	QTY of it qua n have	•	ets of the erature	
L		Data		24	1	N Bytes			•	•			binet, if binet is	



		· · · · · · · · · · · · · · · · · · ·
		above zero, the value is less than
		128. If the value is more than 127,
		it means that the temperature is
		below zero, the current value is
		-128, the unit is centigrade.
		For example:
		0x1E means 30°C
		0x86 means -6℃

(21).Read the playing log(0x0115)

♣ This command is used to read the playing log of the system. The format as the following table:

Table3.1.21.1 Format of Reading the playing log

			lable	3.1.2	1.1 F	ormat	of Rea	ding the	playir	ng log					
SYN Code	Check Sum	Data Len	Sou Addr			nation	Packe Serial	01	15	Arg.	Flag	Arg.	Data		
!	!	!	Auui !	C33	auu	!	!		<u>.</u>	Len !	•				
A	B	C	: D	`	E E		F	G G	H	·	J	K	L		
A	Ь	C	L	,		_	Г	G	П		J	K	L		
Item	N	ame		Offset		Si	ze			Desc	riptior	<u> </u>			
Α		N Code		0		2 By						-			
В	Che	ck Sum		2		2 B									
С	Da	ta Len			4	2 By		Please refer to Table 1.2 for definition in							
D	Source	e Addre	ss	6		2 By		details							
Е	Destinati	ion add	ress		8	2 By	/tes								
F	Packe	et Seri	al	10		2 By	/tes								
G	Mair	n CMD)	12		1 B	yte	Data read-back, the value =0x01							
Н	Sub	CMD		1	13	1B;	yte	Read a	playir	ng log,	the va	alue=0	k 15		
I	Arg.	Length	ı	14 1			yte	Parameter of 4 Bytes required. Fill 1							
J	Flag		Flag		Flag		Flag 15		1 B	yte	In reading data commands, this F invalid				Flag is
К	Þ	∖rg.		1	16	4*1 E	Bytes	1=SE	tes]:typ ELECT tes]:res	state	ment	ınd			
L	С	Data 20		20	0 B	yte	stateme sele obtain t	oles: the qual ents ct count the des	antity t(*) fron signat	of the n table; ed rec	record	ed SQL			



		obtain the records with designated conditions
		select * from table where xxx=yyy

- ♣ If the operation is successful, the data will be echoed. And its format is as the following Table3.1.21.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

					nat of reac				•					
SYN	Check	Data	Source	Destination	on Packet	01	15	Arg.	Floor	Ara	Doto			
Code	Sum	Len	Address	address	Serial	UI	15	Len	Flag	Arg.	Data			
			- 1		1						<u> </u>			
Α	В	С	D	Е	F	G	Н	- 1	J	K	L			
Item		Nan	ne	Offset	Size			Des	scripti	on				
Α		SYN C	Code	0	2 Bytes									
В		Check Sum		2	2 Bytes									
С		Data I	Len	4	2 Bytes				40 T	، ماماد	10 for			
D	So	ource A	ddress	6	2 Bytes					able	1.3 for			
Е	Des	tination	address	8	2 Bytes	de	finition	ı ın ae	lalis.					
F	Р	acket	Serial	10	2 Bytes									
G		Main C	CMD	12	1 Byte									
Н		Sub C	MD	13	1 Byte									
							Parameter of N				Bytes			
I	A	Arg. Le	ength	14	1 Byte		required—calculate according to							
							the situation							
J		Fla	g	15	1 Byte				0. I	t mea	ns the			
					,		hoed o							
						[2	Byte	-		•	antity of			
		_								ent data	1			
K		Arg) .	16	4*N Bytes	_	Byte	-						
						[N	•	_		t name				
						_				oy "<>"				
					Confirm			-			ounded			
L	Data	L Data		according					are not					
	Data	to the			m	more than 1200.								
			situation											

(22). Read the information of brightness (0x0116)

This command is used to read the brightness information of the system. The format as the following table:

4

Table3.1.22.1 format of reading the brightness information



SYN	Check	Data	Sou	rce	ce Destination		Pack	cet			Arg.					
Code	Sum	Len	Addr			ress	Seri		01	16	Len	Flag	Arg.	Data		
	<u> </u>	1	<u> </u>				-		-		<u> </u>	· i	-	<u> </u>		
Α	В	С	D			E	F		G	Н	- 1	J	K	L		
Item	N	ame		Of	fset	Size		Description								
Α	SYI	N Code			0	2 By	tes									
В	Che	ck Sum	1		2	2 By	tes	Dia	r	ofor to	Toble	. 1 2 f	or dofir	nition in		
С	Da	ta Len			4	2 By	tes		tails.	eiei ii	labie	3 1.2 1	or delli	IIIIOII III		
D	Source	e Addre	ess		6	2 By	tes	uei	lalis.							
E	Destinat	ion add	ress		8	2 By	tes									
F	Pack	et Seri	al		10 2 B											
G	Mai	n CME)		12	1 By	/te	Da	ta rea	ıd-bac	k, the	value	=0x01			
Н	Sub	o CMD)		13	1By	rte	Read the brightness infor			ormatio	on, the				
						,				0x16						
I	Arg.	Lengt	h		14	1 By	/te	Pa 1	ramet	er of 4	1 Bytes	s requi	red. Fi	ll in as		
J	F	Flag		15		1 By	/te		readir alid	ng dat	a com	nmand	s, this	Flag is		
К		۸ra	_		16	4*	1	[4	Bytes:	:reser	ved					
r\	,	Arg.			10	Byte	es									
L		Data		2	20	0 By	/te									

♣ If the operation is successful, the data will be echoed. And its format is as the following Table3.1.22.2. If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.

+

Table3.1.22.2 Echoed format of Reading the brightness information

						,		<u>J</u>				
SYN Code	Check Sum	Data Len	Source Address	Destination address	Packet Serial	01	1	16	Arg. Len	Flag	Arg.	Data
	-			i		-		1	<u> </u>	-	<u> </u>	
Α	В	С	D	Е	F	G	3	Н	1	J	K	L
Item		Nan	ne	Offset	Size				Des	cript	ion	
Α		SYN C	ode	0	2 Bytes							
В		Check	Sum	2	2 Bytes							
С		Data I	_en	4	2 Bytes		DI -			4	Falal a	40 fa
D	So	ource A	ddress	6	2 Bytes		_		refer		Гablе	1.3 for
E	Des	tination	address	8	2 Bytes	7	uen	HILIOI	in det	aiis.		
F	Р	acket	Serial	10	2 Bytes							
G		Main C	CMD	12	1 Byte							
Н		Sub CMD		13	1 Byte							



1	Arg. Length	14	1 Byte	No parameter, the value=0
J	Flag	15	1 Byte	The value is 0. It means the echoed data.
K	Arg.	16	0 Bytes	
L	Data		Confirm according to the situation	[1 Bytes]:current brightness type 0=auto,1= manual,2=dispatching [1 Bytes]: brightness percentage Effective value[1-100], 100 means the brightest [2 Bytes]:current AD value it is effective when the type is automatic [4 Bytes]:reserved

(23). Report the status information of the system (0x0117)

♣ This command is used to echo the status information of the system by SMS. The format as the following table:

4

Table3.1.23.1 format of echoing the status information of the system\

				ce Destina								·		
SYN	Check	Data	Sour	се			Pack	et	01	17	Arg.	Flag	Arg.	Data
Code	Sum	Len	Addre	ess	add	ress	Seria	al	01	17	Len	Flay	Aig.	Dala
			- 1			1			1					
Α	В	С	D			E	F		G	Н	1	J	K	L
					Officer									
Item	N	ame		Off	iset	Siz	:e				Descr	iption		
Α	SYI	N Code		(0	2 By	tes							
В	Che	ck Sum	l	:	2	2 By	tes	Please refer to Table 1.2 for o						oition in
С	Da	ta Len		4	4		rtes	deta		elel (C	labit	5 I.Z I	or uem	IIIIOII III
D	Source	e Addre	ss		6		tes	uela	1115.					
E	Destinat	ion add	ress		8		tes							
F	Pack	et Seri	al	1	0	2 By	tes							
G	Mai	n CME)	1	2	1 By	yte	Data	a rea	d-bac	k, the	value	=0x01	
Н	Sub	CMD	ı	1	3	1Byte			_	the s 0x17	status	of the	e syste	em, the
I	Arg.	Lengt	h	1	4	1 By	yte	Parameter of 24 Bytes required. Fill in a						-ill in as
J	F	lag		15		1 By	yte	In reading data commands, this Flag is invalid						Flag is
К	ļ	Arg.		16		24 By	ytes		Ву]:rese tes]:		echoe	ed tel	ephone
L		Data		2	20	0 By	yte							



- If it fails, the status code would be echoed. The status code information in details can be found in the Appendix.
- if the operation is successful, the data will be echoed to the designated cellphone.

 The information is as follows:

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(24). Read back the multi-win parameters of 5800 (0x0118)

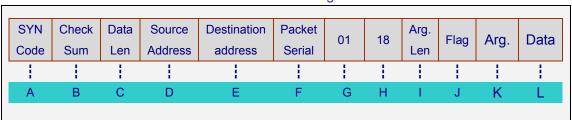
♣ This command is used to read back the parameters set up by 5800 windows. The format as the following table:

Table3.1.24.1 format of reading back the parameters set up by 5800 windows

				Destination		g Daoi					ар <i>Б</i> у			
SYN Code	Check Sum	Data Len	Sour Addre			Destination address		ket ial	01	18	Arg. Len	Flag	Arg.	Data
			- 1									- 1		
Α	В	С	D			Ε	F		G	Н	- 1	J	K	L
Item	N	ame		Of	ffset Siz		:e				Descr	iption		
Α	SYI	V Code			0 2 E		tes							
В	Che	ck Sum			2		tes	Please refer to Table 1.2 for definition i						
С	Da	ta Len				2 By	tes			eter to	lable	e 1.2 f	or aetir	nition in
D	Source	e Addre	SS		6	2 Bytes		ae	tails.					
E	Destinat	ion add	ress		8	2 By	tes							
F	Pack	et Seri	al	,	10	2 By	2 Bytes							
G	Mai	n CME)	,	12	1 By	/te	Da	ıta rea	d-bac	k, the	value	=0x01	
Н	Sub	cMD		,	13	1By	rte			back ms. Va	•		ers se	t up by
I	Arg.	Lengt	h	,	14	1 By	/te	pa	ramet	er is n	ot req	uired		
		-1						In	readir	ng dat	a con	nmand	s, this	Flag is
J	ŀ	-lag			15 1 By		/te	invalid						
K	,	Arg.		•	16 0 By		tes	No parameter						
L		Data		2	20 0 By		/te							

If it fails, the status code would be echoed. The status code information in details can be found in the Appendix. If the operation is successful, return to the 5800 multi-form structure. As the following table:

Table 3.1.24.2 echoed format of reading the window information





Item	Name	Offset	Size	Description
Α	SYN Code	0	2 Bytes	
В	Check Sum	2	2 Bytes	
С	Data Len	4	2 Bytes	Diagon refer to Table 1.2 for
D	Source Address	6	2 Bytes	Please refer to Table 1.3 for definition in details.
Е	Destination address	8	2 Bytes	definition in details.
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	
Н	Sub CMD	13	1 Byte	
1	Arg. Length	14	1 Byte	Parameter of 4 Bytes required. Fill in as 1
J	Flag	15	1 Byte	The value is 0. It means the echoed data.
К	Arg.	16	4*0 Bytes	[2 Bytes] WinNum,present the quantity of the form [2 Bytes] reserved
L	Data		Confirm according to the situation	one form is one structure, as follows, the specific quantity depends on the WinNum typedef struct { INT8U WinName[64];// end up with NULL INT32U WinID; INT32U Y; INT16U Z; INT16U Width; INT16U Height; INT8U Transparency; //0-100,0 means opacity, invalued INT8U PlayMode; //invalued INT8U WinMode;//0=RGB&YUV,1=RGB Only INT8U Rev[3]; }WinInfo;

2.Information Write-in(0x02)

- (1). Absolute address data write-in (0x0201)
- ♣ This command is used to write in special data. The format as the following table :

Table3.2.1 Command format of writing in absolute address



SYN	Check	Data	Source	e Destina	tion	Packet	00	0.4	Arg.	Fl	Δ	Dete	
Code	Sum	Len	Addres	s Addres	ss	Serial	02	01	Len	Flag	Arg.	Data	
- 1	ļ	- 1	1	- 1		- 1	i	- 1	- 1	1	1	-	
Α	В	С	D	Е		F	G	Н	- 1	J	K	L	
Item	l	Name		Offset	,	Size			Desc	riptio	n		
Α	S	YN Cod	е	0	2	Bytes							
В	Ch	eck Su	m	2	2	Bytes	Discourse for the Table 4.0 for the						
С	D	ata Ler	1	4	2 Bytes		Please refer to Table 1.2 for definition						
D	Sour	ce Addr	ress	6	2	Bytes	in deta	ails					
E	Destina	ation ad	Idress	8	2 Bytes								
F	Pac	ket Se	rial	10	2	Bytes							
G	Ma	ain CM	ID	12	1	Byte	Write i	in info	rmatio	n, the	value=	0x02	
Н	Sı	ıb CMI	D	13	1	Byte	Write in Absolute address inform the value=0x01				mation,		
I	А	rg. Ler	า	14	1	Byte				tes is	neede	d, fill in	
J		Flag		15	1	Byte	Echo l	Flag,	1= In-	echo;	0=Ec	ho	
K		۸ra		16		4*1	[4 Byte	es]: V	Vrite in	addre	ess		
,		Arg.		10	В	sytes							
L		Data		20		Data Size	more	than 1 sted t	024 b	ytes a e con	t on tir	ritten in ne. It is ould be	

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(2). System File Write-in(0x0202)

This command is used to write in system files. The format as the following table:

Table3.2.2 Command format of system file write-in

	_													
SYN	Check	Data	Sour	ce			Pack	et	02	02	Arg.	Flag	Arg.	Data
Code	Sum	Len	Addre	ess	Address		Seria	al	02	02	Len	i iag	Λιy.	Data
- 1	1	i	i				i		i	i	i	i	i	
Α	В	С	D		E		F		G	Н	- 1	J	K	L
Item	N	ame		Offs	set	Siz	e			I	Descr	iption		
Α	SYI	V Code		0)	2 By	tes	DIA		-f t-	Table	. 4 0 £	au da£iu	.:4: : -
В	Che	ck Sum		2	2 2 Byt		tes	det		eier to	iable	1.210	or defir	nition in
С	Da	ta Len		4 2 B		2 By	tes	uei	alis					



D	Source Address	6	2 Bytes	
E	Destination address	8	2 Bytes	
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	Write in information, the value=0x02
Н	Sub CMD	13	1Byte	Write in system file, the value =0x02
I	Arg. Len	14	1 Byte	Parameter of 24 Bytes is needed, fill in as 6
J	Flag	15	1 Byte	Echo Flag, 1= In-echo; 0=Echo
K	Arg.	16	4*6 Bytes	[12 Bytes]:string, name of system file The name of configuration file is fixed as: CONFIG.SYS The name of list file is fixed as: SEQUENT.SYS The name of Time allocation able is fixed as: RUNTIME.SYS The name of CPU program file is fixed as: PROGRAM.CPU The name of Color Palette file is fixed as: COLORTY.BIN Note: Fill in as 0 if there are not 12 bytes [4 Bytes]: the total size of the file [2 Bytes]:the size of packet (should be the same to all the packet) [2 Bytes]:quantity of packet [2 Bytes]: the current packet. The value of the first packet is 0x01; the value of the second packet is 0x02; the value of the third packet is 0x03, and so on. Packets should be sent in the order of packet serial number. [2 Bytes]:Note The data of system file
L	Data	40	Size	The data of system file

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table1.3</u> for the format of echoed data.

(3). Font Library File Write-in(0x0203)

This command is to used write in font library. The format as the following table Table3.2.3 Command format of writing in font library file



SYN	Check	Data	Sourc	e Destina	ition	Packet	02	03	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Addre	ss Addre	ss	Serial -			Len			-		
<u>:</u>	i	<u> </u>		i				i	<u> </u>			<u>:</u>		
Α	В	С	D	Е		F	G	Н	I	J	K	L		
_	_													
Item		Name		Offset		ze			Desc	criptio	n			
Α		/N Code		0	· '	ytes								
В		eck Sur		2	· ·	ytes		_						
С		ata Len		4	· ·	ytes			r to Ta	able 1.	2 for de	efinition		
D		ce Addr		6	· ·	ytes	in det	ails						
E		ation ad		8	·	ytes								
F	Pac	ket Se	rial	10	2 B	ytes								
G	Ма	ain CM	D	12	1 B	Syte	Write	=0x02						
Н	ā	ıb CMI	<u> </u>	13	10	yte	Write in font library file,							
11	31	ID CIVIL		13	ID	yıe	value=0x03							
	Δ	rg. Ler	,	14	1 🛭	syte	Parameter of 24 Bytes is needed, t							
		ig. Lei	!	14	1 L	yıc	in as 6							
J		Flag		15	1 B	yte	Echo	Flag,	1= In	-echo;	0=Ec	ho		
К		Flag 15 Arg. 16				Bytes	The n FONT library [4 Byt [2 Byt shoul [2 Byt valu valu the 0x0 ser	rLIST. y are destess]:To tess]:sized be in tess]:que ytes]: ue of t value 03, and	of the LST. lecided tall size of parties of the second tall so or	font list The in Ind by Fore The of the The acket of The acket of The acket	ONTLIS e file (All the ize) cket packe et is 0 acket i ird pa	ed as: of font ST.LST. packet et. The k01; the s 0x02; cket is ould be t serial		
ı		Data		40	Data	Size		es]:No		v file				
_		Data		70	Data	0120	Data		ibiai	y IIIC				

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(4). Text File Write-in (0x0204)

♣ This command is used to write Text File into T catalogue under the designated partition. The format as the following table:

Table3.2.4 Text File Command format of writing in Text File



SYN	Check	Data	Sourc			Packet	02	04	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Addres	ss Addre	SS	Serial			Len		, g.			
	i	- 1	i	į į		-	i	- 1	i	i				
Α	В	С	D	Е		F	G	Н	I	J	K	L		
					1									
Item		Name		Offset	5	Size			Desc	riptio	n			
Α	S'	YN Cod	е	0	2 E	3ytes								
В	Ch	eck Su	m	2	2 E	3ytes								
С	D	ata Len	1	4	2 E	3ytes	Please	e refe	r to Ta	ble 1.2	2 for de	efinition		
D	Sour	ce Addr	ess	6	2 F	3ytes	in deta	ails						
E	Destina	ation ad	ldress	8	2 F	3ytes								
F	Pac	ket Se	rial	10	2 F	3ytes								
G	Ma	ain CM	D	12	1	Byte	Write	in info	rmatio	n, the	value=	0x02		
Н	Sı	ıb CMI	D	13	1	1 Byte Write in Text File, the va						x04		
I	А	rg. Ler	ר	14	1	Byte	Param as 6		of 24 B	sytes is	neede	ed, fill in		
J		Flag		15	1	Byte	Echo Flag, 1=In-echo; 0=Echo							
К		Arg.		16		4*6 ytes	E) [1 By buzze its validing [12 By packe [2 By value value the value and so buzze its validing [2 By value value the value and so buzze its validing [2 By value value the validing [2 By value value the validing [2 By value value the validing [2 By value	/te]:the r, the ue=0x /tes]:To /tes]:sho es]:qu /tes]:tl of the of the lue of o on.	e ring maxir 00, the EXT For tal size ould be antity the cuer first expected the the Packet	ging to mum is a buzz of the sa of pacturrent packet and pactured the sa of the sa of pacturrent packet and pactured packet sa sho	er is classed and size the size that the siz	of the of the of the osed. All the ose. It. The oxo2, oxo3, sent in		
L		40	Data Data of Text File Size											

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(5). String File Write-in(0x0205)

This command is used to write the String File into S catalogue under the designated partition. The format as the following table:

Table3.2.5 Command format of writing in String File



		1					1	I						
SYN	Check	Data	Sourc			Packet	02	05	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Addres	SS Addres	SS	Serial			Len					
1	į	<u> </u>	!	i		i	- 1	İ	İ	-	i			
Α	В	С	D	Е		F	G	Н		J	K	L		
					<u> </u>									
Item		Name		Offset		Size			Desc	riptio	n			
A		YN Cod		0		Bytes								
В		neck Su		2		Bytes		_						
С		ata Ler		4		Bytes			r to Ta	ble 1.	2 for de	efinition		
D		ce Addr		6		Bytes	in det	ails						
E		ation ad		8		Bytes								
F	Pac	ket Se	rial	10	2	Bytes								
G	Ma	ain CM	12	1	Byte	Write in information, the value=0x								
Н	Sı	Sub CMD		13	1	Byte	Write in String File, the value=0x05							
ı	۸	ra Lor		14	1	Duto	Parameter of 24 Bytes is needed, fill in							
ı	4	Arg. Len		14	ı	Byte	as 6							
J		Flag		15	1	Byte	Echo Flag, 1=In-echo; 0=Echo							
К	Flag Arg.			16		4*6 sytes	E) [1 B [12 B) [4 B [2 E packet [2 B [2 E value value the value and s	ytes]: ytes]:Sytes]: Sytes]: sts sho ytes]: of the of the alue of	Reserving TRING Total si Size of the continuation of the continu	ved, fill G FILE ze of the satty of pacturrent packet and pactured the satty of packet and pactured the satty should be satty should be satty should be satty should be satty should be satty should be satty should be satty should be satty should be satty should be satty should be satty sa	ame sizeckets packet is 0x000 cket is cket is	All the ze.) et. The le; the 0x02; 0x03, sent in		
L	Data			40		Data size			ng File					

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table1.3</u> for the format of echoed data.

(6).Picture File Write-in(0x0206)

♣ This command is used to write in Picture File to P catalogue under the designated partition. The format as the following table:

Table3.2.6 Picture File command write-in format



							_	_						
SYN	Check	Data	Source			Packet	02	06	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Addres	s Addres	SS	Serial			Len			-		
i	į	i	i	i		!	- 1	i	i	i	- 1	i		
Α	В	С	D	Е		F	G	Н	l l	J	K	L		
•						. 1								
Item		Name		Offset		Size			Desc	riptio	n			
A		YN Cod		0		Bytes								
В		eck Su		2		Bytes								
С		ata Ler		4		Bytes			r to Ta	ible 1.	2 for d	efinition		
D		ce Addr		6		Bytes	in det	ails						
Е		ation ad		8		Bytes								
F	Pac	ket Se	rial	10	2	Bytes								
G	Ma	ain CM	D	12	1	Byte	Write in information, the value= 0x02							
Н	Sı	ıb CMI	D	13	1	Byte	Write in Picture File, the value= 0x06							
1	۸	ra Lor		1.1	1	Duto	Parameter of 24 Bytes is needed							
l	A	rg. Ler	l	14	I	Byte	in as 6							
J		Flag		15	1	Byte	Echo Flag, 1=In-echo; 0=Echo [1 Byte]:Code of disk partition (D,							
К		Arg.		16		4*6 Sytes	E) [1 B [12 B [4 B [2 E packet [2 B [2 E value value The v and s	ytes]:Fytes]:Fytes]:Pytes]:Pytes]:Ostable Sytes]:Ostable Of the alue on	Reserver PICTUR Total si Size con ould be Quantiff The control of the the Packer Reserver Packer Reserver Reser	red, find RE FILE ize of for pace the saturent packed and pace the saturent packed and pace the saturent packed and pace the saturent packed and pace the saturent packed and pace the saturent packed and pace the saturent packed and pace the saturent pace the satur	II in as E LAB iile kets (ame siz ackets packet is 0x acket is cket is	O EL All the ze.) et. The color. The soxo2. 0x03, sent in		
L	Data			40	Da siz		the order of packet serial number. Data of Picture File							

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table1.3</u> for the format of echoed data.

(7). Array Picture File Write-in(0x0207)

This command is to write in Array Picture File to A catalogue under the designated partition. The format as the following table:

Table 3.2.7 Command format of writing in Array Picture File



SYN	Check	Data	Source	e Destinat	tion	Packet	02	07	Arg.	Flag	Arg.	Data	
Code	Sum	Len	Addres	s Addres	ss	Serial		07	Len	1 lag	Aig.	Data	
<u> </u>	ŀ	- 1	- 1	- 1		- 1	- 1	i	ŀ	- 1	- 1	<u> </u>	
Α	В	С	D	Е		F	G	Н	I	J	K	L	
			1		I								
Item		Name		Offset		Size			Desc	riptio	n		
A		YN Cod		0		Bytes							
В		eck Su		2		Bytes							
C		ata Ler		4		Bytes			r to Ta	ible 1.	2 for de	efinition	
D		ce Addr		6		Bytes	in de	tails					
E		ation ad		8		Bytes							
F		ket Se		10		Bytes							
G	Ma	ain CM	D	12	1	Byte	Write	in info	rmatio	n, the	value=	0x02	
Н	Sı	ub CMI	D	13	1	Byte	Write in Array Picture File, the value 0x07						
ı	А	rg. Ler	1	14	1	Byte	Para as		of 24 B	ytes is	neede	ed, fill in	
J		Flag		15	1	Byte	Echo	Flag,	1=In-	echo;	0=Ech	10	
К		Flag 15				4*6 ytes	E [1 E [12 LABE [4 E [2 pack [2 E [2 val val Th 0xt ser	Bytes]:F Bytes]:T Bytes]:T Bytes]: ets sho Bytes]: ue of t ue of t e valu	Reserve ARRA Size of buld be Quanting The of the second discould be as of the second discount to the second discou	ze of to the saturent to pack the track.	Il in as CTURE he file kets (ame siz ackets packet et is 0x acket i	All the	
L	Data 40					Data size	Data	of Arra	ıy Pictı	ure File	е		

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table1.3</u> for the format of echoed data.

(8). Write a file to a designated path(0x0208)

♣ This command is used to write in a file to a designated path. The format as follows:



Table3.2.8 Command	format of writing	in a file to a	designated path

						1			ı				
SYN	Check	Data	Source	Destinati	on Packet	02	08	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Address	Address	s Serial	02	00	Len	i iag	Λig.	Dala		
- 1	i	- 1	i	1	i	- 1		- 1					
Α	В	С	D	Е	F	G	Н	1	J	K	L		
Item		Name	9	Offset	Size			Des	criptio	n			
Α		SYN Co	de	0	2 Bytes								
В	C	Check S	um	2	2 Bytes								
С		Data Le	en	4	2 Bytes	Pleas	se refe	er to Ta	able 1.	2 for de	efinition		
D	Sou	urce Ad	dress	6 2 Bytes			in details.						
Е	Desti	nation a	address	8	2 Bytes								
F	Pa	cket S	erial	10	2 Bytes								
G	N	lain Cl	MD	12	1 Byte	Write in information, the value=0:							
Н	5	Sub CN	ЛD	13	1Byte	Write	in file	, the	value=	=0x08			
I		Arg. Le	en	14	1 Byte	Arg.	Len =	(Leng	th of A	rg. field	1 + 3)/4		
J		Flag		15	1 Byte	Echo	Flag,	1=In	-echo;	0=Ec	ho		
K		Arg.		16	4*6 Bytes	[2 packet] [2 E value value 0x02 0x03 sent numb nai E.g.: Note NULI	Bytes]: ets she Bytes]: Bytes]: of the of, and in the oer. and me an "D:\ : the _(0).	Size ould be Quant of the calue of so on the File North The file file file for the file file file file file file file fil	of pa e the s tity of p current packe secon of the n. Pack er of Name] path of LCOM n. should nar	same so came s	All the ize.) set. The control of th		
L		Data		40	Data Size	Data							

[♣] If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.



(9). Emergency Information Write-in (0x0209)

This command is used to write in an emergency message. This message is a Text File. Emergency information means the message is displayed exigently in an active period. The format as follows:

Table 3.2.9 Command format of writing in emergency information

				illalia loi		77 7711(11	19 111 0111	orgon.	oy 11110			
SYN	Check	Data	Source	e Destin	ation	Packe	t 02	09	Arg.	Flag	Arg.	Data
Code	Sum	Len	Addres	s Addr	ess	Serial	02	09	Len	riay	Aig.	Dala
_ ;	i	ŀ	ł	i		ŀ	1	ł	- 1	- 1		- 1
Α	В	С	D	E		F	G	Н	- 1	J	K	L
Item		Name		Offset	Si	ze			Desc	riptior	1	
Α	S'	YN Cod	е	0	2 Bytes							
В	Ch	neck Su	m	2	2 Bytes							
С	С	Data Ler	1	4	2 B	ytes	Please refer to Tab			e 1.2 f	or defin	nition in
D	Sour	rce Add	ress	6	2 B	ytes	details.					
Е	Destin	ation ac	Idress	8	2 B	ytes						
F	Pac	ket Se	rial	10	2 B	ytes						
G	Ма	ain CM	D	12	1 B	Byte	Write in information, the value=0x02					
Н	Sı	ub CM	D	13	1B	yte	Write i		ergen	cy info	ormatio	n, the
I	А	rg. Le	า	14	1 B	Syte	Parame as 1	eter of	4 Byte	es is n	eeded,	fill in
J		Flag		15	1 B	Byte	Echo F	lag,1	l=In-e	cho; (=Echc)
К		Arg.		16		*1 tes	[2 Bytes]:living period is calculated by second. 0 means it displays forever. [1 Bytes]:on & off switch of sound, 1=On, 0 = Off [1 Bytes]:Reserved					rever.
L		Data		40		ata ze	Data o	of em	nergen	cy in	formati 24 Byte	on(Text

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(10).Brightness Control Block Write-in(0x020A)

The command is used to write in a brightness control block. The display without brightness is useless, E.g. Texcellent. The format as the following table:

Table3.2.10: Command format of writing in Brightness Control block



							1				
SYN	Check	Data	Source	Destination	Packet	02	0A	Arg.	Flag	Arg.	Data
Code	Sum	Len	Address	Address	Serial		0, 1	Len		, g.	
	ł	- 1	-		- 1	- 1	i	i	- 1	- 1	i i
Α	В	С	D	Е	F	G	Н	I	J	K	L
Item	Na	me	Offse	et Size			D	escrip	otion		
Α	SYN	Code	0	2 Bytes	;						
В	Chec	k Sum	2	2 Bytes	,						
С	Data	a Len	4	2 Bytes	Please refer to Table 1.2 for definition						
D	Source	Addres	s 6	2 Bytes	detai		ei io	iable	1.2 10	ı ueiii	illion in
Е	Desti	nation	8	2 Pytos		15					
E	add	ress	0	2 Bytes							
F	Packe	t Seria	l 10	2 Bytes	1						
G	Main	CMD	12	1 Byte	Write	in info	ormati	on, the	e value	=0x02	
Н	Sub	CMD	13	1 Byte	Write 0x0A	/rite in brightness information, th					value=
I	Arg.	Len	14	1 Byte	Para	meter	of 12	Bytes	is need	ded, fill	in as 3
J	FI	ag	15	1 Byte	Echo	Flag,	1=In	-echo;	0=Ec	cho	
					[2 By	rtes]:	X plac	е			
					[2 By	rtes]:	Y plac	e			
					[1 Byte]: Red						
K	Λ.	r. ca	16	4*3	[1 Byte]: Green						
^	A	rg.	16	Bytes	[1 By	rte]: I	Blue				
					[2 By	tes]:	Width				
					[2 By	tes]:	Heigh ¹	t			
					[1 By	tes]:	Reser	ved			
L	Da	ata	28	0 Byte	No d	ata					

- ♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.
- ▶ Note: This command is not valid on control boards QS5003 & QS0925.

(11). SN&MAC Write-in (0x020B)

This command is used to write SN, MAC into the system. The format as the following table:

Table3.2.11: Command format of writing in SN, MAC



SYN Code	Check Sum	Data Len	Sou		Destin Addr		Packe Serial	02	0B	Arg. Len	Flag	Arg.	Data	
1	- i	1	<u> </u>		- 1		- 1	1	<u> </u>	<u> </u>	1	-	<u> </u>	
Α	В	С		E			F	G	Н	Ī	J	K	L	
Item	N	lame		Of	Offset		ze			Desc	riptior	1		
Α	SY	N Code)		0		ytes							
В	Che	eck Sun	n		2	2 B	ytes	3						
С	Da	ata Len			4	2 B	ytes	Dloggo	rofor	to Tabl	o 1 2 f	or dofi	nition in	
D	Sourc	e Addre	ess		6	2 B	ytes	Please refer to Table 1.2 for definitio details.						
Е		stinatior ddress	1		8	2 Bytes		uctails.						
F	Pack	et Ser	ial		10	2 B	ytes							
G	Mai	in CMI)		12	1 E	Byte	Write in information, the value=0x02)x02	
Н	Su	b CME)		13	1B	yte	Write in	n SN,	MAC	the \	/alue=0	0x0b	
I	Ar	g. Len			14	1 E	Byte	No para	amete	r				
J		Flag			15	1 E	Byte	Echo F	lag, 1	1=In-e	cho; ()=Echc)	
K		Arg.			16	0 B	ytes	No para	amete	r				
L		Data			16	22 E	Bytes	[12 Byt [4 Byte [6 Byte	es] Re	serve				

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(12). Default Display Style Write-in (0x010C)

This command is used to write system default display style. This style is used for controlling display modes, colors and so on (If there is no display mode control available in the display files, the default mode will work). The format as the following table:

Table3.2.12.1 Writing of System Default Display Style

SYN	Check	Data	Sourc	e Des	tination	Packet	02	0C	Arg.	Flag	Arg.	Data
Code	Sum	Len	Addres	ss ad	ldress	Serial	02		Len	i iay	Alg.	Data
					1							
Α	В	С	D		Е	F	G	Н	- 1	J	K	L
Item	N	lame		Offset	Siz	ze			Desci	ription		
Item A		lame N Code		Offset 0	Siz 2 By	rtes	Dlagge			•		nition in
	SY					rtes rtes	Please letails.			•		nition in



D	Source Address	6	2 Bytes	
Е	Destination address	8	2 Bytes	
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	Write in information, the value=0x02
Н	Sub CMD	13	1Byte	Write in system default Style, the value=0x0c
I	Arg. Len	14	1 Byte	No parameter
J	Flag	15	1 Byte	Echo Flag, 1=In-echo; 0=Echo
K	Arg.	16		No parameter
L	Data	16		Structure Struct { UWORD ID; //55aa UWORD Rev; // reserved UBYTE Ddrive; //default disk UBYTE Dback_color; //default background color UBYTE Dfont_color; //default foreground color UBYTE Dhor_just; //horiz. alignment UBYTE Dver_just; //verti. alignment UBYTE Dline_space; //line space UBYTE Dfont; //font UBYTE Din_mode; // in mode UBYTE Dout_mode; // out mode UBYTE Dspeed; //speed UBYTE Dstay_time; //stay time UBYTE Dwrap; //auto sentence wrapping }DEFAULT_SET

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(13). Write a File to a Designated Path—Extension(0x020D)

This command is used to write a file to a designated path, especially the file larger than 64MB. The format as the following table:

Table3.2.13 Command Format of Writing a File to a Designated Path



		I									1			
SYN	Check	Data		urce		tination	Packe	02	0D	Arg.	Flag	Arg.	Data	
Code	Sum	Len	Add	ress	ad	dress	Seria •		<u> </u>	Len				
	<u> </u>					1			i	-		i		
Α	В	С	[)		Е	F	G	Н	- 1	J	K	L	
	ı			1										
Item	N	lame		Off	set	Siz	ze			Desci	ription	1		
Α		N Code)	2 By								
В		eck Sum	1	2	2	2 By	rtes							
С	Da	ata Len		4	1	2 By	rtes	Please	refer t	o Tabl	e 12f	or defi	nition in	
D	Sourc	e Addre	ess	(3	2 By	rtes	details.		.0 1001	0 1.2 1	or dom		
E		stination ddress	1	8	3	2 By	rtes	aotano.						
F	Pack	et Ser	ial	1	0	2 By	rtes							
G	Mai	in CME)	1	2	1 B	yte	Write in	ninforr	nation	, the v	alue=0	x02	
Н	Su	b CMD)	1	3	1By	⁄te	Write a File to a Designated Path, the value is 0x0D						
I	Ar	g. Len		1	4	1 B	yte	Arg. Le	n = (L	ength	of Arg.	field +	3)/4	
J		Flag		1	5	1 B	yte	Echo F	lag,1	=In-ed	cho; C	=Echo	1	
К		Arg. Len 14 Flag 15 Arg. 16				4*N B	ytes	[2 By packets [4 By value of value of pack [Path & E.g.,	tes]: Quetes]: Quetes]: Quetes]: of the softhe the chets so tet series and the "D:\T\\ The	Size Id be to uantity The confirst passecond al num Name e path	of packet is be sen ber. I: Write of the OME.	cket (me size ckets packe is 0x et is 0x s 0x03, nt in the file, NMG"	All the e.) et. The one of the order ename	
L	ı	Data		16	+N	Data	size	Data of		g in file	es.			

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table1.3</u> for the format of echoed data.

Note: This command is not valid on control board QS0925.

(14). Write CRC file into the display to save (0x020E)

♣ This command is used to write CRC file into the display to save, the software can read the file: D:\ FILELST.SY. this file records verification of every file in the display. If



it is the same as the verification, it means that the file has been saved in the display. (Does not require sending). The format as the following table:

Please note: judging if the feature list can support opening the CRC file or not first, or the firmware does not support this command.

Table3.2.14 Format of writing the CRC file to the display

SYN	Check	Data	Source		stination	Packe	02	0E	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Address	ac	ddress	Seria			Len					
	i		i					İ	i					
Α	В	С	D		Е	F	G	Н	- 1	J	K	L		
Item	Na	ame	Off	Offset Size					Descri	ption				
Α	SYN	Code	()	2 Byte	es								
В	Chec	k Sum		2	2 Byte	es								
С	Dat	a Len		4	2 Byte	es _	Disease refer to Table 4.2 for definition in							
D	Source	Addres	ss (3	2 Byte	25	Please refer to Table 1.2 for definition in							
Е		ination dress		3	2 Byte		etails.							
F	Packe	et Seria	al 1	0	2 Byte	es								
G	Main	CMD	1	2	1 Byt	e V	Write in information, the value=0x02							
Н	Sub	CMD	1	3	1 Byt	Α .	/rite a 0 0x0E	CRC F	ile to t	he disp	olay, th	e value		
I	Arg. l	Length	1	4	1 Byt	e A	rg. Len	gth = (Length	of Arg	g. field	+ 3)/4		
J	F	lag	1	5	1 Byt	e E	cho Fla	ag, 1=	In-ech	o; 0=	Echo			
К	Α	irg.	1	6	4*10 Byte) w	ith NUI Byte Byte		of the	file	name,	end up		
L	D	ata	4	0	none	e n	one							

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table1.3</u> for the format of echoed data.

(15). Write form configuration of 5800(0x020F)

T his command is used to set up the multi-form of 5800. The format as the following table:

Table3.2.15 writing form configuration of 5800



SYN	Check	Data				tination	Pad	cket	00	٥٦	Arg.	EL.	Δ	Dete	
Code	Sum	Len	Ad	dress	ac	ldress	Se	rial	02	0F	Len	Flag	Arg.	Data	
	-			1		1			-					-	
Α	В	С		D		Е	F	F	G	Н	- 1	J	K	L	
Item	Na	ame		Offs	set	Size	•)escri	ption			
Α	SYN	l Code		0		2 Byte	es								
В	Chec	k Sum		2		2 Byte	es								
С	Dat	a Len		4		2 Byte	es	Dia	000 r	ofor to	Table	106	or dofir	sition in	
D	Source	Addres	ss	6		2 Byte	es		ase re ails.	eiei lo	rabie	1.2 10	or delli	nition in	
Е		ination dress		8		2 Byte	es	uei	alis.						
F	Packe	et Seria	al	10)	2 Byte	es								
G	Mair	Main CMD 12				1 Byt	е	Wri	te in ir	nforma	tion, t	, the value=0x02			
Н	Sub	Sub CMD 13				1 Byte Form configuration of 5800. Th							. The v	/alue is	
1	Arg.	Arg. Length 14				1 Byte Parameter of 12 Bytes is needed, fi							fill in as		
J	F	lag		15	5	1 Byt	е	Ech	no Fla	g,1=I	n-ech	o; 0=	Echo		
К	А	Arg. Length Flag Arg.				0 Byte	es	the	form	WinNu		dicate	the qua	antity of	
L	D	ata		40)	N Byt	es	One the W typee { IN IN IN IN IN IN IN IN IN IN IN IN IN	e form e sp inNum def struc T8U Win T32U Y; T16U Z; T16U W T16U H6 T8U ued T8U PI T8U W	n mear ecific n t Name[64 inID; idth; eight; Transpa	quar quar 1];/end u rency;	p with NU	depen JLL	s opacity,	

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table 1.3</u> for the format of echoed data.



(16). Modify the percentage of pixel detection manually and then save to the screen (0x0210)

This command is to modify the percentage of pixel detection manually, 5 stands for 5%, 10stands for 10%, and the max value is 70. The format is as shown in the table below:

♣ Note: This command is a project of non-GM agreement.

Table 3.2.15 Format of percentage of pixel detection to the screen

						регесии	<u>U</u>									
SYN	Check	Data	So	urce	Des	tination	Pa	cket	00	10	Arg.	Floor	۸۳۵	Doto		
Code	Sum	Len	Add	dress	ac	ldress	Se	erial	02	10	Len	Flag	Arg.	Data		
	1							1	- 1					<u> </u>		
Α	В	С		D		Е		F	G	Н	- 1	J	K	L		
Item	Na	ame		Offs	set	Size	•				Descri	ption				
Α	SYN	l Code		0		2 Byte	es									
В	Chec	k Sum		2		2 Byte	es									
С	Dat	a Len		4		2 Byte	es	Please refer to Table 1.2 for definition in								
D	Source	Addres	ss	6		2 Byte	es			eier to	rable	1.2 10	or delir	iition in		
_	Dest	ination		0		O D: 44		details.								
E	ado	dress		8		2 Byte	es									
F	Packe	et Seria	al	10)	2 Bytes										
G	Mair	n CMD		12	2	1 Byt	е	Wri	te in ir	nforma	ition, t	he val	ue=0x0)2		
	0 1	ONAD		46		4.5.4	_	Mo	dify the	e perce	entage	of dete	ction m	anually,		
Н	Sub	CMD		13	3	1 Byt	е	the	e value	=0x10)					
ı	Arg.	Length)	14	1	1 Byt	е									
J	F	lag		15	5	1 Byt	е	Ech	noed F	lag, 1	1=In-e	cho; (0=Ech)		
								[1	Byte	s]:Perc	entage	of	pixel,	5stands		
K	А	rg.		16	3	4 Byte	es	for5	5%,10s	tands 1	.0%					
								[3	Byte	s]:Res	erve					
L	D	ata		40)	N Byte	es	non	e							

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table1.3</u> for the format of echoed data.

3.Test Command(0x03)

- (1). Connection Test (0x0301)
- 4 This command is used to test the connection of the LED sign. If it is connected, some



parameters of the sign will return. The format as the following table:

Table3.3.1.1 Command format of Connection Test

SYN Code	Check Sum	Data Len	Source		tination dress	Pack Seri		03	01	Arg. Len	Flag	Arg.	Data		
- 1	i	i			1	i		-	- 1	- 1	- 1	-	<u> </u>		
Α	В	С	D		Е	F		G	Н	- 1	J	K	L		
Item	N	ame	C	ffset	Siz	:e				Descr	escription				
Α	SYN	V Code		0	2 By	tes									
В	Che	ck Sum		2	2 By	tes									
С	Da	ta Len		4	2 By	tes	Dia		ofor to	Table	. 10 £	or dofi	aitian in		
D	Source	e Addre	ss	6	2 By	tes		ails.	eiei it	labie	3 1.2 1	or delli	nition in		
E	Des	tination		8	2 Bytes		uei	alis.							
	ad	dress			Z Dy	ics									
F	Packe	et Seri	al	10	2 By	tes									
G	Mair	n CMD)	12	1 By	/te	Tes	st con	nmand	l, the	value=	0x03			
	O. J.	OMP		40	4.0.	4-	Co	nnect	ion	test	con	nmand,	the		
Н	Suc	CMD		13	1 By	/te	value=0x01		x01						
I	Arg	g. Len		14	1 By	/te	No	para	meter,	fill in a	as 0				
J	F	lag		15	1 By	/te	No	mear	ning						
K	F	٦rg.		16	0 By	/te	No	parai	meter						
L		ata		16	0 By	/te	No	data							

If the LED sign is connected, the data will return. The format of these data as the following table:

Table 3.3.1.2 Echoed Format of Connection Test Command

		Table	0.0.1.		710001	011110	101 00	Jillectic	11 1000	001111	- IIIIII		
SYN Code	Check Sum	Data Len	Sou Addr				Packe Serial	03	01	Arg.	Flag	Arg.	Data
<u> </u>	1	:	; taai		, tuui		;	:	<u> </u>	;	1	;	:
A	В	С			E		F	G	Н	i i	J	K	Ĺ
					_								
Item	N	lame		Of	Offset		ize			Desc	riptior	1	
Α	SY	N Code	;		0		ytes						
В	Che	eck Sun	n		2		ytes						
С	Da	ata Len			4	2 B	ytes						
D	Sourc	e Addre	ess		6	2 B	ytes						
Е	Des	stinatior	ı		8	2 0	ytes			o labi	e 1.3 t	or defii	nition in
	a	ddress			0	2 0	yıes	details.	•				
F	Pack	et Ser	ial		10	2 B	ytes						
G	Ма	in CMI	0		12 1 E		Byte						
Н	Su	b CME)		13 1		Byte	1					
I	Ar	g. Len			14		Byte	The pa	ramete	er nee	ded 12	2 Bytes	, fill in



				as 3;
J	Flag	15	1 Byte	The value is 0. It means the echoed data.
К	Arg.	16	4*3 Bytes	[2 Bytes]: Program version [2 Bytes]: FPGA version [4 Bytes]: IP address, low address is followed by high address, E.g.: 169.254.10.49(A9FE0A31) the return data should be :31 0A FE A9 [2 Bytes]:Sign address, the former 1B is Group, the latter 1B is Unit address [2 Bytes]:Rev
L	Data	28	0 Byte	No data

(2). Auto Test (0x0302)

♣ This command is used to make the LED sign test automatically (The test order: all bright->all Red-> all Green->all Blue-> scan horizontally-> scan vertically>the basic parameter of the sign)

Table3.3.2 Command format of Auto Test

SYN	Check	Data	Source			Packet	03	02	Arg.	Flag	Arg.	Data			
Code	Sum	Len	Addres	s Addre	ess	Serial			Len	•	•				
:	:	- 1	<u> </u>			<u>:</u>	<u> </u>					i			
Α	В	С	D) E		F	G	Н		J	K	L			
Item	N	ame		Offset	S	Size	Description								
Α	SYI	N Code		0	2 E	Bytes									
В	Che	ecksum		2	2 E	Bytes									
С	Da	ta Len		4	2 E	Bytes		_							
D	Source	e Addre	ss	6	2 E	Bytes	Please		to lab	le 1.2	for def	inition			
Е		tination		8	2 E	Bytes	in deta	IIIS							
F	Pack	et Seria	al	10	2 Bytes										
G	Mai	in CMD		12	1	Byte	Test co	omma	nd, the	value	=0x03				
Н	Sul	b CMD		13	1	Byte	Comm value=		for	auto	test	, the			
I	Ar	g. Len		14		Byte	No par	amete	er, fill i	n as 0					
J	ı	Flag		15		Byte	Echo F	-lag,	1= In-	echo;	0=Ech	10			
K		Arg		16		Byte	No parameter								
L	[Data		16		Byte	No dat	а							

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix.



Please refer to the <u>Table1.3</u> for the format of echoed data.

(3). All Bright Test (0x0303)

This command is used to test the LED sign under the condition of Complete Lighting.

The format as the following table:

Table3.3.3: Command format of complete lighting test

						iiiat oi						
SYN Code	Check Sum	Data Len	Source Address	Destina Addre		Packet Serial	03	03	Arg. Len	Flag	Arg.	Data
1	i	-	ł	1		-	- ;	-	<u> </u>	-	1	
Α	В	С	D	Е		F	G	Н	- 1	J	K	L
Item	N	ame	Of	fset	S	ize			Desc	riptio	1	
Α	SYI	V Code		0	2 E	Bytes				-		
В	Che	ecksum		2	2 E	Bytes						
С	Da	ta Len		4	2 E	Bytes	DI		4- T-1	.1. 4.0	£	
D	Source	e Addre	ss	6	2 E	Bytes	in deta		to rat	ne 1.2	for def	inition
E		tination dress		8	2 E	Bytes	iii ueta	III5.				
F	Pack	et Seria	al	10	2 E	Bytes						
G	Mai	n CMD		12	1	Byte	Test co	omma	nd, the	e value	e=0x03	
Н	Sul	o CMD		13	1	Byte	Test command for complete lighting the value=0x03				nting,	
I	Ar	g.Len	,	14		Byte	No par	amete	er, fill i	n as 0		
J	i	-lag		15		Byte	Echo F	Flag,	1= In-	echo;	0=Ech	10
K		Arg		16		Byte	No par	amete	er			
L		Data		16		Byte	No data					

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table1.3</u> for the format of echoed data.

(4).All Red Test (0x0304)

This command is used to test the LED sign under the condition of complete lighting in Red. The format as the following table:

Table3.3.4 Command format of complete lighting in Red test



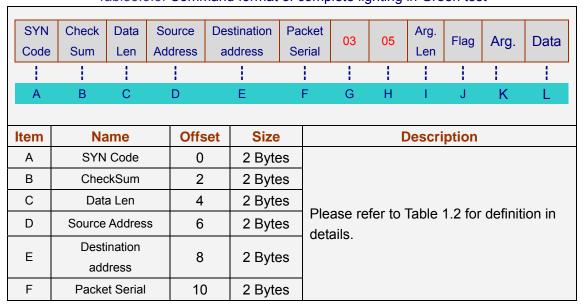
SYN Code	Check	Data Len		ource dress		stination		cket	03	04	Arg.	Flag	Arg.	Data
	!	!		!		<u>.</u>		!	- 1		!	<u> </u>	1	•
A	В	С		D		E		F	G	Н	Ė	J	K	Ĺ
Item	N	lame		Offs	et	Size					Descri	ption		
Α	SYI	N Code		0		2 Byte	es							
В	Che	ecksum		2		2 Byte	es							
С	Da	ita Len		4		2 Byte	es	i		, , <u>-</u>		406		
D	Source	e Addre	ss	6		2 Byte	es			ter to	lable	1.2 for	definit	on in
_	Des	tination		0		0.0.4-		ueu	ails.					
E	ac	ldress		8		2 Bytes								
F	Pack	et Seria	al	10)	2 Bytes								
G	Mai	in CMD		12)	1 Byte	Ф	Test command, the value=0x03						
Н	C	L CMD		10	,	1 D. d.		Test command for complete lighting						nting in
П	Sui	b CMD		13)	1 Byte	е	Red	d, the v	value=	0x04			
I	Ar	g.Len		14		1 Byte	е	No	param	neter, f	ill in a	s 0		
J		Flag		15		1 Byte	е	Ech	no Flag	g, 1=	In-ech	10; 0=	Echo	
K		Arg		16)	0 Byte	te No parameter							
L	ı	Data		16	;	0 Byte	е	No	data		_			

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table 1.3 for the format of echoed data.

(5).All Green Test (0x0305)

This command is used to test the LED sign under the condition of complete lighting in Green. The format as the following table:

Table 3.3.5: Command format of complete lighting in Green test





G	Main CMD	12	1 Byte	Test command, the value=0x03
Н	Sub CMD	13	1 Byte	Test command for complete lighting in Green, the value =0x05
I	Arg.Len	14	1 Byte	No parameter, fill in as 0
J	Flag	15	1 Byte	Echo Flag, 1= In-echo; 0=Echo
K	Arg	16	0 Byte	No parameter
L	Data	16	0 Byte	No data

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table 1.3 for the format of echoed data.

(6).All Blue Test (0x0306)

This command is to test the LED sign under the condition of complete lighting in Blue.
The format as the following table:

Table 3.3.6 Command format of complete lighting in Blue test

						10111101				5 5					
SYN	Check	Data	Sou	ırce	Des	tination	Pac	ket	03	06	Arg.	Floo	۸ ۲۵	Dete	
Code	Sum	Len	Add	lress	ad	dress	Ser	ial	03	06	Len	Flag	Arg.	Data	
1	1	-				1						- ;	-	-	
Α	В	С	I)		Е			G	Н	- 1	J	K	L	
Item	Na	ame		Off	set	Size		Description							
Α	SYN	l Code		C)	2 Byte	s								
В	Che	ckSum		2	<u> </u>	2 Byte	s								
С	Dat	a Len		4	ļ	2 Byte	s F	Pleas	se refe	er to Ta	able 1	.2 for c	definitio	n in	
D	Source	Addres	SS	6	3	2 Byte	s d	details.							
E	Destinati	on addr	ess	8	}	2 Byte	s								
F	Packe	et Seria	l	1	0	2 Byte	s								
G	Mair	n CMD		1:	2	1 Byte	еТ	Test	comm	and, t	he val	ue =0x	(03		
Н	Sub	CMD		1:	3	1 Byte	Те					•	te ligh	ting in	
						,		Blue, th		he va	lue=0x	(06			
I	Arç	g.Len		1	4	1 Byte	e N	No p	arame	eter, fil	l in as	0			
J	F	lag		1:	5	1 Byte	Echo Flag, 1= In-echo; 0=Echo								
K	-	٩rg		1	6	0 Byte	e N	No p	arame	eter	_	_			
L	С	ata		1	6	0 Byte	e N	lo d	ata						

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.



(7). Horizontal scanning in All Bright Condition (0x0307)

♣ The command is used to have the horizontal scanning test on the LED sign in the condition of complete lighting. The format as the following table:

Table 3.3.7 Command format of the horizontal scanning test in the condition of complete lighting

SYN	Check	Data	Sou	rce	Dest	ination	Pack	ket	03	07	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Addr	ess	ado	dress	Seri	ial	00	07	Len	i iag	Aig.	Dala		
	- 1		- 1													
Α	В	С	D)		E	F		G	Н	1	J	K	L		
Item	N	Name		Off	set	Size		Description								
Α	SY	'N Code	•	ı	0	2 Byt	tes									
В	Ch	eckSun	า	:	2	2 Byt	tes									
С	Da	ata Len			4	2 Byt	tes	DI-		_ £ 4 _	Table	405-		4::-		
D	Source	ce Addr	ess	(6	2 By	tes		ase r ails.	eter to	rable	1.2 10	r defini	tion in		
Е	De	stinatio	n		8	2 Dvd	too	uei	alis.							
	a	ddress			5	2 Byt	les									
F	Pac	ket Seri	al	1	0	2 Byt	tes									
G	Ма	ain CME)	1	2	1 By	rte	Test command, the value =0x03								
								Tes	st con	nmand	for h	orizont	al scar	ning in		
Н	Su	ıb CMD	1	1	3	1 By	rte	t	he co	nditio	n of co	omplet	e lighti	ng, the		
								V	/alue	=0x07						
ı	А	rg.Len		1	4	1 By	rte	No	parai	meter,	fill in a	as 0				
J		Flag		1	5	1 By	rte	Ech	no Fla	ag, 1=	In-ec	ho; 0	=Echo			
K		Arg		1	6	0 Byte		No parameter								
L		Data		1	6	0 By	rte	No	data							

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(8). Vertical scanning in All Bright Condition (0x0308)

♣ This command is to have the vertical scanning test on the LED sign in the condition of complete lighting. The format as the following table:

Table3.3.8 Command format of the vertical scanning test in the condition of complete lighting



SYN Code	Check	Data Len		urce Iress		Destination address		acket erial	03	08	Arg.	Flag	Arg.	Data
	1		, 10.0	1		1			-			i .	1	:
A	В	C		D D		E		F	G	Н	-	J	K	L
Item		ame		Off	set	Size	-	<u>' </u>			escri		IX	_
Α		l Code		(2 Byte								
В	Che	ckSum		2	2	2 Byte								
С	Dat	ta Len		2		2 Byte	es	Plea	se refe	er to Ta	able 1	.2 for o	definitio	n in
D	Source	Addres	ss	6	3	2 Byte	es	deta	ils.					
Е	Destinati	on addı	ess	8	}	2 Byte	s							
F	Pack	et Seria	I	1	0	2 Byte	s							
G	Maiı	n CMD		1.	2	1 Byte	е	Test	comm	and, t	he val	ue=0x	03	
								Test	comm	and fo	r verti	cal sc	anning	in
Н	Sub	CMD		1	3	1 Byte	e	the c	onditio	on of c	comple	ete ligh	iting,	
								the v	alue=	80x0				
I	Ar	g.Len		1	4	1 Byte	е	No p	arame	eter, fil	l in as	0		
J	F	lag		1	5	1 Byte	е	Echo Flag, 1= In-echo; 0=Echo						
K	,	Arg		1	16		е	No parameter						
L		Data		1	6	0 Byte	е	No d	ata					

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table1.3</u> for the format of echoed data.

(9).End Test Status (0x0309)

This command is used to end the test on the LED sign. The format as the following table:

SYN Check Source Destination Arg. Data **Packet** 03 09 Flag Arg. Data Code Sum Len Address address Serial Len С D Ē Н В G K **Item Name** Offset **Size Description** SYN Code Α 2 Bytes 0 CheckSum В 2 2 Bytes С Data Len 4 2 Bytes Please refer to Table 1.2 for definition in D Source Address 6 2 Bytes details. Destination Ε 8 2 Bytes address F Packet Serial 10 2 Bytes

Table3.3.9 Command format of ending the test



G	Main CMD	12	1 Byte	Test command, the value=0x03
Н	Sub CMD	13	1 Byte	Test command for ending the test, the value=0x09
I	Arg.Len	14	1 Byte	No parameter, fill in as 0
J	Flag	15	1 Byte	Echo Flag, 1= In-echo; 0=Echo
K	Arg	16	0 Byte	No parameter
L	Data	16	0 Byte	No data

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table1.3</u> for the format of echoed data.

(10).Gray Scale Test (0x030A)

♣ This command is used to have the gray scale test on the LED sign. The format as the following table:

Table 3.3.10 Command Format of Gradual Gray Scale Test

SYN	Check	Data	Sou	rce	Dest	ination	Pack	et	03	0A	Arg.	Flag	Arg.	Data			
Code	Sum	Len	Addr	ess	ado	dress	Seria	al		0/1	Len		Aig.				
							- 1							- 1			
Α	В	С	D)		Е	F		G	Н	- 1	J	K	L			
						ı											
Item	ı	Name		Off	set	Siz				l	Descr	iption					
Α	SY	'N Code	9	(0	2 Byt	tes										
В	Ch	eckSun	n	:	2	2 Byt	tes	-									
С	D	ata Len		4	4	2 Byt	tes	Please refer to Table 1.2 for definition in									
D	Source	ce Addr	ess	(6	tes		ase n ails.	eier to	rabie	1.2 10	r delini	tion in				
E	De	Destination			8	2 Dv4	too	uei	alis.								
	а	address			0	2 Byt	les										
F	Pac				0	2 Byt	tes										
G	Ma	ain CME)	1	2	1 By	rte	Tes	t con	nmand	, the v	alue=0	0x03				
Н	Sı	ıb CMD	1	1	13 1 By			Test command for gray scale test,									
						,		the value= 0x0A									
- 1	А	rg.Len		1	4	1 By	rte	Parameter of 8 Bytes is needed, fill in as									
								2.									
J		Flag		1	5	1 By	rte	Ech	no Fla	ıg, 1=	In-ec	ho; 0	=Echo				
								[1 E	3yte]:	Test ty	уре						
									0 = fi	xed va	lue of	gray s	scale te	est			
									1 = g	radual	gray	scale t	est				
K	Arg				16 81		tes	-		Red p							
									1 = w	ith Re	d port	ion					
							0 = without Red portion										
								[1 Byte]: Green portion									



				1 = with Green portion
				0 = without Green portion
				[1 Byte]:Blue portion
				1 = with Blue
				0 = without Blue portion
				[2 Bytes]: Gray scale degree
				The value of gray scale degree, E.g.:
				16 stands for 16 degrees of gray scale.
				Value is counted from 1
				[2 Bytes]: Rev2
Ĺ	Data	24	0 Byte	No data

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

Note: This command is not valid on control board QS0925.

(11).Color Test (0x030B)

♣ This command is used to have the color test on the LED sign. The format as the following table:

Table 3.3.10 Command Format of Color Test

0)(1)	011	D.I.	0		D		D									
SYN	Check	Data		urce		ination	Pack		03	0B	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Add	ress	add	dress	Seri	aı			Len			•		
- :	İ	- 1		!	i		- 1			- 1	- 1	- 1	-	-		
Α	В	С	[)		E F			G	Н	1	J	K	L		
Item	N	lame		Off	set	Size		Description								
Α	SY	N Code	:	(0	2 By	tes									
В	Che	eckSum)	:	2	2 By	tes									
С	Da	ata Len		4	4	2 By	tes									
D	Sourc	e Addre	ess	(6	2 By	tes	_		efer to	Table	2 1.2 fc	or defin	ition in		
_	Des	stination	1			2 Dutos		details.								
E	ac	ddress		· '	8	2 Bytes										
F	Pack	ket Seria	al	1	0	2 By	tes									
G	Ма	in CMD)	1	2	1 By	/te	Test command, the value=0x03								
	C	L CMD		,	2	4 D.	4.5	Test command for gray scale test,						,		
Н	Su	b CMD		1	3	1 By	/te	the	value	e= 0x0)B					
	Λ.	ralor		4	1	4 D.	t o	Par	amet	ter of 1	16 Byt	es is n	eeded	, fill in		
I	Al	rg.Len		1	4	1 By	/ie	as 4	4.							
J		Flag		1	15		/te	Ech	o Fla	ag,1=	= In-ed	cho; 0	=Echo			
IZ.		۸ra		4	6	16 D	too	[1 Byte]: Red portion, value[0-255]					5]			
K		Arg		1	6	16 By	/ies	[1 B	Byte]:	Gree	n porti	on, va	lue[0-2	55]		



				[1 Byte]:Blue portion, value[0-255] [2 Bytes]: Rev2
L	Data	24	0 Byte	No data

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table 1.3 for the format of echoed data.

(12). Have the Test on the Srceen (0x030C)

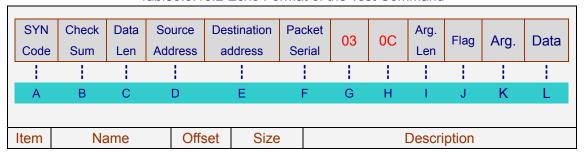
This command is used to have the test on the LED sign, mainly on the mainboard. The format as the following table:

Table3.3.13.1 Command Format of the Test

										OI tile						
SYN	Check	Data	Sou	urce	Dest	ination	Pack	cet	03	0C	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Add	ress	ado	dress	Seri	al			Len	9	, g.	Data		
Α	В	С	- 1)		E F			G	Н	1	J	K	L		
Item	N	lame		Off	set	Siz	:e	Description								
Α	SY	N Code		(0	2 By	tes									
В	Che	eckSum)	2		2 By	tes									
С	Da	ata Len			4	2 By	tes				-					
D	Sourc	e Addre	ess		6	2 By	tes	Please refer to Table 1.2 for definition in details.								
_	Des	stination	1		^	0.0	4	details.								
E	ac	ddress			8	2 By	tes									
F	Pack	ket Seria	al	1	0	2 By	tes									
G	Ma	in CMD		1	2	1 By	/te	Test	con	nmand	d, the v	/alue=	0x03			
Н	C.,	h CMD		4	3	4 D.	to.	Test	con	nmand	for g	ray sca	ale test	,		
П	Su	b CMD		ı	3	1 By	/le	the v	valu	e = 0x	0C					
- 1	Δι	rg.Len		1	4	1 By	/te	Para	ame	ter of (Byte	s is ne	eded,	fill in as		
•	A	19.2011			7	1 0)	, i.C	0								
J		Flag		1	15		/te	Echo Flag, 1= In-echo; 0=Echo								
K		Arg 16			0 B	ytes	es None									
L		Data		2	24	0 Byte		No data								

If the screen is connected, the format of echo data as the following table:

Table 3.3.13.2 Echo Format of the Test Command





Α	SYN Code	0	2 Bytes	
В	Check Sum	2	2 Bytes	
С	Data Len	4	2 Bytes	
D	Source Address	6	2 Bytes	
Е	Destination address	8	2 Bytes	Please refer to Table 1.3 for description
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	
Н	Sub CMD	13	1 Byte	
I	Arg. Length	14	1 Byte	Parameter of 0 Bytes is needed, fill in as 0
J	Flag	15	1 Byte	the value = 0,the data is echoed
K	Arg.	16	0 Bytes	none
L	Data	28	N Byte	[2 Bytes]: The main version of the program [2 Bytes]: The secondary version of the program [2 Bytes]: FPGA version [2 Bytes]: GGUU, the former 1B is GG, the latter 1B 为 UU [2 Bytes]: protocol Version [2 Bytes]: the length of the screen [2 Bytes]: the width of the screen [2 Bytes]: the system version of the file [4 Bytes]: the broken piece of NAND flash [4 Bytes]: the total piece of NAND flash [4 Bytes]: CAN test, the former 2B is the number of success; the latter 2B is the total number of test. [4 Bytes]: IP address, low address is before, while high address is behind, for instant: 169.254.10.49(A9FE0A31), echo is 31 0A FE A9 [4 Bytes]:Second from 12/31/1899 [1 Bytes]:the system playing mode [1 Bytes]:the temperature inside the screen, 0xff shows no [1 Bytes]: the temperature outside the screen, 0xff shows no [1 Bytes]: nandflash existing signal,1=exist [1 Bytes]: Brightness percentage



		10 D 1 1 D 1 1 1
		[2 Bytes]: Brightness Ad value
		[2 Bytoo]. Brighthood / ta value

(13). Test mode of designated area (0x030D)

This command is to make the designated area of the screen enter the color testing status, the format as shown in the table below

Table 3.3.13 Command format of color testing in designated area

					1		at of color testing in designated area										
SYN	Check	Data		urce		nation	Pack	æt	03	0D	Arg.	Flag	Arg.	Data			
Code	Sum	Len	Add	ress	ado	Iress	Seri	al			Len	- 3		-			
						<u> </u>							<u> </u>	<u>:</u>			
Α	В	С	I)		E	F		G	Н	- 1	J	K	L			
_	T			1													
Item		lame			fset	Siz		Description									
Α		N Code			0	2 By											
В		eckSum			2	2 By											
С	Da	ata Len		4	4	2 By	tes	PI	ease r	efer to	Table	1 2 fc	r defin	ition in			
D	Sourc	e Addre	ess	(6	2 By	tes	Please refer to Table 1.2 for definition in details.									
E		stination ddress	1	;	8	2 By	tes	u.	idilo.								
F	Pack	cet Seria	al	1	10	2 By	tes										
G	Ма	in CMD		12		1 By	/te	Те	st con	nmand	, the \	/alue=	0x03				
Н	Su	b CMD		1	13	1 By	/te	Test command in designated area, the value= 0x0D									
I	Ai	Arg.Len			14	1 By	/te		ith Re with 5		20 b	ytes o	of para	meters,			
J		Flag		1	15	1 By	/te	Echoed Flag, 1=In-echo; 0=Echo									
К		Arg		1	16	0 B ₂	ytes	[2] [2] [1] [1] Va an [1] 0 = 1 2 = 3 = [1] [1]	Byte: Byte: Byte: Byte: Byte: d 100 byte: All p = Odd = Even Byte: Byte: Byte: Byte:	s]:Y1, s]:X2, es]:Y2 s]:Res s]:Int etween percen Patt ixels pixels dots in]:Red,]:Gree	start finis 2, fin erve ensit 0 and t brigh ern only only the ce rang en, ran	Y cook h X cook ish Y y 100 r thess.	epreser the mo 0-255]	te ate dinate dinate nting off			



				[2 Bytes]: modWidth [2 Bytes]: modHeight
				[2 Bytes]: Rev
L	Data	24	0 Byte	No data

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

4. Black Screen Command (0x04)

(1). Start the display of black screen (0x0401)

This command is used to make the LED sign be in the status of black screen. The format as the following table:

SYN Check Data Source Destination Packet Arg. 04 01 Flag Arg. Data Code Sum Len Address address Len Serial ı Т Ŧ Ĭ ł Ē Α В C D **Item** Name Offset Size **Description** Α SYN Code 2 Bytes 2 2 Bytes В CheckSum С Data Len 4 2 Bytes Please refer to Table 1.2 for definition in D Source Address 6 2 Bytes details. Ε **Destination address** 8 2 Bytes F Packet Serial 10 2 Bytes G Main CMD 12 1 Byte Black screen command, the value= 0x04 Command for starting Black screen, Н Sub CMD 13 1 Byte the value=0x01 Arg.Len 1 Byte No parameter, fill in as 0 I 14 Echo Flag, 1= In-echo; 0=Echo J Flag 15 1 Byte Κ Arg 16 0 Byte No parameter Data 16 No data 0 Byte

Table3.4.1 Command format of starting the black screen

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(2). End the Black Screen (0x0402)

♣ This command is used to quit the status of black screen on the LED sign. The format as the following table:

Table 3.4.2 Command format of ending the black screen



SYN	Check	Data	So	urce	Des	stination	Pa	cket	04	02	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Ad	dress	a	address		rial	04	02	Len	i iag	Aig.	Data		
Α	В	С		D		E		F	G	Н	- 1	J	K	L		
Item	Na	ame		Offs	et	Size		Description								
Α	SYN	Code		0		2 Byte	es									
В	Chec	ckSum		2		2 Byte	s									
С	Dat	a Len		4	4 2 B			i								
D	Source	Addres	s	6	6 2 Bytes					ter to	lable	1.2 for	definit	ion in		
_	Dest	ination				0.5.4		aeta	ails.							
Е	ado	dress		8		2 Byte	es									
F	Packe	et Serial		10)	2 Byte	es									
G	Mair	n CMD		12	2	1 Byt	e	Bla	ck scre	een co	mmar	nd, the	value=	= 0x04		
						,							screen			
Н	Sub	CMD		13	3	1 Byt	е		value:		_	Diack	3010011	,		
1	Δrc	g.Len		14	L	1 Byte			param			s N				
-									•				Echo			
J	<u> </u>	lag		15	15 1 By			Echo Flag, 1= In-echo; 0			10; 0-	·LUIU				
K	P	\rg		16 0 Byte			е	No parameter								
L	D	ata		16	16 0 By			No data								

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table1.3</u> for the format of echoed data.

(3).Reset the System (0x0400)

♣ This command is used to reset the system of the LED sign. The format as the following table:

Packet SYN Check Data Source Destination Arg. 04 00 Flag Arg. Data Code Sum Len Address address Serial Len I Ĭ i A C D Ē Н Offset **Size Description Item** Name SYN Code Α 0 2 Bytes 2 В CheckSum 2 Bytes С Data Len 4 2 Bytes Please refer to Table 1.2 for definition in D Source Address details. 6 2 Bytes Destination Ε 8 2 Bytes address

Table 3.4.3 Command format of resetting the system



F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	Black screen command, the value= 0x04
Н	Sub CMD	13	1 Byte	Command for resetting the system, the value= 0x00
1	Arg.Len	14	1 Byte	No parameter, fill in as 0.
J	Flag	15	1 Byte	Echo Flag, 1= In-echo; 0=Echo
K	Arg	16	0 Byte	No parameter
L	Data	16	0 Byte	No data

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table1.3</u> for the format of echoed data.

(4). Command for Switching Off the LED Sign(0x0403)

♣ This order is used to make the LED sign be in a semi-off status. The format as the following table:

Table 3.4.4 Command Format of Switching off the LED Sign

	Pable 5.4.4 Command Format or Switching on the LED Sign															
SYN	Check	Data	Source	Destination	Packet	04	03	Arg.	Flag	۸ra	Data					
Code	Sum	Len	Address	address	Serial	04	03	Len	riay	Arg.	Dala					
									- 1	- 1						
Α	В	С	D	Е	F	G	Н	1	J	K	L					
Item	Nan	ne	Offset	Size	Description											
Α	SYN C	ode	0	2 Bytes												
В	Checks	Sum	2	2 Bytes												
С	Data I	_en	4	2 Bytes												
D	Sour		6	2 Bytes	Please r	efer to	Table	1.2 fc	or defir	nition in	1					
	Addre				details.											
E	Destina addre		8	2 Bytes												
F	Packet		10	2 Puton												
				2 Bytes												
G	Main C	CMD	12	1 Byte	Black so	reen c	comma	and, th	e valu	e=0x04	1					
Н	Sub C	MD	13	1 Byte	Commar the value			ing of	f the L	ED sigi	n,					
I	Arg.L	.en	14	1 Byte	Paramet	ter of 4	4 Byte:	s, fill ir	n as 1							
J	Flag	9	15	1 Byte	Echo Fla	ag,1=	= In-ec	:ho; C	=Echc)						
К	Arg	Arg 16		4 Bytes	[1 Byte]: "USERS 0 = [3 Bytes	HUTE show	OWN ,	I" whe	n swite	•	ff.					
L	Data 20 0 Byte				No data											



If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(5). Command for Switching On the LED Sign(0x0404)

This command is used to switch the LED sign from semi-off status to normal display status. The format as the following table:

SYN Check Data Source Destination Packet Arg. 04 04 Flag Arg. Data Code Sum Len Address address Serial Len Ī Ĭ Ī ı ł I l ı ł С Ē G Α В D F Н K Offset Item Name **Size Description** Α SYN Code 0 2 Bytes В CheckSum 2 2 Bytes С Data Len 4 2 Bytes Please refer to Table 1.2 for definition in D Source Address 6 2 Bytes details. Destination Ε 8 2 Bytes address F Packet Serial 10 2 Bytes G Main CMD 12 Black screen command, the value=0x04 1 Byte Command for switching the LED sign Н Sub CMD 13 1 Byte from semi-off status to normal status, the value=0x04 I 14 1 Byte No parameter, fill in as 0 Arg.Len Echo Flag, 1= In-echo; 0=Echo J 15 1 Byte Flag K Arg 16 0 Byte No parameter L 16 Data 0 Byte No data

Table 3.4.5 Command Format of Switching On the LED Sign

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table1.3</u> for the format of echoed data.

(6).Reading Status of the LED sign (0x0405)

♣ This command is used to read the status of the LED sign. It can be known that the sign is on or in semi-off status through this command. The format as the following table:

Table 3.4.6.1 Command Format of Reading the Status of the LED Sign



SYN Code	Check Sum	Data Len	Sou Addr			ination	Pacl		04	05	Arg.	Flag	Arg.	Data
	-	į	-			1	-			-	<u> </u>		1	•
Α	В	C	D)	E E		F		G	Н	i	J	K	Ĺ
Item	ı	lame		Off	Offset Siz		е				Descr	iption		
Α	SY	'N Code)		0 2		es							
В	Ch	eckSum	1	2		2 Byt	es							
С	Da	ata Len		4		2 Byt	es	Please refer to Table 1.2 for definition in						
D	Sourc	ce Addre	ess	6		2 Bytes				erer to	rabie	1.2 10	r aetini	tion in
Е		stinatior ddress	ו	:	8	2 Byt	es	ue	tails.					
F	Pac	ket Seri	al	1	0	2 Bytes								
G	Ма	in CMD)	1	2	1 By	te	Black screen command, the v			e value	=0x04		
Н	Su	ıb CMD		1	3	1 By	te	Command for reading the status of th LED sign, the value= 0x05			of the			
I	А	rg.Len		1	4	1 By	te	No	parar	neter,	fill in a	as 0.		
J		Flag		1	15 1 E		te	Ec	ho Fla	ıg, inv	alid ur	der th	is comi	mand
K		Arg		1	6	0 By	te	te No parameter						
L		Data	_	1	6	0 By	te	No	data		_			

If the operation is successful, the data is echoed and its format of communication data is as the following Table 3.4.6.2.

4

Table 3.4.6.2 Echoed data format of reading the status of LED sign command

				data format (-
SYN Code	Check Sum	Data Len	Source Addre			Packet Serial	04	05	Arg. Len	Flag	Arg.	Data
- 1			- 1	- 1		- 1				-		- I
Α	В	С	D	Е	F		G	Н	- 1	J	K	L
Item		Name		Offset		Size			Desc	criptio	n	
Α	S	YN Cod	le	0	2	Bytes						
В	Cł	neck Su	m	2	2	Bytes						
С		Data Ler	ı	4	2	Bytes						
D	Soul	rce Add	ress	6	2	Bytes	Diago	o rofo	r to To	blo 1	O for d	ofinition
Е		estinatio address		8	2	Bytes	in det		1 10 16	ible 1.	3 101 06	efinition
F	Pac	ket Se	erial	10	2	Bytes						
G	Ma	ain CM	ID	12	1	Byte						
Н	S	ub CM	D	13	1	Byte						
I	Arç	g. Leng	gth	14	1	Byte	No pa	arame	ter, fill	in as ()	
J		Flag		15	1 Byte		The value is 0. It means the echoed					



				data.
K	Arg.	16	0 Bytes	No parameter
L	Data	24	16 Bytes	[1 Byte]: Control board in On/Off status 0 = On 1=Off("USERSHUTDOWNI" is shown) 2= Off (black screen) [1 Byte]: Driver board in On/Off status 1 = Off, 0 = On [14 Bytes]: Reserved

(7). Dynamically revise the data of screen(0x0406)

This command is used to dynamically revise the data of the screen, the revise won't be saved if the power is off. The format as the following table:

Table 3.4.6 command format of dynamically revise the data of screen

SYN	Check	Data	Sou	rce	Dest	tination	Pack	cet	04	06	Arg.	Flag	Arg.	Data
Code	Sum	Len	Addr	ess	ado	dress	Seri	al	04	00	Len	Flay	ζ.	Dala
						1								
Α	В	С	D)		Е	F		G	Н	1	J	K	L
Item	N	lame		Off	set	Siz	е				Descr	iption		
Α	SY	'N Code	e	(0	2 Byt	tes							
В	Ch	eckSum	า	:	2	2 Byt	tes							
С	Da	ata Len		6		2 Byt	tes	Dia		- 6	T-61-	405-	l . £::	4: :
D	Sourc	ce Addre	ess			2 Byt	es			eter to	rabie	1.3 10	r defini	tion in
-	De	stination	n	6		2 Bytes		uela	ails.					
Е	a	ddress		•	8 10		es							
F	Pac	ket Seri	al	1	0	2 Bytes								
G	Ма	in CMD)	1	2	1 By	te	Bla	ck sc	reen c	omma	ınd, th	e value	=0x04
Н	Sı	ıb CMD		10 12 13		1 Byte		Revise the data of the scre					screen,	
	00	ID OIVID			<u> </u>	ГБу	ic	valu	ue=0x	k 06				
1	A	rg.Len		1	4	1 By	rte			er of	32 By	tes is	neede	d, fill in
						,		as 8						
J		Flag		1	5	1 By	te	Ech	no Fla	ıg, 1=	In-ec	ho; 0	=Echo	
								[1 Bytes] :revise the baud rate of the					of the	
K		Arg		1	6	32 B	vte	scre	een					
IX		, ug			J	02 D	0 = 115200							
										1 =	57600)		



				2 = 38400
				3 = 19200
				4 = 9600
				5 = 4800
				6 = 2400
				7 = 1200
				8 = 600
				[31 Bytes]: Reserved
L	Data	16	0 Byte	No data

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(8). Brightness adjusting command (0x0407)

♣ This command is used to adjust the brightness of the screen. The format as the following table:

Table 3.4.8 command format of adjusting the brightness of the screen

SYN	Check	Data	Sou	rce	Dest	ination	Pack	cet	04	07	Arg.	Flag	Arg.	Data	
Code	Sum	Len	Addr	ess	ade	dress	Seri	al	U -1	07	Len	1 lag	Alg.	Data	
						1	- 1								
Α	В	С	D)		Е	F		G	Н	1	J	K	L	
	,					1									
Item	1	lame		Off	fset	Siz	е				Descr	iption			
Α	SY	'N Code)	(0	2 Byt	tes								
В	Ch	eckSun	1	:	2	2 Byt	tes								
С	Da	ata Len		4 ss 6		2 Byt	tes	Dia		-f t-	Tabla	105-	سامان،	tion in	
D	Sourc	ce Addre	ess			2 Bytes		Please refer to Table 1.2 for definition in details.							
_	De	stination	า		^	0.0.4		uela	ali5.						
E	a	ddress		6 8 10		2 Bytes									
F	Pac	ket Seri	al	1	0	2 Byt	tes								
G	Ма	ain CME)	10		1 By	rte	Blad	ck sc	reen c	omma	ınd, th	e value	e= 0x04	
Н	Sı	ıb CMD	D 12		13	1 By	rte	Adjust the brightness level of the s value=0x07				screen,			
I	А	rg.Len		1	4	1 By	rte	Para 1	amet	er of 4	l Byte:	s is ne	eded, i	fill in as	
J		Flag		15		1 By	rte	Ech	o Fla	ıg,1=	In-ec	ho; 0	=Echo		
K		Arg		1	16	4 By	rte		0 = A	-100] utoma		ghtnes		virtual 1 is the	



				darkest, 100 is the brightest.
				[3 Bytes]: Reserved
L	Data	16	0 Byte	No data

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table 1.3 for the format of echoed data.

(9). Setting the Ethernet test command (0x0408)

♣ This command is used to set up the Ethernet's function of 看门获, and to test the condition of Ethernet. The format as the following table:

Table3.4.9 command format of the operation of Ethernet

		labi	e3.4.9	9 COI	mmai	nd form	at of	tne	opera	ition of	r Etne	rnet			
SYN	Check	Data	Sou	ess ad		ination	Pack	cet	0.4	00	Arg.	Біле	Δ	Data	
Code	Sum	Len	Addr	ess	ado	dress	Seri	al	04	08	Len	Flag	Arg.	Data	
						1	- 1								
Α	В	С	D)		E	F		G	Н	- 1	J	K	L	
	1			ı		ı									
Item	ı	Name		Of			е				Descr	iption			
Α	SY	'N Code	•		0	2 Byt	tes								
В	Ch	eckSun	n		2	2 Byt	tes								
С	Da	ata Len		,	4	2 Byt	tes	Dio	aco r	ofor to	Table	1 2 fo	r dofini	tion in	
D	Sourc	ce Addr	ess		6	2 Byt	tes	Please refer to Table 1.2 for definition in details.							
Е	De	stinatio	n		8	2 Bv/	toe.	ueı	alis.						
	а	ddress		10		2 Bytes									
F	Pac	ket Seri	ial			2 Byt	tes	S							
G	Ma	ain CME)	1	2	1 By	rte	Bla	ick sc	reen c	omma	ınd, the	e value	= 0x04	
Н	Sı	ıb CMD	1	13		1 By	rte	Se	t up th	ne test	for Et	hernet	, value	=0x08	
I	А	rg.Len		1	4	1 By	rte	Pa 1	ramet	er of 4	Bytes	s is ne	eded, f	ill in as	
J		Flag		1	5	1 By	rte	Echo Flag, 1= In-echo; 0=Echo							
								[1 8	3ytes]	: test	the re	set sw	itch		
									0 = c	lose th	e rese	et test	switch		
									1 = o	pen th	e rese	et test s	switch		
								[1 8	3ytes]	time (of test	, the u	nit is m	inute	
K		Arg			6	4 Dv	rto.	The virtual value is: [5-255], mea					means		
r\		Aig		16		4 By	ıe	e that if the Ethernet received the data						he data	
								packet, but has not received a				ed any			
								data pa			data packet after the setting time,				
									then	you s	hould	reset	the Eth	ernet.	
								[2	3ytes]	: Rese	erved				
L		Data		1	6	0 By	rte	No	data						



If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

4

(10). Command of reading the Ethernet test setting (0x0409)

♣ This command is used to read the condition of Ethernet's software 看门获. The format as the following table:

Table 3.4.10.1 command format of reading the operation of Ethernet

SYN	Check	Data	Sou			ination	Pacl		04	09	Arg.	Flag	Arg.	Data
Code	Sum	Len	Addr	ess	ado	dress	Seri	ial		_	Len			_
	- 1					1								
Α	В	С	D)	Е		F		G	Н	- 1	J	K	L
Item	N	lame		Off	Offset S		е				Descr	iption		
Α	SY	N Code	÷		0		tes							
В	Ch	eckSum	ı		2	2 Bytes								
С	Da	ata Len		4		2 Bytes								
D	Sourc	e Addre	ess		6	2 Byt	tes	Please refer to Table 1.2 for definition in details.						tion in
Е	Des	stination	า		0	O Dvd		uei	aiis.					
	a	ddress		(8	2 Byt	es							
F	Pacl	ket Seri	al	1	0	2 Bytes								
G	Ма	in CMD)	1	2	1 Byte		Bla	ick sc	reen c	omma	ind, th	e value	e= 0x04
Н	Su	ıb CMD		1	3	1 By	te	Read the test of Ethernet, value=0x09			0x09			
I	А	rg.Len		1	4	1 By	te	No	parar	neter,	fill in a	as 0.		
J		Flag		1			rte	Ec	ho Fla	ag,1=	In-ec	ho; 0	=Echo	
K		Arg		1	6	0 By	te	No	parar	neter				
L		Data		1	6	0 Byte		e No nada						

If the operation is successful, the data is echoed. And its format of communication data is as the following table:

Table3.4.10.2 Echoed data format of reading time command

SYN	Check	Data	Source	Destination	Packet	04	09	Arg.	Elog	Ara	Doto
Code	Sum	Len	Address	address	Serial	04	09	Len	Flag	Arg.	Data
- 1			- 1	- 1	- 1		- 1		- 1		- 1
Α	В	С	D	Е	F	G	Н	1	J	K	L
Item	1	Na	me	Offset	S	ize		[Descri	ption	
Α		SYN	Code	0	2 B	Bytes	Ple	ase re	efer to	Table	1.3 for



C Data Len 4 2 Bytes D Source Address 6 2 Bytes E Destination address 8 2 Bytes F Packet Serial 10 2 Bytes G Main CMD 12 1 Byte H Sub CMD 13 1 Byte I Arg. Length 14 1 Byte J Flag 15 1 Byte [1 Bytes] :test the reset switch 0 = close the reset test function 1 = open the reset test function [1 Bytes]: test the time, the unit is minute K Arg. 16 4 Bytes K Arg. 16 4 Bytes K Arg. 16 4 Bytes C Data Length 2 Bytes B Parameter of 4 Bytes, fill in as 1 Parameter of 4 Bytes, fill in as 1 Parameter of 4 Bytes, fill in as 1 Bytes] :test the reset test function [1 Bytes]: test the time, the unit is minute The virtual value is : [5-255], means that if the Ethernet received the data packet, but has not received any data packet after the setting time, then	В	Check Sum	2	2 Bytes	definition in details.
E Destination address 8 2 Bytes F Packet Serial 10 2 Bytes G Main CMD 12 1 Byte H Sub CMD 13 1 Byte I Arg. Length 14 1 Byte J Flag 15 1 Byte [1 Bytes] :test the reset switch 0 = close the reset test function 1 = open the reset test function [1 Bytes]: test the time, the unit is minute K Arg. 16 4 Bytes K Arg. 16 4 Bytes K Arg. 16 4 Bytes Fracket Serial 10 2 Bytes Parameter of 4 Bytes, fill in as 1 Parameter of 4 Bytes, fill in as 1 Parameter of 4 Bytes, fill in as 1 Flag 15 1 Bytes [1 Bytes] :test the reset test function [1 Bytes]: test the time, the unit is minute The virtual value is : [5-255], means that if the Ethernet received the data packet, but has not received any data packet after the setting time, then you should reset the Ethernet.	С	Data Len	4	2 Bytes	
F Packet Serial 10 2 Bytes G Main CMD 12 1 Byte H Sub CMD 13 1 Byte I Arg. Length 14 1 Byte J Flag 15 1 Byte [1 Bytes]: test the reset switch 0 = close the reset test function 1 = open the reset test function [1 Bytes]: test the time, the unit is minute K Arg. 16 4 Bytes The virtual value is: [5-255], means that if the Ethernet received the data packet, but has not received any data packet after the setting time, then you should reset the Ethernet.	D	Source Address	6	2 Bytes	
G Main CMD 12 1 Byte H Sub CMD 13 1 Byte I Arg. Length 14 1 Byte J Flag 15 1 Byte [1 Bytes] :test the reset switch 0 = close the reset test function 1 = open the reset test function [1 Bytes]: test the time, the unit is minute K Arg. 16 4 Bytes The virtual value is : [5-255], means that if the Ethernet received the data packet, but has not received any data packet after the setting time, then you should reset the Ethernet.	Е	Destination address	8	2 Bytes	
H Sub CMD 13 1 Byte I Arg. Length 14 1 Byte Flag 15 1 Byte [1 Bytes] :test the reset switch 0 = close the reset test function 1 = open the reset test function [1 Bytes]: test the time, the unit is minute K Arg. 16 4 Bytes The virtual value is: [5-255], means that if the Ethernet received the data packet, but has not received any data packet after the setting time, then you should reset the Ethernet.	F	Packet Serial	10	2 Bytes	
I Arg. Length I Byte Parameter of 4 Bytes, fill in as 1 I Bytes I Bytes I Bytes I Bytes]: test the reset switch O = close the reset test function I = open the reset test function I Bytes]: test the time, the unit is minute K Arg. Arg. I Bytes	G	Main CMD	12	1 Byte	
Flag 15 1 Byte as 1 Flag 15 1 Byte [1 Bytes] :test the reset switch 0 = close the reset test function 1 = open the reset test function [1 Bytes]: test the time, the unit is minute K Arg. 16 4 Bytes The virtual value is : [5-255], means that if the Ethernet received the data packet, but has not received any data packet after the setting time, then you should reset the Ethernet.	Н	Sub CMD	13	1 Byte	
[1 Bytes] :test the reset switch 0 = close the reset test function 1 = open the reset test function [1 Bytes]: test the time, the unit is minute K Arg. 16 4 Bytes The virtual value is: [5-255], means that if the Ethernet received the data packet, but has not received any data packet after the setting time, then you should reset the Ethernet.	1	Arg. Length	14	1 Byte	Parameter of 4 Bytes, fill in as 1
Switch 0 = close the reset test function 1 = open the reset test function [1 Bytes]: test the time, the unit is minute The virtual value is: [5-255], means that if the Ethernet received the data packet, but has not received any data packet after the setting time, then you should reset the Ethernet.	J	Flag	15	1 Byte	
	K	Arg.	16	4 Bytes	switch 0 = close the reset test function 1 = open the reset test function [1 Bytes]: test the time, the unit is minute The virtual value is: [5-255], means that if the Ethernet received the data packet, but has not received any data packet after the setting time, then you should reset the Ethernet.
L Data 24 0 Byte No data	L	Data	24	0 Byte	

(11). Communicating command of the indicator (0x040A)

This command is used to transmit the indicator's condition to the control board. The illustration as the following table:

Table 3.4.11.1 command transmit format of the indicator's condition

SYN	Check	Data	Sour	ce Des	tination	Packe	et 04	0A	Arg.	Flag	Arg.	Data
Code	Sum	Len	Addre	ess ac	ldress	Seria		UA	Len	Flay	Kig.	Data
					1							
Α	В	С	D		Е	F	G	Н	- 1	J	K	L
Item	1	Name		Offset	fset Siz				Descr	iption		
Α	SY	'N Code	•	0	2 By	tes	Please r	efer to	Table	1.2 fo	r defini	tion in
В	Ch	eckSun	n	2	2 By	tes	details.					



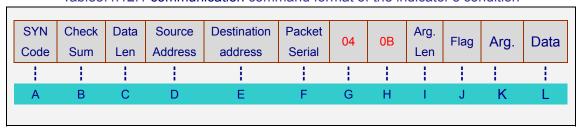
С	Data Len	4	2 Bytes	
D	Source Address	6	2 Bytes	
E	Destination address	8	2 Bytes	
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	Black screen command, the value=0x04
Н	Sub CMD	13	1 Byte	Control the condition of the indicator, the value=0x0A
ı	Arg.Len	14	1 Byte	4 Bytes needed. Fill in1.
J	Flag	15	1 Byte	Echoed Flag, 1=In-echo; 0=Echo
К	Arg	16	8 Byte	[1 BYTE] the value of passage 1 0=off; 1 = Open; the other is the flash period whose unit is 100ms [1 BYTE] the value of passage 2 0=off; 1 = Open; the other is the flash period whose unit is 100ms [1 BYTE] the value of passage 3 0=off; 1 = Open; the other is the flash period whose unit is 100ms [1 BYTE] passage mode 0x00: all put out 0x01: all bright 0x02: all flash 0x03: flash up and down 0x04: flash left and right
L	Data	16	0 Byte	No data

[♣] If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(12). Command of reading the status of the indicator (0x040B)

This command is used to read the condition of the indicator from the control board. The illustration as the following table:

Table3.4.12.1 communication command format of the indicator's condition





Item	Name	Offset	Size	Description
Α	SYN Code	0	2 Bytes	
В	CheckSum	2	2 Bytes	
С	Data Len	4	2 Bytes	Diagon refer to Table 4 O fee definition in
D	Source Address	6	2 Bytes	Please refer to Table 1.2 for definition in details.
E	Destination address	8	2 Bytes	uctalis.
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	Black screen command, the value=0x04
Н	Sub CMD	13	1 Byte	Read the condition of the indicator, value=0x0B
I	Arg.Len	14	1 Byte	No parameter, the value=0x00
J	Flag	15	1 Byte	Invalid
K	Arg	16	0 Byte	No parameter
L	Data	16	0 Byte	No data

If the operation is successful, the data is echoed. And its format of communication data is as the following table:

Table3.4.12.2 Echoed data format of reading indicator command

			ı							1				
SYN	Check	Data	Source	Destination	Pa	Packet 04		0B	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Address	address	Se	Serial		OB	Len	riug	7 tig.	Data		
						1								
Α	В	С	D	Е		F	G	Н	1	J	K	L		
Item		Na	me	Offset		S	ize			Descri	ption			
Α		SYN	Code	0		2 B	ytes							
В		Check	k Sum	2		2 B	ytes							
С		Data	Len	4		2 Bytes								
D	Source Address			6		2 B	ytes	Ple	Please refer to Table 1.2 for					
Е	D	estinatio	n address	8		2 B	ytes	def	definition in details.					
F		Packet	t Serial	10		2 B	ytes							
G		Main	CMD	12		1 E	3yte							
Н		Sub	CMD	13		1 E	3yte							
		Ara I	onath	1.1		4 D. 4-		Par	Parameter of 4 Bytes, fill in					
I		Arg. Length		14		1 Byte		as	as 1.					
J		Fla	ag	15		1 E	3yte							
								[1 E	BYTE]	the va	lue of			
								pas	passage 1					
K		Ar	g.	16		4 Bytes		0=0	0=off; 1 = Open; the other is					
								the	the flash period whose unit					
								is 1	is 100ms					



				[1 BYTE] the value of				
				passage 2				
				0=off; 1 = Open; the other is				
				the flash period whose unit				
				is 100ms				
				[1 BYTE] the value of				
				passage 3				
				0=off; 1 = Open; the other is				
				the flash period whose unit				
				is 100ms				
				[1 BYTE] passage mode				
				0x00: all put out				
				0x01: all bright				
				0x02: all flash				
				0x03: flash up and down				
				0x04: flash left and right				
L	Data	24	0 Byte	No data				

5.Time command (0x05)

- (1).Read the time (0x0501)
- ♣ This command is used to read the time of the LED sign. The format as the following table:

SYN Check Source Data Destination **Packet** Arg. 05 01 Flag Data Arg. Code Sum Len Address address Serial Len Ē Α В С D F G Н K Offset **Size Description Item** Name Α SYN Code 0 2 Bytes В CheckSum 2 2 Bytes С Data Len 4 2 Bytes Please refer to Table 1.2 for definition in D Source Address 6 2 Bytes details. Destination Ε 8 2 Bytes address F Packet Serial 10 2 Bytes G 12 Main CMD 1 Byte Time command, the value=0x05

Table 3.5.1.1 Command format of reading time



н	H Sub CMD	13	1 Byte	Command for reading time, the
		10	Dyte	value=0x01
I	Arg.Len	14	1 Byte	No parameter, fill in as 0.
J	Flag	15	1 Byte	Invalid under this command
K	Arg	16	0 Byte	No parameter
L	Data	16	0 Byte	No data

If the operation is successful, the data is echoed. And its format of communication data is as the following table:

Table 3.5.1.1 Echoed data format of reading time command

	SVN Charle Pate Source Position Position Position													
SYN	Check	Check Data Source		Destination	Packet	05	01	Arg.	Flag	Arg.	Data			
Code	Sum	Len	Address	address	Serial	Serial Serial		Len	i iag	7tig.				
											<u> </u>			
Α	В	С	D	Е	F	G	Н	1	J	K	L			
				T			1	Description						
Item		Naı		Offset		ize			Descri	ption				
Α		SYN		0		Bytes								
В		Check	Sum	2	2 E	Bytes								
С		Data		4		Bytes								
D		Source A		6		Bytes	-				1.3 for			
E	D	estinatio	n address	8	2 E	Bytes	defi	nition	in deta	ails.				
F		Packet		10	-	Bytes								
G		Main	CMD	12	1	Byte								
Н		Sub (CMD	13	1	Byte								
I		Arg. L	ength	14	1	Byte	Par 2	Parameter of 8 Bytes, fill in as 2						
J		Fla	ag	15	1	Byte		The value is 0. It means the echoed data.						
К		Ar	g.	16	4*2	Bytes	[2 B 20 0x [1 E will [1 E will [1 min 0x0 [1 E is	echoed data. [2 Bytes]: Year. E.g.: The Y 2005 will be filled in 0x2005 [1 Bytes]: Month. E.g.: Mar will be filled in as 0x03 [1 Bytes]: Date. E.g.: 22nd be filled in as 0x22 [1 Bytes]: Hour. E.g.: 15 will be filled in as 0x15 [1 Bytes]: Minute. E.g.: minutes will be filled in 0x08 [1 Bytes]: Week. Value ran is [0x00,0x06],E.g. Tuese will be filled in as 0x						



				Sunday as 0x00; Saturday
				as 0x06
				[1 Bytes]: Time-zone. Please
				refer to the related appendix
				for more information.
L	Data	24	0 Byte	No data

(2).Adjust Time (0x0502)

This command is used to adjust the time of the LED sign. The format as the following table:

Table3.5.2 Command format of adjusting time

Table3.5.2 Command format of adjusting time															
SYN	Check	Data	Sou	rce	Dest	Destination				Arg.					
Code	Sum	Len	Addr	ess	ado	dress	Serial	05	02	Len	Flag	Arg.	Data		
-	-		i			1	- 1				- 1	-			
Α	В	С)		Е	F	G	Н	1	J	K	L		
Item	Name Offset				Si				Desc	riptior	1				
Α		N Code			0	2 By									
В		eckSum	1		2	2 By									
С	-	ata Len		4	4	2 By	/tes	Please	refer	to Tal	ble 12	ofor de	efinition		
D	Sourc	e Addre	ess	(6	2 By	ytes	in deta		10 10		- 101 at			
E		stinatior ddress	ו		8	2 Bytes		iii detalis.							
F	Pac	ket Seri	al	1	0	2 By	/tes								
G	Ма	in CMD)	1	2	1 B	yte	Time command, the value= 0x05							
Н	Su	ıb CMD		1	3	1 B	yte	Command for adjusting time, the value=0x02							
I	А	rg.Len		1	4	1 B	yte	Parameter of 8 Bytes, fill in as 2							
J		Flag		1	5	1 B	yte	Echo Flag, 1= In-echo; 0=Echo							
К		Arg		1	6	4*2 E	Bytes	[2 Bytes]: Year. E.g.: The Year 20 be filled in as 0x2005 [1 Bytes]: Month. E.g.: March. v filled in as 0x03 [1 Bytes]: Date. E.g.: 22nd will be in as 0x22 [1 Bytes]: Hour. E.g.: 15:00 v filled in as 0x15 [1 Bytes]: Minute. E.g.: 8 minute be filled in as 0x08					will be be filled will be tes will agle is		



				in as 0x03; Sunday as 0x01; Saturday as 0x07 [1 Bytes]: Systematical Time-zone. Please refer to the related appendix for more information.
L	Data	32	0 Byte	No data

(3). Temperature and humidity processing (0x0503)

♣ This command is used to process the temperature and humidity information, this command is passive processing operation, that is, the data is sent to the main board by the temperature and humidity sensor. The format as following:

Table 3.5.3 Command Format of temperature and humidity processing

												<u> </u>					
SYN	Check	Data	Sou			ination	Packet	05	03	Arg.	Flag	Arg.	Data				
Code	Sum	Len	Addi	ess	add	dress	Serial			Len			•				
i	i	- 1	i			<u> </u>	i						<u> </u>				
Α	В	С				E	F	G	Н	1	J	K	L				
Item	N	lame		Off	set	Si	ze	Description									
Α	SY	N Code)	(0	2 By	/tes										
В	Ch	eckSum	1	2		2 By	/tes										
С	Da	ata Len		4		2 By	/tes	Please refer to Table 1.2 for definition									
D	Sourc	e Addre	ess	6		2 By	/tes			to lab	le 1.2	tor deti	nition				
_	Des	stination	ı			0.0	1	in deta	IIS.								
E	a	ddress			8	2 Bytes											
F	Pacl	ket Seri	al	1	0	2 By	/tes										
G	Ма	in CMD)	1	2	1 B	yte	Time c	omma	nd, th	e value	e =0x0	5				
								Comma	and fo	r proc	essing	the					
Н	Su	ıb CMD		1	3	1 B	yte	temper	ature	and h	umidity	, the v	alue=				
								0x03									
I	A	rg.Len		1	4	1 B	yte	Parameter of 4 Bytes, fill in		in as 1							
J		Flag		1	5	1 B	yte	Echo F	lag,	1= In-6	echo;	0=Ech	0				
								-		[1 Byte]:Hum	idity, t	he val	ue= 0 t	o 100		
K		Arg		1	6	4*1 E	Bytes	[2 Byte	s]:Ten	nperat	ure,						
								Temp	>>= 4	;							



				If(Temp & 0x80)
				Temp = (256 – Temp) 0x80
				The unit is (C) ,the highest bit among
				the 8 bits means minus
				[1 Bytes]:Brightness
L	Data	32	0 Byte	No data

[♣] There is no echoed code, since this command is passive processing operation.

(4). Adjust Time -- Extension (0x0504)

♣ This command is used to adjust the time of the LED sign(include second), the difference between this command and the former one is, this command can adjust seconds. The format as the following table:

Table 3.5.4 Command format of adjusting time

			lab	le3.5	.4 Cc	omman	d form	nat	of adj	usting	time			
SYN	Check	Data	Soi	urce	Des	tination	Pack	æt			Arg.			
Code		Len	Add	Iress		dress	Seri		05	04	Len	Flag	Arg.	Data
-	1	<u> </u>		1		1	1			-	-	1	1	1
Α	В	С	ı	D		Е	F		G	Н	- 1	J	K	L
Item	N	ame		Off	set	Siz	е				Descr	iption		
Α	SYN	l Code		C)	2 Byt	es							
В	Che	ckSum		2	2	2 Byt	es							
С	Dat	ta Len		4	ļ	2 Byt	es	Ple	ease r	efer to	Table	1.2 f	or defir	nition in
D	Source	e Addres	SS	6	6	2 Byt	tes	de	tails.					
Е	Destinati	ion addı	ess	8	3	2 Byt	es							
F	Pack	et Seria	I	1	0	2 Byt	es							
G	Maii	n CMD		1:	2	1 By	te	Tin	ne cor	nman	d, the	value=	0x05	
Н	Sub	CMD		1	3	1 By	rte		mmar ue=0		or ac	ljustino	g time	e, the
	Ar	g.Len		1.	4	1 By	rte	Pa	ramet	er of 1	2 Byte	es, fill i	in as 3	
J	F	lag		1:	5	1 By	te	Ec	ho Fla	ag,1=	In-ec	ho; 0	=Echo	
К		Arg		10	6	4*2 Byte		bo [1] in a [1] in a [1] fille	e filled Byte]: as 0x0 Byte]: s 0x22 Byte]: as 0x1 Byte]:	Month Tin as Month Tin Tin Tin Tin Tin Tin Tin Tin Tin Tin	0x200 n. E.g.: E.g.: . E.g te. E.g	05 : Marc 22nd :: 15:0	h. will I will be 0 will t	oo5 will oe filled in oe filled will be



				filled in as 0x08
				[1 Byte]: Week. Value rangle is [0x01,0x07] E.g. Tuesday will be filled in as 0x03; Sunday as 0x01; Saturday as
				0x07
				[1 Byte]: Systematical Time-zone. Please
				refer to the related appendix for more
				information.
				[3 Bytes]: Received.
L	Data	32	0 Byte	No data

(5). Speed limit value put in command (0x0505)

This command is used to put in the speed limit value and offset value of RADAR, The format as following table:

Table3.5.5 Command format of putting in the Speed Limit Value

SYN	Check	Data	So	urce	Des	tination	Pacl	ket	05	05	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Add	Iress	ad	dress	Seri	ial	00	03	Len	i iag	Aig.	Data		
						1										
Α	В	С)		E F			G	Н	1	J	K	L		
Item	Na	ame		Offset		Size		Description								
Α	SYN	l Code		C)	2 Byt	es									
В	Che	ckSum		2		2 Bytes										
С	Dat	a Len		4		2 Byt	es	Ple	ase r	efer to	Table	1.2 fo	r defini	ition in		
D	Source	Addres	SS	6		2 Byt	es	det	ails.							
Е	Destinati	on addı	ess	8		2 Byt	es									
F	Packe	et Seria	I	8		2 Byt	es									
G	Mair	n CMD				1 By	te	Tin	ne cor	nman	d, the	value :	=0x05			
Н	Sub	CMD		1	3	1 By	te		mmar ue=0x		adju	sting	the tin	ne, the		
I	Arg	g.Len		1.	4	1 By	te	Pa	ramet	er of 8	Bytes	s, fill in	as 2			
J	F	lag		1:	5	1 By	te	Echo Flag, 1= In-echo; 0=Echo								
К	,	Arg		1	6	4*2 Byte		[2	Bytes]		d limit t value erved					
L	С	ata		3:	2	0 By	te	No	data							



6. Play control command (0x06)

(1). Replay the file list (0x0601)

This command is used to replay the file list. The format as the following table:

Table 3.6.1 Command format of replaying the file list

	_														
SYN	Check	Data	Sou	urce	Des	tination	Pa	acket	06	01	Arg.	Flag	Arg.	Data	
Code	Sum	Len	Add	Iress	s address		S	erial	00	01	Len	Flay	Alg.	Dala	
1	- 1							1				-	-	1	
Α	В	С	ı	D		Е		F	G	Н	- 1	J	K	L	
Item	Na	ame		Off	set	Size		Description							
Α	SYN	l Code		C)	2 Byte	s								
В	Che	ckSum		2	2	2 Byte	s								
С	Dat	a Len		2	ļ	2 Byte	s	Please refer to Table 1.2 for definition							
D	Source	Addres	SS	6	3	2 Byte	s	detai	ils.						
Е	Destinati	on addr	ess	8	3	2 Byte	s								
F	Pack	et Seria	l	1	0	2 Byte	s								
G	Maii	n CMD		1.	2	1 Byte	е	Play	contro	ol com	mand	, the va	alue=0	x06	
Н	Sub	CMD		1	3	1 Byte	е				olayin	g the fi	le list,		
						, , ,		the v	alue=	0X01					
I	Arç	g.Len		1	4	1 Byte	е	No p	arame	eter, fil	l in as	0.			
J	F	lag		1	5	1 Byte	Э	Echo	Flag,	. 1= lı	n-echo);	Echo		
K	,	٩rg		1	6	0 Byte	е	No p	arame	eter					
L		ata		1	6	0 Byte	е	No d	ata		_	_			

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(2). Replay the current file (0x0602)

This command is used to replay the current file. The format as the following table: Table3.6.2 Command format of replaying the current file



SYN Code	Check Sum	Data Len		urce Iress		tination dress		acket erial	06	02	Arg. Len	Flag	Arg.	Data
	1	1		:				1	- ;	1	<u> </u>	- ;	-	<u> </u>
Α	В	С		D		Е		F	G	Н	- 1	J	K	L
代号	名	3称		偏	移	大小					意义和	1值		
Α	SYN	l Code		C)	2 Byte	s							
В	Che	ckSum		2	2	2 Byte	s							
С	Dat	ta Len		2	1	2 Byte	s	Please refer to Table 1.2 for definition						
D	Source	e Addres	SS	6	3	2 Byte	es	detai	ils.					
Е	Destinati	on addı	ess	8	3	2 Byte	es							
F	Pack	et Seria	I	1	0	2 Byte	s							
G	Maiı	n CMD		1.	2	1 Byte	е	Play control command, the value=0x00						x06
Н	Sub	CMD		1	3	1 Byte	е				playin	g the c	urrent	file,
						,		the v	/alue=	0x02				
I	Arç	g.Len		1	4	1 Byte	е	No p	arame	eter, F	ill in as	0.		
J	F	ag		1	5	1 Byte	е	Echo	Flag.	1= I	n-echc);	cho	
K	,	Arg		1	6	0 Byte	е	No p	arame	eter				
L		Data		1	6	0 Byte	е	No d	lata					

(3). Pause playing (0x0603)

♣ This command is used to pause playing. The format as the following table:

Table 3.6.3 Command format of pausing playing

									<u> </u>	mg pr	, ,			
SYN Code	Check Sum	Data Len		urce Iress		Destination address		et I	06	03	Arg. Len	Flag	Arg.	Data
	<u> </u>	1	<u> </u>						Τ	$\overline{}$	<u> </u>	-	1	<u> </u>
Α	В	С	I)		Е	F		G	Н	- 1	J	K	L
Item	Na	ame		Offset		Size				D	escri	otion		
Α	SYN	l Code		0		2 Byte	es							
В	Che	ckSum		2		2 Byte								
С	Dat	a Len		4	ļ	2 Byte	s Pl	eas	e ref	er to	Table	1.2 fc	r defin	ition in
D	Source	Addres	ss	6	3	2 Byte	s de	details.						
Е	Destinati	on addr	ess	8	3	2 Byte	s							
F	Packe	et Seria	I	1	0	2 Byte	es							
G	Mair	n CMD		1:	2	1 Byte	e Pl	ay c	ontro	ol com	mand	, the va	alue=0	x06
Н	Sub	CMD		1	3	1 Byte	e I			for pa 0x03	using	playin	g,	



I	Arg.Len	14	1 Byte	No parameter, fill in as 0.
J	Flag	15	1 Byte	Echo Flag, 1= In-echo; 0=Echo
K	Arg	16	0 Byte	No parameter
L	Data	16	0 Byte	No data

(4). Continue the play (0x0604)

This command is used to continue the play. The format as the following table:

Table 3.6.4 Command format of continuing the play

						mana i					•	,		
SYN	Check	Data	Soi	ırce	Des	tination	Pa	cket	00	0.4	Arg.	Біла	Δ	Data
Code	Sum	Len	Add	lress	address		Se	erial	06	04	Len	Flag	Arg.	Data
	· i	-			i			1		$\overline{}$	<u> </u>	-	-	:
Α	В	С	ı)	E			F	G	Н	1	J	K	L
Item	Na	ame		Off	Offset S			Description						
Α	SYN	l Code		C)	2 Byte	es							
В	Che	ckSum		2		2 Byte	es							
С	Dat	a Len		4	ļ	2 Byte	es	Plea	se ref	er to	Table	1.2 fc	r defin	ition in
D	Source	Addres	SS	6	3	2 Byte		detai						
Е	Destinati	on addr	ess	8	3	2 Byte	es							
F	Packe	et Seria	I	1	0	2 Byte	es							
G	Mair	n CMD		1:	2	1 Byte	е	Play control command, the val				alue=0	x06	
Н	Sub	CMD		1:	3	1 Byte	е		mand alue=		ntinuir	ng the	play,	
I	Arç	g.Len		1	4	1 Byte			arame		l in as	0.		
J	F	lag		1:	5	1 Byte);	Echo	
K	,	Arg		10	6	0 Byte	е	No p	arame	eter				
L	С	ata		10	6	0 Byte	е	No d	ata					

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(5). Play the next file (Skip the current file) (0x0605)

This command is used to skip the current file and display the next one. The format as the following table:

Table 3.6.5 Command format of playing the next file



SYN	Check	Data	Sou	urce	Des	tination		acket	06	05	Arg.	Flag	Arg.	Data
Code	Sum	Len	Add	lress	ad	dress	S	erial	00	0	Len	riug	, u g.	Data
Α	В	С	ı)		Е		F	G	Н	- 1	J	K	L
Item	Na	ame		Off	set	Size				D	escri	otion		
Α	SYN	l Code		C)	2 Byte	s							
В	Che	ckSum		2	2	2 Byte	s							
С	Dat	a Len		4		2 Byte	s	Plea	se ref	er to	Table	1.2 fc	r defin	nition in
D	Source	Addres	SS	6	6	2 Byte	s	detai	ils.					
Е	Destinati	on addr	ess	8	}	2 Byte	s							
F	Packe	et Seria	l	1	0	2 Byte	s							
G	Mair	n CMD		1:	2	1 Byte	е	Play	contro	ol com	mand	, the va	alue=0	x06
Н	Sub	CMD		1:	3	1 Byte	е	Command for playing the next file				kt file,		
									alue=					
I	Arç	g.Len		1	4	1 Byte	Э	No p	arame	eter, fil	l in as	0.		
J	F	lag		1:	5	1 Byte	Э	Echo	Flag.	. 1= lı	n-echo);	Echo	
K	/	٩rg		1	6	0 Byte	е	No parameter						
L	D	ata		1	6	0 Byte	е	No d	ata	_	_			

[♣] If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table1.3</u> for the format of echoed data.

(6). Play a designated file with priority (Play immediately)(0x0606)

♣ This command is used to play a designated file with priority. After playing the designated file, the system will continue to play the files according to the regular file list. The format as the following table:

Table 3.6.6 Command format of playing a designated file with priority

SYN	Check	Data	Sou	urce	Dest	tination Pa		cet	06	06	Arg.	Flag	۸ra	Data
Code	Sum	Len	Add	ress	ad	dress	Seri	al	00	00	Len	riay	Arg.	Dala
-	- 1	-				1	- 1			-		- 1	-	<u> </u>
Α	В	С	- [)		Е	F		G	Н	- 1	J	K	L
Item	Na	ame		Off	set	Siz	е	Description						
Α	SYN	l Code		0)	2 Byt	es							
В	Che	ckSum		2	2	2 Byt	es							
С	Dat	a Len		4	ŀ	2 Byt	es	Ple	ease r	efer to	Table	e 1.2 fc	or defir	nition in
D	Source	Addres	ss	6	6	2 Byt	es	de	tails.					
Е	Destinati	on addr	ess	8	3	2 Byt								
F	Pack	et Serial		1	0) 2 Byt								



G	Main CMD	12	1 Byte	Play control command, the value=0x06
Н	Sub CMD	13	1 Byte	Command for playing a designated file with priority, the value=0x06
I	Arg.Len	14	1 Byte	Parameter of 16 Bytes, fill in as 4.
J	Flag	15	1 Byte	Echo Flag, 1= In-echo; 0=Echo
К	Arg	16	4*4Bytes	[1 Byte]:Partition number [1 Byte]:Type of the file [12Bytes]:File name (FILE LABEL) [2 Byte]:Reserved
L	Data	32	0 Byte	No data

- Note: If the designated file has been saved in the system, the system will pause playing the current file and play the designated file. After playing this designated file, the system will continue to play the files according to the regular file list.
- ♣ Please refer to the <u>Table1.3</u> for the format of echoed data after the successful operation.

(7).Read the current file (name, content)(0x0607)

This command is used to read the name or the contents of the current file. The format as following table:

Table 3.6.7 Command format of reading the name or the contents of the current file

100	100.0.7		una i	OTTTIC	011	reading the r		IGITI	0 01 1	10 001	iterito	OI tile	ourren	· iiio
SYN Code	Check Sum	Data Len	Sou Addr			ination dress			06	07	Arg. Len	Flag	Arg.	Data
			- 1			1	- 1							<u> </u>
Α	В	С	D)		E	F		G	Н	- 1	J	K	L
Item	N	Name		Off	set	Siz	е				Descr	iption		
Α	SY	'N Code)	C)	2 By	tes							
В	Ch	eckSum	1	2	2	2 By	tes							
С	Da	ata Len		4		2 By	tes	Please refer to Table 1.2 for definition						
D	Sourc	ce Addre	ess	6	6	2 Bytes				eter to	lable	e 1.2 f	or defi	nition in
E		stination	า	8	}	2 By	tes	ae	tails.					
	a	ddress				,								
F	Pac	ket Seri	al	10	0	2 By	tes							
G	Ма	in CMD)	1:	2	1 By	⁄te	Pla	ay con	itrol co	mmar	nd, the	value	=0x06
Н	Sı	ıb CMD		1:	3	1 By	rte.	Со	mmar	nd fo	r rea	ading	the	current
		0				, Dy	Ü	file	(name	e, file)	, the v	alue=	0x07	
I	А	rg.Len		14	4	1 Byte		Pa	ramet	er of 4	Byte:	s, fill in	as 1.	
J		Flag		1:	5	1 Byte		Ne	glecte	ed und	er this	comn	nand.	



К	Arg	16	4*1 Bytes	[1 Byte]: value 1= Read the file name only Value 2= Read the file name and the content [3 Bytes]:Reserved
L	Data	20	0 Byte	No data

♣ The format of echo communication data after the successful operation.

Table 3.6.7 Echoed format of reading the current file command

SYN	Check	Data	Source	Destination	Packet	06	07	Arg.	Flag	Arg.	Data
Code	Sum	Len	Address	address	Serial	00	07	Len	i iay	Alg.	Data
			- 1	- 1	- 1						- 1
Α	В	С	D	Е	F	G	Н	- 1	J	K	L
Item		Na	me	Offset	S	ize		[Descri	ption	
Α		SYN	Code	0	2 B	ytes					
В		Check	Sum	2	2 B	2 Bytes					
С		Data	Len	4	2 B	ytes					
D		Source A	Address	6	2 B	ytes	Ple	ase re	efer to	Table	1.3 for
Е	De	estinatio	n address	8	2 B	2 Bytes		inition	in deta	ails.	
F		Packet	Serial	10	2 B	2 Bytes					
G		Main	CMD	12	1 E	3yte					
Н		Sub	CMD	13	1 E	3yte					
l		Arg. L	ength	14	1 E	3yte	Arg	. Leng	gth = ([Arg.]+3	3)/4

(8).Read the next file (name, content) (0x0608)

♣ This command is used to read the name or the contents of the next file. The format as following table:

Table 3.6.8 Command format of reading the next file

SYN	Check	Data	Source	De	stination	Pack	ket 06		08	Arg.	Flag	Ara	Data
Code	Sum	Len	Address	a	ddress	Seri	al	00	06	Len	riay	Arg.	Dala
-	1	;	i		1	:		ŀ	-	1	i	-	- 1
Α	В	С	D		Е	F		G	Н	- 1	J	K	L
Item	Na	ıme	Offs	et	Size	•			D	escri	ption		
Α	SYN	Code	0		2 Byte								
В	Chec	kSum	2		2 Byte	es	Ple	ase re	fer to	Table	1.2 fc	r defin	ition in
С	Data	a Len	4		2 Byte	es	deta	ails.					
D	Source	Addre	ss 6		2 Byte	es							



E	Destination address	8	2 Bytes	
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	Play control command, the value=0x06
Н	Sub CMD	13	1 Byte	Command for reading the next file(name, contents), the value=0x08
	Arg.Len	14	1 Byte	Parameter of 4 Bytes, fill in as 1.
J	Flag	15	1 Byte	Echo Flag, 1= In-echo; 0=Echo
К	Arg	16	4*1Bytes	[1 Byte]: Value 1=Read only the name of the file Value 2=Read the name and the content [3 Bytes]: Reserved
L	Data	20	0 Byte	No data

- ♣ If the operation is successful, the communication data will be echoed. The data format in details can be found in the Table 3.6.7.
- ♣ Note: If there is no current play file, the echoed code will be 0x6702. This code definition in details can be found in the Appendix.

(9). Play the previous file (Skip the current file) (0x0609)

♣ This command is used to skip the current file and display the previous one. The format as the following table:

Table3.6.9 Command format of playing the previous file

								•	, ,	'				
SYN Code	Check Sum	Data Len		urce Iress		tination dress		cket rial	06	09	Arg. Len	Flag	Arg.	Data
-	1	1		:		1		<u> </u>	i	- 1	ŀ	i	i	
Α	В	С	[D		Е	ı	F	G	Н	- 1	J	K	L
Item	Na	ame		Off	set	Size	!			D	escrip	tion		
Α	SYN	I Code		C)	2 Byte	es							
В	Che	ckSum		2	2	2 Byte	es							
С	Dat	a Len		4	ļ	2 Bytes		Please refer to Table 1.2 for definition						
D	Source	Addre	ess	6	3	2 Byte	es l			er to	lable	1.2 to	r defin	ition in
Е		ination)	8	3	2 Byte		detai	IIS.					
F	Packe	et Seria	al	1	0	2 Byte	es							
G	Mair	n CMD		1.	2	1 Byte	е	Play control command. Value=0x06						
Н	Sub	CMD		1	3	1 Byte	e		mand alue=	-	ying tl	ne pre	vious fi	le,
ı	Arç	g.Len		1	4	1 Byte	е	No p	arame	ter, fill	in as	0		



J	Flag	15	1 Byte	Flag of return code, 1=no return; 0=return
K	Arg	16	0 Byte	No parameter
L	Data	16	0 Byte	No data

(10).Play forward (0x060A)

♣ This command is used to accelerate playing forward. The format is as the following table:

Destination SYN Check Data Source Packet Arg. 06 0a Flag Arg. Data Code Sum Len Address address Serial Len i ł ŀ 1 i ŀ i i į Α В С D Ε G Н Κ L Offset **Item Name** Size **Description** Α SYN Code 0 2 Bytes В CheckSum 2 2 Bytes C Data Len 4 2 Bytes Please refer to Table 1.2 for definition in Source Address D 2 Bytes details. Destination Ε 8 2 Bytes address F Packet Serial 10 2 Bytes G Main CMD 12 1 Byte Play control command, the value=0x06 Command for playing forward, Н Sub CMD 13 1 Byte the value= 0x0a 14 No parameter, fill in as 0. I Arg.Len 1 Byte Echo Flag, 1= In-echo; 0=Echo J Flag 15 1 Byte Κ 0 Byte Arg 16 No parameter Data 16 0 Byte No data

Table 3.6.10 Command format of playing forward

↓ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(11).Play backward (0x060B)

This command is used to play backward. The format as the following table: Table3.6.11 Command format of playing backward



SYN Code	Check	Data Len		urce Iress		tination dress			06	0b	Arg.	Flag	Arg.	Data
Code	Juili	LEII	Auc	1	au	1	3	·	,		Len			
-	:	- 1		:		:		:	i	1	- :	1		i
Α	В	С		D		Е		F	G	Н	I	J	K	L
Item		ame		Off	set	Size				D	escrip	otion		
Α	SYN Co	ode		0		2 Byte	es							
В	CheckS	Sum		2		2 Byte	s							
С	Data Le	n		4		2 Byte	s						.,	
D	Source	Addres	ss	6		2 Byte	s	Please refer to Table 1.2 for definitio details.					ition in	
Е	Destina address			8		2 Bytes		uetai	115.					
F	Packet	Serial		10		2 Byte	s							
G	Main Cl	MD		12		1 Byte	;	Play	contro	ol com	mand,	the va	lue=0x	c 06
Н	Sub CM	1D		13		1 Byte)	Command for playing backward, the value= 0x0b			ırd,			
I	Arg.Len	1		14		1 Byte	;	No p	arame	ter, fill	in as	0.		
J	Flag			15		1 Byte	;	Echo	Flag,	1= Ir	n-echo	; 0=E	cho	
K	Arg			16		0 Byte	;	No parameter						
L	Data			16		0 Byte		No d	lata					

(12).Play next frame (0x060c)

This command is used to control the play of next frame. The format as the following table:

Table 3.6.12 Command format of playing next frame





Е	Destination address	8	2 Bytes	
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	Play control command, the value=0x06
Н	Sub CMD	13	1 Byte	Command for playing next frame, the value=0x0c
I	Arg.Len	14	1 Byte	No parameter, fill in as 0.
J	Flag	15	1 Byte	Echo Flag, 1= In-echo; 0=Echo
K	Arg	16	0 Byte	No parameter
L	Data	16	0 Byte	No data

(13).Read the current play file (0x060D)(extension)

♣ This command is used to read the name or the contents of the current play file, it is the extension command of 0x0607. The format as following table:

Table 3.6.13.1 Command format of reading current play file (extension))

					- ioimae c			,		, ,			
SYN	Check	Data	Sourc	e De	stination	Pad	cket	06	0D	Arg.	Elog	۸ra	Doto
Code	Sum	Len	Addre	ss a	ddress	Se	rial	00	טט	Len	Flag	Arg.	Data
	- 1		-	·	- 1								-
Α	В	С	D		Е		=	G	Н	- 1	J	K	L
Item	Na	ame	0	Offset Size						Descri	ption		
Α	SYN	Code		0	2 Byte	es							
В	Chec	ckSum		2	2 Byte	es							
С	Data	a Len		4	2 Byte	es	Б.			-	406		
D	Source	Addres	s	6	2 Byte	es			eter to	lable	1.2 for	definit	ion in
_	Dest	ination		0	2 D. 44	Bytes		ails					
Е	ado	dress		8	2 Byte	es							
F	Packe	et Serial		10	2 Byte	es							
G	Main	CMD		12	1 Byt	е	Pla	y cont	rol cor	nman	d, the	value=	0x06
							Cor	nman	d for r	eading	the n	ame or	•
Н	Sub	CMD		13	1 Byt	е	con	itent o	f the c	urrent	play f	ile, the	
							valı	ue=0x	0D				
I	Arg	J.Len		14	1 Byt	е	parameter of 8 Bytes, fill in as 2						
J	F	lag		15	1 Byt	e	neglected under this command						



К	Arg	16	4*2 Bytes	[1 Byte]: value 1= Read the file name only Value 2= Read the file name and the content [3 Bytes]:Reserved [2 Bytes]:Size of packets [2 Bytes]:Serial number of packets (counted from 1)
L	Data	24	0 Byte	No data

[♣] If the operation is successful, the data will be echoed. And its format is as the following table:

Table 3.6.13.2 Echoed format of reading current play file command

	Tal	0163.6.	13.2 ECN	bed form	al 0	reading	curre	int play	/ IIIe C	omma	na		
SYN Code	Check Sum	Data Len	Source Address	Destinat addres		Packet Serial	06	0D	Arg. Len	Flag	Arg.	Data	
	-		1	1		1		<u> </u>	<u> </u>		-	<u> </u>	
Α	В	С	D	Е		F	G	Н	- 1	J	K	L	
Item		Nam	ie	Offset		Size			Des	cripti	on		
Α		SYN C	ode	0	2	2 Bytes							
В		Check S	Sum	2	2	2 Bytes							
С		Data L	.en	4	2	2 Bytes							
D	Sc	ource Ad	ddress	6	2	2 Bytes	Dia	ase ı	efer	to Ta	able ′	I.3 for	
Е		Destina	ition	8	9	2 Bytes		ase i inition			abie	1.3 101	
		addre	ss	<u> </u>		Dyles	_ ueii	111111011	iii uca	alis.			
F	P	acket S	Serial	10	2	2 Bytes							
G	I	Main C	MD	12	1	Byte							
Н		Sub C	MD	13		1 Byte							
I		Arg. L	.en	14		1 Byte	Arg	. Len=	([Arg	.]+3)/4			
J		Flag	,	15		1 Byte	The	e value	is 0.	It mea	ns the	echoed	
Ü		1 145	9	10		1 Dyte	data	a					
							[4 E	Bytes]:	Size o	f file			
							[2	_	-		mber	of the	
K		Arg		16	N	l Bytes				(counted from 1)			
		9		. •	·	-,	1 -	Bytes]:					
											-	e path	
							_	the n					
L		Data	a	16+N	N	l Bytes			•	, ,		data is	
							the	e conte	ent of	the cu	rrent pl	ay file.	

Note: if there is no file being displayed, then the return code is: 0x6701, refer to Appendix for more information.



(14).Read the next play file (name or content)(0x060E) (extension)

♣ This command is to read the name or content of the next play file, it is the extension command of 0x0608. The format as the following table:

Table3.6.14 Command format of reading next play file(extension)

						Tiormat				- 15 15.5				
SYN	Check	Data	Sc	ource	De	stination	Pad	cket	06	0E	Arg.	Flag	۸ ۲۵	Dete
Code	Sum	Len	Ad	dress	a	ddress	Se	rial	00	UE	Len	гіау	Arg.	Data
- 1				1		-							-	
Α	В	С		D		Е	F	F	G	Н	- 1	J	K	L
Item	Na	ame		Offs	et	Size					Descri	ption		
Α	SYN	Code		0		2 Byte	es							
В	Chec	ckSum		2		2 Byte	es							
С	Data	a Len		4		2 Byte	es							
D	Source	Addres	s	6		2 Byte	es			ter to	lable	1.2 for	definit	ion in
_	Dest	ination						det	alis					
E	ado	dress		8		2 Byte	es							
F	Packe	et Serial		10)	2 Byte	es							
G	Main	n CMD		12)	1 Byt	е	Pla	y cont	rol cor	nman	d, the	value=	0x06
								Co	mman	d for	read	ling t	he na	me or
Н	Sub	CMD		13	3	1 Byt	е	cor	tent	of th	ne ne	ext p	lay fil	e, the
								val	ue=0x	0E				
I	Arg	J.Len		14	Ļ	1 Byt	е	Pai	amete	er of 8	Bytes	, fill in	as 2.	
J	F	lag		15	5	1 Byt	е	Ech	noed F	lag, ′	1=In-e	cho; (0=Ech)
								[1 E	Byte]:					
								val	ue 1=	Read	the file	name	only	
								Val	ue 2=	Read	the file	e name	e and t	he
V	^	\ ra		40		4*2 D		cor	itent					
K	F	Arg		16)	4*2 By	es	[3 E	Bytes]:	Reser	ved			
								[2 E	Bytes]:	Size o	f pack	et		
								[2	Bytes]: Se	rial n	umbe	r of	oackets
								(0	ounte	d from	1)			
L	D	ata		24		0 Byt	е	No	data					

- ♣ If the operation is successful, the data will be echoed. And its format is as the Table3.6.13.2:
- ♣ Note: If there is no play file, the echoed code will be 0x6702. This code definition in details can be found in the Appendix.



(15).Control the Sound (0x060F)

♣ This command is used to control the buzzer. The format as following table:

Table 3.6.15 Command format of controlling the sound

						iniana re								
SYN	Check	Data	Sc	ource	Des	stination	Pad	cket	06	0F	Arg.	Flag	Arg.	Data
Code	Sum	Len	Ad	dress	a	ddress	Se	rial			Len		_	
				1		1								<u> </u>
Α	В	С		D		Е	F	F	G	Н	1	J	K	L
Item	Na	ame		Offs	et	Size				[Descri	ption		
Α	SYN	Code		0		2 Byte	es							
В	Chec	ckSum		2		2 Byte	es							
С	Data	a Len		4		2 Byte	s	DI.		£	T-1-1-	405		
D	Source	Addres	s	6		2 Byte	S		ase re ails	eter to	rabie	1.2 TO	definit	ion in
Е		ination dress		8		2 Byte	es	uei	alis					
F	Packe	et Serial		10		2 Byte	es							
G	Main	CMD		12		1 Byt	е	Pla	y cont	rol cor	nman	d, the	value=	0x06.
Н	Sub	CMD		13		1 Byt	е		mman value			ing the	e sound	d,
ı	Arg	J.Len		14		1 Byt	е	Pai	ramete	er of 8	Bytes	, fill in	as 2.	
J	F	lag		15		1 Byt	е	Ech	noed F	lag,	1=In-e	cho; (0=Ech)
К		Arg		16		4*2 By		off [1 E who	Byte]: en set 0 = b 1 = b to and Bytes]: Valu	1 = b Mode ting is ouzzes ouzzes other. Leng ues ard '0' = '1' =	of buz open. when when th of b e:'0' to mute buzze	is on; zer. It new f chanç uzzing '9' (Se	is valid ile is re ging fro	eceived. om one
L	D	ata		24		0 Byt	е		Bytes]: data	Rese	iveu			

This command is valid on the control board QS0925.



(16). Start countdown/counting (0x0611)

This command is to start countdown/counting(0X0611), the format as shown below:

Table 3.6.16 Command format of starting countdown/counting

SYN Code	Check Sum	Data Len	Sour Addr		Destir addı	nation ress	Packet Serial	06	11	Arg.	Flag	Arg.	Data	
			- 1											
A	В	C	D		F	Ξ	F	G	Н	I	J	K	L	
 tem		Vame		Off	cot	siz	70			Descr	intion			
 A		N Code		0		2 By				Desci.	ірпоп			
В		eckSum		2		2 By								
С		ata Len		4		2 B								
D		ce Addre	ess		6 21		ytes	Please ret	fer to <u>Ta</u>	ble1.2				
Е		ition add				2 By								
F	Pac	ket Seria	ıl	10	C	2 B								
G	Ma	in CMD)	12	2	1 B	yte	Play cor	ntrol c	omman	d, the	value	= 0x06	
Н	Su	b CMD		13	3	1 B	yte	Start countdown/counting command, value= 0x11						
I	A	rg.Len		14	4	1 B	yte	4 bytes 1	of para	meter	s requ	ired,	fill with	
J		Flag		15	5	1 B	yte	Echoed F	lag, 1=	In-ech	o; 0=	Echo		
K		Arg		16	ô	4 B	yte	[4 Byte] [1 Byte] [1 Byte] [1 Byte] [1 Byte] If time not c time((c)]: day]: Hour]: minu]: Seco of this	Ler te Ler nd Ler part ted	ngth ongth ongth ongth of is 0,	of time of time of time it mea leng	ns it is	
L		Data		16	6	0 B	yte	e No data						

If the command is successful, the loopback status code 0x9000 appears; if not, it means that the operation failed. Please find meaning of the status code in the appendix. Return to data format Table 1.3.

(17). Stop countdown/ counting (0x0612)

♣ This command is to stop countdown/counting(0X0612), the format as shown below:

Table 3.6.17 Command format of stopping countdown/counting



SYN Code	Check Sum	Data Len	Sour			nation ress	Packe Serial	06	12	Arg.	Flag	Arg.	Data			
- 1	-	-	- 1						<u> </u>	1	1	i	<u> </u>			
A	В	С	D)	I	E F		G	Н	I	J	K	L			
Item	ľ	Name		O	ffset	Size				Descr	iption					
A	SY	N Code			0	2 B	ytes									
В	Ch	eckSum			2	2 B	ytes									
C	D	ata Len			4	2 Bytes		D1	C 4- T-	L1-1 O						
D	Sourc	ce Addre	ess		6	2 B	ytes	Please re	ier to <u>1a</u>	bie1.2						
Е	Destina	ation add	lress		8	2 Bytes										
F	Pac	ket Seria	ıl		10	2 Bytes										
G	Ma	in CMD			12	1 Byte		Play control command, the value= 0x06								
Н	Su	b CMD			13	1 B	yte	Stop countdown/counting command, the value= 0x12								
I	A	rg.Len			14		yte	No bytes of parameters required, fi 0			fill wit					
J		Flag			15	1 B	yte	Echoed F	lag, 1=	In-ech	o; 0=	Echo				
K		Arg			16	0 B	yte	No para	neters							
L		Data			16	0 B	yte	No data			_					

If the command is successful, the loopback status code 0x9000 appears; if not, it means that the operation failed. Please find meaning of the status code in the appendix. Return to data format Table 1.3.

(18). Pause countdown/ counting (0x0613)

 \blacksquare This command is to pause countdown/counting(0X0613), the format as shown below:

Table 3.6.18 Command format of pausing countdown/counting

		_	_	ce Destination Pac								
SYN	Check	Data	Sourc	e Desti:			t 06	13	Arg.	Flag	Arg.	Data
Code	Sum	Len	Addre	ss add	address				Len		8	
					- 1							
A	В	C	D]	Е		G	Н	I	J	K	L
Item	N	Name		Offset Si		ze			Descr	iption		
A	SY	N Code		0	0 2 By							
В	Ch	eckSum		2	2 B	ytes						
С	Da	ata Len		4	2 B	ytes	D 1					
D	Sourc	ce Addre	ess	6 2 By		ytes	Please refer to <u>Table 1.2</u>					
Е	Destina	ition add	lress	8	2 Bytes							
F	Pacl	ket Seria	ıl	10	2 Bytes							



G	Main CMD	12	1 Byte	Play control command, the value= 0x06
Н	Sub CMD	13	1 Byte	Pause countdown/counting command, the value= 0x13
I	Arg.Len	14	1 Byte	No bytes of parameters required, fill with 0
J	Flag	15	1 Byte	Echoed Flag, 1=In-echo; 0=Echo
K	Arg	16	0 Byte	No parameters
L	Data	16	0 Byte	No data

If the command is successful, the loopback status code 0x9000 appears; if not, it means that the operation failed. Please find meaning of the status code in the appendix. Return to data format Table 1.3.

(19). Continue countdowm/counting (0x0614)

This command is to continue countdown/counting(0X0614), the format as shown below:

Table 3.6.19 Command format of continuing countdown/counting

								Continui	_					
SYN	Check	Data	Sou	rce	Desti	nation	Packe	et 06		14	Arg.	Flag	Arg.	Data
Code	Sum	Len	Addı	ress	add	ress	Seria	l		1.	Len	1145	7115.	
			- 1					i						
A	В	C	D)	I	Ξ	F	G		Н	I	J	K	L
Item	1	Name		O	ffset	Si	ze				Descr	iption		
A	SY	N Code			0	2 B	ytes							
В	Ch	eckSum			2		ytes							
С	D	ata Len			4		ytes	Please refer to Table 1.2						
D	Sourc	e Addre	ess		6		ytes	Please r	ete	er to <u>Ta</u>	ble1.2			
Е	Destina	tion add	lress		8	2 B	ytes							
F	Pacl	ket Seria	ıl		10	2 B	ytes							
G	Ma	in CMD	1		12	1 B	yte	Play co	on	trol c	omman	d, the	value	= 0x06
Н	Su	b CMD			13	1 B	yte	Continue countdown/counting command, the value= 0x14						
I	A	rg.Len			14	1 B	yte	No bytes of parameters required, fill with 0						
J		Flag			15	1 B	yte	Echoed	Fl	ag, 1=	In-ech	o; 0=	Echo	
K		Arg		16		0 B	yte	No para	am	eters				
L		Data			16	0 B	yte							

If the command is successful, the loopback status code 0x9000 appears; if not, it means that the operation failed. Please find meaning of the status code in the appendix. Return to data format Table 1.3.



7. File control command (0x07)

(1).FDISK partition (0x0701) (No longer supported)

(2).FORMAT (0x0702)

This command is used to format the partition of the disk. The format as the following table:

Table 3.6.11.1 Command format of FORMAT command

SYN	Check	Data	Sc	ource	De	stination	Pad	cket	07	02	Arg.	Flag	Arg.	Data	
Code	Sum	Len	Ad	dress	а	ddress	Se	rial	<u> </u>	02	Len	. iag	, u g.	Data	
. :	1	ŀ		1		1		!	i	- 1	ŀ	i	ł	- 1	
Α	В	С		D		Е	F	=	G	Н	- 1	J	K	L	
Item	Na	ame		Offs	et	Size				D	escri	ption			
Α	SYN	Code		0		2 Byte	s								
В	Chec	kSum		2		2 Byte	s								
С	Data	a Len		4		2 Bytes									
D	Source	Addre	ss	6		2 Byte	es		ase re ails.	ter to	Table	1.2 to	r defin	ition in	
Е	Desti	ination		8		2 Pute		details.							
	ado	dress		0		2 Bytes									
F	Packe	t Seria	ıl	10		2 Bytes									
G	Main	CMD		12		1 Byt	е	File	contr	ol com	mand	, the va	alue= 0)x07	
11	Cub	CMD		13		1 D. d		Coi	mman	d for F	ormati	ting the	e partit	ion,	
Н	Sub	CMD		13	1	1 Byt	Ð	the	value:	=0x02					
I	Arg	.Len		14		1 Byt	е	Parameter of 4 Bytes, fill in as 1.							
J	F	lag		15		1 Byt	e	Ech	noed F	lag,1	=In-e	cho; (=Echc)	
I/	^	ra		10		4*4 D. 4		[1 E	Byte]:	Partiti	on nur	mber, '	D', 'E'		
K	P	rg		16		4*1 Byt	es	[3 E	Bytes]:	the v	alue is	s 0			
L	D	ata		20		0 Byte		None							

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(3).Creating a new folder (0x0703)

This command is used to create a new folder. The format as the following table: Table3.7.3 Command format of creating a new folder



SYN Code	Check Sum	Data Len		urce Iress		tination dress		cket erial	07	03	Arg. Len	Flag	Arg.	Data
1	1	1	•	1		1		1	i	i	1	i	i	i
Α	В	С	I	D		Е	I	F	G	Н	- 1	J	K	L
Item	Na	ame		Off	set	Size				D	escrip	tion		
Α	SYN	l Code	!	C)	2 Byte	s							
В	Che	ckSum		2	2	2 Byte	s							
С	Dat	a Len		4	ļ	2 Byte	s	Б			T. I. I.	40.6		
D	Source	Addre	ess	6	3	2 Byte	S			er to	rable	1.2 10	r aetin	ition in
Е		tination dress)	8	3	2 Byte		detai	iis.					
F	Packe	et Seria	al	1	0	2 Byte	s							
G	Mair	n CMD		1:	2	1 Byte	:	File	contro	comn	nand,	the val	ue=0x	07
Н	Sub	CMD		1	3	1 Byte	•		mand alue=		eating	a new	folder,	
I	Arg	g.Len		1	4	1 Byte		Arg.	Len=	([Arg.]	+3)/4			
J	F	lag		1:	5	1 Byte	:	Echo	ed Fla	ag, 1=	In-ech	no; 0=	Echo	
К	Å	Arg		1	6	N Bytes		the funde	ile pat er disk : Esta	h. E.g. C: "(ablishii	Estat C:\TES ng mu	olishing ST\" Itilevel	g folde	tablish TEST at one JLL
L	D	ata		16-	+N	0 Byte	:	No d	ata					

[♣] If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(4).RENAME (0x0704)

This command is used to rename a file or a folder. The format as the following table.

Table3.7.4 Command format of renaming a file or folder

SYN	Check	Data	Sour	ce Des	tination	Packet	07	0.4	Arg.	Пос	Λ	Data
Code	Sum	Len	Addre	ss ad	dress	Serial	07	04	Len	Flag	Arg.	Data
-	1	-	1		1	i	- ;	-		;	-	-
Α	В	С	D		Е	F	G	Н	- 1	J	K	L
Item												
item	Na	ame		Offset	Size			D	escrip	otion		
A		<mark>ame</mark> I Code		Offset 0	Size 2 Byte			D	escrip	otion		
	SYN					s	se ref				r defin	ition in
Α	SYN Chec	Code		0	2 Byte	s s Plea					r defin	ition in



Е	Destination address	8	2 Bytes	
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	File control command, the value=0x07
Н	Sub CMD	13	1 Byte	Command for renaming a file or folder, the value= 0x04
I	Arg.Len	14	1 Byte	Arg. Len= ([Arg.]+3)/4
J	Flag	15	1 Byte	Echoed Flag, 1=In-echo; 0=Echo
К	Arg	16	N Bytes	[Path of the character string]: its format as following: Source path & file (folder) name + Space+ Target file (folder) name+ NULL (End with NULL, NULL =0)
L	Data	16	0 Byte	No data

(5). Move a file (0x0705)

This command is used to move the file or the folder. The format as the following table:

Table3.7.5 Command format of moving a file or folder

SYN	Check	Data	Sou	ırce	Des	tination	Pa	acket	07	0.5	Arg.		A	D.1.		
Code	Sum	Len	Add	ress	ad	dress	S	erial	07	05	Len	Flag	Arg.	Data		
	<u> </u>	<u> </u>		<u> </u>		1		<u> </u>	- 1	-	<u> </u>	<u> </u>	i	-		
Α	В	С	I)		E		F	G	Н	1	J	K	L		
					_											
Item	Na	ame		Off	Offset Si					D	escrip	otion				
Α	SYN	l Code		C	0 2 E		s	-								
В	Che	ckSum				2 Byte	s									
С	Dat	a Len				2 Byte	s	1								
D	Source	Addre	ess	6	3	2 Byte	s			er to	Table	1.2 fo	r defin	ition in		
Е	Dest	ination			<u> </u>	O Duto		detai	IIS.							
	ado	dress		3)	2 Byte	S									
F	Packe	et Seria	al	1	0	2 Byte	s									
G	Mair	n CMD		1.	2	1 Byte	;	File	control	comn	nand.	Value=	0x07			
Н	Sub	CMD		1	3	1 Byte	;	Move files. Value= 0x05								
I	Arg	g.Len		1	4	1 Byte	;	Arg.	Len= ([Arg.]	+3)/4					
J	F	lag		1	15 1		;	Echo	ed Fla	ag, 1=	In-ecl	no; 0=	Echo			
14		١		4	^	N	[Size of the character string]: Format a					mat as				
K	F	Arg		1	0	Bytes		follov	NS:							



				Source path & file (folder) name + Space+
				Target file (folder) name+ NULL (End by
				NULL, NULL =0)
L	Data	16+N	0 Byte	No data

(6).Delete a file (0x0706)

Under this command, users will be able to delete a file. The format as the following table:

SYN Check Data Source Destination Packet Arg. 07 06 Flag Arg. Data Code Sum Len Address address Serial Len ŀ 1 1 i ŀ 1 ŀ 1 ł 1 i В С D Ε Α G Н K Item Name Offset Size **Description** SYN Code Α 2 Bytes 2 В CheckSum 2 Bytes C Data Len 4 2 Bytes Please refer to Table 1.2 for definition in D Source Address 6 2 Bytes details. Destination Ε 8 2 Bytes address F **Packet Serial** 10 2 Bytes G Main CMD 12 1 Byte File control command. Value= 0x07 Н Sub CMD 13 1 Byte Delete file. Value= 0x06 Arg.Len 14 1 Byte Arg. Len= ([Arg.]+3)/4 1 J Flag 15 1 Byte Echoed Flag, 1=In-echo; 0=Echo Ν [Path& file name]: Path of the deleted file Κ Arg 16 Bytes and the file name (Ended by NULL)) L Data 16 + N 0 Byte No data

Table3.7.6Command Format of Del

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(7). Delete all Text File in a designated section (0x0707)

♣ Under this command, users will be able to delete all the TEXT FILE in a designated partition. The format as the following table:



			ables.	/./ L	relete all	ισχι	IIIC	COIIIII	andi	Official				
SYN Code	Check Sum	Data Len	Sourc		stination ddress		ket rial	07	07	Arg. Len	Flag	Arg.	Data	
· :	<u> </u>				· ·			i	-	<u> </u>	i	i		
Α	В	С	D		Е	F	=	G	Н	- 1	J	K	L	
Item	Na	ame	C	ffset	Size		Description							
Α	SYN	Code		0	2 Byte	es								
В	Chec	ckSum		2	2 Byte	es								
С	Data	a Len		4	2 Byte	es	DI-		£ 1-	T-1-1-	405-		:4:	
D	Source	Addre	ss	6	2 Byte	es		ase re ails.	erer to	rable	1.2 10	r aetin	ition in	
Е		ination dress		8	2 Byte	es	uei	alis.						
F	Packe	t Seria	al	10	2 Byte	es								
G	Main	CMD		12	1 Byt	е	File control command. Value=0x07							
Н	Sub	CMD		13	1 Byt	е		ete th			e in a	a desi	gnated	
I	Arg	J.Len		14	1 Byt	е	4 B	ytes n	eeded	. Fill ir	11.			
J	F	lag		15	1 Byt	е	Ech	noed F	lag, 1	=In-e	cho; C	=Echc)	
К	Δ	Arg		16	4*1 By	tes	-	Byte]: Bytes]:				D', 'E'		
L	D	ata		20	0 Byt	е	No	data						

Table 3.7.7 Delete all text file Command Format

(8). Del all String File in a designated partition. (0x0708)

Under this command, users will be able to delete all the STRING FILE in a designated partition. The format as the following table:

Table 3.7.8 Command Format to delete the String files in a designated partition

SYN	Check	Data	Source	Destination	Packet	07	08	Arg.	Flag	Arg.	Data
Code	Sum	Len	Address	address	Serial	07	00	Len	Flay	Aig.	Dala
- :	- 1	- 1	- 1	- 1	-	-	- 1	- 1	- 1	- 1	
Α	В	С	D	Е	F	G	Н	- 1	J	K	L
Item	Na	ame	Offs	set Size	•		0)escri	ption		
Α	SYN	Code	0	2 Byte	es D	0000 r	ofor to	Tabla	1 2 fo	r dofin	ition in
В	Chec	kSum	2	2 Byte	es		eiei to	rable	1.2 10	or defin	ition in
С	Data	a Len	4	2 Byte	es	etails.					



D	Source Address	6	2 Bytes	
Е	Destination address	8	2 Bytes	
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	File control command. Value=0x07
Н	Sub CMD	13	1 Byte	Delete the SRTING files in a designated partition. Value= 0x08
I	Arg.Len	14	1 Byte	4 Bytes needed. Fill in1.
J	Flag	15	1 Byte	Echoed Flag, 1=In-echo; 0=Echo
K	Arg	16	4*1 Bytes	[1 Byte]: Partition number, 'D', 'E' [3 Bytes]: the value is 0
L	Data	20	0 Byte	No data

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(9).Del all Picture File in a designated partition (0x0709)

Under this command, users will be able to delete all the PICTURE FILE on a designated partition. The format as the following table:

Table3.7.9 Command format of deleting all the PICTURE files in a designated partition

													•			
SYN Code	Check Sum	Data Len		ource dress		stination ddress		cket rial	07	09	Arg. Len	Flag	Arg.	Data		
1	<u> </u>			;					i	- 1	<u> </u>	i	i			
Α	В	С		D		Е	ı	=	G	Н	1	J	K	L		
Item	Na	ame		Offs	et	Size)escri	ption				
Α	SYN	Code		0		2 Bytes										
В	Chec	kSum		2		2 Byte	es									
С	Data	a Len		4		2 Byte	es									
D	Source	Addre	SS	6		2 Byte	es		ase re	fer to	Table '	1.2 for	definiti	ion in		
Е		ination Iress		8		2 Byte	es	aet	ails.							
F	Packe	t Seria	al	10		2 Byte	es									
G	Main	CMD		12		1 Byt	е	File control command. Value=0x07								
Н	Sub	CMD		13	,	1 Byt	е		lete the				a desi	gnated		
I	Arg	.Len		14		1 Byt	е	4 B	ytes n	eeded	. Fill ir	າ1.				
J	F	lag		15)	1 Byt	е	Ecl	noed F	lag,1	I=In-e	cho; C)=Echc)		
К	Д	rg		16	i	4*1 Byt	tes	_	Byte]: Bytes]:				D', 'E'			
L	D	ata		20)	0 Byte	e	No	data	_						



(10). Del all Array Picture File files in a partition (0x070a)

♣ Under this command, users will be able to delete the ARRAY PICTURE files in a designated partition. The format as the following table:

Table3.7.10 Command Format to delete all ARRAY PICTRURE files in a designated partition

							ai titic								
SYN	Check	Data	Sc	ource	De	stination	Pad	cket	07	0a	Arg.	Flag	Arg.	Data	
Code	Sum	Len	Ad	dress	а	ddress	Se	rial	01	Va	Len	i iay	ζig.	Data	
1	- 1	- 1		1		-			i	i	i	i	i	1	
Α	В	С		D		Е	F	F	G	Н	- 1	J	K	L	
Item	Na	ame		Offs	et	Size					Descri	ption			
Α	SYN	Code		0		2 Byte	es								
В	Chec	kSum		2		2 Byte	es								
С	Data	a Len		4		2 Byte	es	1							
D	Source	Addre	SS	6		2 Byte	es	Please refer to Table 1.2 for definition in details.							
Е		ination Iress		8		2 Byte	es	aeı	alis.						
F	Packe	t Seria	al	10)	2 Byte	es								
G	Main	CMD		12)	1 Byt	е	File control command. Value=0x07							
Н	Sub	CMD		13	}	1 Byt	е					PICTU /alue=		e in a	
I	Arg	ı.Len		14		1 Byt	е	4 Bytes needed. Fill in1.							
J	F	lag		15	5	1 Byt	е	Ech	noed F	lag, 1	1=In-e	cho; ()=Echc)	
К	Α	vrg		16		4*1 By	tes	-	Byte]: Bytes]:				D', 'E'		
L	D	ata		20)	0 Byt	е	No	data						

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(11).List the files in the designated folder (0x070b)

Under this command, the users will be able to list out the file name of the designated folder. The format as the following table:

Table 3.7.11.1 DIR Command Format



SYN	Check	Data	Soi	urce	Des	tination	Pa	cket	07	O.b.	Arg.	Біле	Δ	Data
Code	Sum	Len	Add	Iress	ad	dress	Se	erial	07	0b	Len	Flag	Arg.	Data
-	1	-		1		;		1	i	-	-	;	-	- 1
Α	В	С		D		Е		F	G	Н	- 1	J	K	L
Item	N	ame		Offs	et	Size				D	escrip	tion		
Α	SYN	l Code		0		2 Byte	s							
В	Che	ckSum		2		2 Byte	s							
С	Dat	a Len		4		2 Byte	s	Dloa	co rof	or to -	Tabla	1 2 fo	r dofin	ition in
D	Source	Addre	ss	6		2 Byte	s	detai		ei io	Iabie	1.2 10	ı u c iiii	ition in
Е		tination dress	1	8		2 Byte	s	ueta	iio.					
F	Packe	et Seria	al	10)	2 Byte	s							
G	Mair	n CMD		12	2	1 Byte	е	File	control	comm	nand. `	Value=	0x07	
Н	Sub	CMD		13	3	1 Byte	е		ber of e= 0x0		DIR FI	LE an	d files	names
1	Arç	g.Len		14	ļ	1 Byte	е		g = 0 , rwise ,	•			•	as 0
J	F	Sub CMD Arg.Len Flag				1 Byte	e	If Vapara If Value If Value Value	meter. alue=1, ult pari lue=2, lue=3, ult pari lue=4, default alue=5	read to read to read to read partition read partition partition partition read partition partiti	the rothe fonthe Sonthe Fonthe AR	signate oot dir ot librar EXT file TRING	ed path rectory ry. e folde G file fo	of the of the r in the older in ders in
К	Arg 1)	N Bytes	33	[Path length NUL Exarth "C:\TFOICH FON	th of L. mple: EST\" er TES ONT\' T folde	is to ST in direction dire	e folde haraci show isk C Sho sk C.	er]: D ter str the fi	ecided ring. E les un e files	l by the End by der the under



L	Data	16+N	0 Byte	No data
---	------	------	--------	---------

Return communication data format

Table3.7.11.2 DIR Command Return Format

0)/41	Ohaal	Deta	0	Danting		Daalaat			Δ							
SYN Code	Check Sum	Data Len	Source Address	Destination address		Packet Serial	07	0B	Arg. Len	Flag	Flag.	Data				
:	i		1	!		į į		<u> </u>	<u> </u>			i				
Α	В	С	D	E		F	G	Н	- 1	J	K	L				
			T		ı											
Item		Nam		Offset		Size		Description								
Α		SYN C	ode	0	2	Bytes										
В	C	Check	Sum	2	2 Bytes											
С		Data L	_en	4	2	Bytes										
D	Sou	urce A	ddress	6	2	Bytes	Disas		.f., ,	. Ta	bla 1	o for				
Е	С	Destina addre		8	2	Bytes	Pleas defini		efer 1 n deta		ble 1	.3 for				
F	Pa	acket S		10	2 Bytes											
G	ı	Main C	MD	12		1 Byte										
Н		Sub C	MD	13		1 Byte										
I		Arg. L	.en	14		1 Byte	4 Byt	es ne	eded.	Fill in	1.					
J		Flag	,	15		1 Byte	The v	alue	is 0. It	mear	s the	echoed				
J		гιας	9	10		ГБуш	data.									
							[2 By	tes]:	files u	nder t	he fold	er and				
K		Arg		16 4		$1 \; Bytes$	numb	er of	the file	es						
							[2 By	tes]: ı	eserv	ed						
ı		Det		20	N.D.		For data format please see the									
L		Data	1	20	IN.	I Bytes	follow	ing ir	nforma	ation s	tructure	€.				

File structure:

```
typedef struct //DirectoryEntryStructure
    UBYTE badir_name[11];
                              // file name
    UBYTE bdir_attr;
                              // file attribution
    UBYTE bdir_rev;
                              // reserved
    UBYTE bcrt_time_tecth;
                                   // creation time 1. Counted by second
    UWORD wcrt time;
                              // creation time 2. Counted by hour and minute
    UWORD wcrt_date;
                                   // to create a date
    UWORD wlast_acc_time; // last visit time (hour, minute)
    UWORD wfst_clus_hi;
                              //
    UWORD wwrt_time;
                              // last modified time
    UWORD wwrt date;
                              // last modified date
```



UWORD wfst_clus_lo;
ULONG dwfile_size; // file size
}DIRECTORY_ENTRY_STRUCT;

(12).List the files in the designated folder (extension) (0x070C)

The function of this command is the same as last DIR command, but this command provides the function of sending packets to solve the problem of reading large contents(which includes multi directory entries), The format as the following table:

Table3.7.12.1 Command format of DIR extension

		10	JUICC	3.7.12		Comma	ariu it	OIIII	מנטום	III CX	CHOIOI					
SYN	Check	Data	Soi	urce	Des	tination	Pac	ket	07	00	Arg.	Floo	۸۳۵	Dete		
Code	Sum	Len	Add	Iress	address		Ser	rial	07	0c	Len	Flag	Arg.	Data		
		- 1		1			- 1					-	1	-		
Α	В	С		D		Е	F	=	G	Н	1	J	K	L		
				ı			-									
Item	Na	ame		Off	set	Size					Descrip	otion				
Α	SYN	I Code		C)	2 Byte	s									
В	Che	ckSum		2	2	2 Byte	s									
С	Dat	a Len		2	1	2 Byte	s F	Please refer to Table 1.2 for definition in								
D	Source	Addres	SS	6	3	2 Byte	s c	details.								
Е	Destinati	on addr	ess	8	3	2 Byte	ytes									
F	Packe	et Seria	l	1	0	2 Byte	s									
G	Mair	n CMD		1.	2	1 Byte	e C	Command of file control, the value is 0x07								
Н	Sub	CMD		1	3	1 Byte	e c		es an			_		number e value		
I	Arç	g.Len		1	4	1 Byte	e A	٩rg.	Len=	([Arg.]	+3)/4					
J	F	ilag		1	5	1 Byte	t	Why second with se	w: nen 0, ramete nen 1, section nen 2, nen 3 ction; nen 4, ction nen 5, ction	use ter; read to read f read read	he dea	signate of direct rary for T fold NG for	ed path ctory in older; der in older in	shown in the default default default default		



				default section
К	Arg	16	N Bytes	[2 Bytes]: read the number of the directory entries (every directory entry occupies 32 Bytes) [2 Bytes]: start directory entry(means from which directory entry it starts reading) If Flag=0,please see the following instruction [Folder path]: is decided by the string length of folder path, ends with NULL. For example: "C:\TEST\" displays the files under TEST folder in Disk C "C:\FONT\" displays the files under FONT
				folder in Disk C
				, ,
				"C:\T\" displays the files under T folder in Disk C
L	Data	16+N	0 Byte	No data

Format of return data:

Table3.7.12.2 Return format of DIR command

			Tables.7	B. r. r.		II IOIIIIat									
SYN	Check	Data	Source	Destinat	tion	Packet	0.4		Arg.			5 (
Code	Sum	Len	Address	addres	SS	Serial	01	0A	Len	Flag	Flag.	Data			
i		1	1	1						-		<u> </u>			
Α	В	С	D	Е		F	G	Н	- 1	J	K	L			
Item		Name SYN Code		Offset		size		Description							
Α		SYN Code Check Sum		0	2	2 Bytes									
В		Check Sum Data Len		2	2 Bytes		1								
С				4		2 Bytes									
D	Sc	urce Ac	ddress	6	2 Bytes										
_		Destina	tion			2 Bytes		Please refer to Table 1.3 for definition in details.							
E		addre	ss	8		2 Bytes	den	nition	ın det	alis.					
F	Pa	Destination address Packet Serial		10	2 Bytes										
G	ı	Main C	MD	12		1 Byte									
Н		Sub C	MD	13		1 Byte									
1		Arg. L	.en	14		1 Byte	4 B	ytes p	arame	eter are	e neede	ed, fill in			
		Пол	_	45		4 D. da	The value is 0. It means the echo				echoed				
J		Flag	}	15		1 Byte	data	a.							
							[2	Bytes]: Nu	mbers	of d	irectory			
K		Arg		16	4*	1 Bytes	е	ntries	in the	folder					
							[2 E	Bytes]:	reser	ve					



1	Data	20	Data size	Please	see	the	following	data
L	Dala	20	Data Size	struct	ure fo	r data	format	

♣ File structure:

```
typedef struct //DirectoryEntryStructure
{
```

UBYTE badir_name[11]; //file name
UBYTE bdir_attr; //file attribute
UBYTE bdir_rev; //reserve

UBYTE bcrt_time_tecth; // time created 1, calculation of second

UWORD wcrt_time; //time created 2, calculation of hour and minute

UWORD wcrt date; //date created

UWORD wlast_acc_time; //last access time, hour and minute

UWORD wfst_clus_hi; //

UWORD wwrt_time; //last modification time
UWORD wwrt_date; //last modification date

UWORD wfst_clus_lo;

ULONG dwfile_size; //file size

}DIRECTORY_ENTRY_STRUCT;

(13). Obtaining disk information (0x070D)

♣ This command is to read the information of the designated disk, the information includes the type of the disk, the total size and the free size of the disk. The format as the following table:

Table 3.7.13.1 Format of command for obtaining disk information

	- 101	0100.7.	10.1		iiiiat	OI COIII	mai	10 101	Obtail	illig a	OK IIII	Jiiiati	J11	
SYN Code	Check Sum	Data Len	Sou					icket erial	07	0D	Arg. Len	Flag	Arg.	Data
<u> </u>	<u> </u>	-						1	-		1	-	1	· i
Α	В	С)		Е		F	G	Н	-1	J	K	L
Item	Na	ame		Offset		Size	ļ			D	escri	otion		
Α	SYN	l Code		0		2 Byte	es							
В	Che	ckSum		2	2	2 Byte	es							
С	Dat	a Len		4	ļ	2 Byte	es	Please refer to Table 1.2 for definition in						
D	Source	Addres	ss	6	6	2 Byte	es	deta	ils.					
Е	Destinati	on addr	ress	8	3	2 Byte	es							
F	Pack	et Seria	I	1	0	2 Byte	es							
G	Maii	n CMD		1.	2	1 Byte	е	Com	mand	of file	contro	ol, the	value i	s 0x07
Н	Sub	CMD		1	3	1 Byte	е			of ol s 0x0E		ng disl	k infor	mation,
I	Ar	g.Len		14		1 Byte	е	4 By	tes pa	ramete	er are	neede	d, so fi	ill in 1
J	F	ag		1	5	1 Byte	е	This value will be neglected						



K	Arg	16	4 Bytes	[2 Bytes]:disk symbol, for example "D:" [2 Bytes]:reserve
L	Data	20	0 Byte	No data

♣ Format of return data:

Table3.7.13.2 Return format of command for obtaining disk information

SYN	Check	Data	Source	Destinat	ion	Packet	07	0D	Arg.	Пос	Пос	Doto		
Code	Sum	Len	Address	addres	ss	Serial	07	שט	Len	Flag	Flag.	Data		
-			-	1		-		-	-	-	-	-		
Α	В	С	D	Е		F	G	Н	- 1	J	K	L		
Item		Nam	е	Offset		Size	Des	cript	ion					
Α		SYN C	ode	0	2	2 Bytes								
В	(Check S	Sum	2	2	2 Bytes								
С		Data L	ata Len		2	2 Bytes								
D	So	urce Ac	dress	6	2	2 Bytes	Dia			1 ₂ T	ماماء:	10 fa		
Е		Destina	tion	0	,	Distan			refer in det		able 1	1.3 for		
		addre	ss	8		2 Bytes	uen	HILIOH	ın u c ı	alis.				
F	Pa	acket S	Serial	10	2	2 Bytes								
G	N	Main C	MD	12	1 Byte									
Н	;	Sub C	MD	13		1 Byte								
- 1		Arg. L	en	14		1 Byte			arame	eter ar	e need	led , so		
		, g				. <i>Dy</i> .c	fill i	n 5						
J		Flag	1	15		1 Byte	The value is 0. It means the		ins the	echoed				
		1 146	1	10		. Dyto	data	э.						
							[4 E	Bytes]:	total siz	ze				
K		Arg	-	16	4'	*5Bytes	s [4 Bytes]:available space							
							[12 Bytes]:name of disk							
L		Data	Э	36		0 Byte	No	data						

(14). Checking the existence of the designated file (0x070E)

This command is to check the existence of the file in designated path, The format as the following table:

Table3.7.14.1 Command format of checking the existence of designated file

	SYN	Check	Data	Source	De	Destination		cket 07		0E	Arg.	Flag	Ara	Data
C	Code	Sum	Len	Addres	a	ddress	Seria	al	07	0L	Len	i iay	Arg.	Dala
	Α	В	С	D		Е	F		G	Н	1	J	K	L
Ite	em	Na	ıme	Of	fset	Size	•				Descri	ption		
	Α	SYN	Code		0	2 Byte	es	Plea	se re	fer to	Table	1.2 for	definit	ion in
I	В	Chec	kSum		2	2 Byte	es	deta	ils.					



С	Data Len	4	2 Bytes	
D	Source Address	6	2 Bytes	
Е	Destination address	8	2 Bytes	
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	Command of file control, the value is 0x07
Н	Sub CMD	13	1 Byte	Check the existence of the file in designated path, the value is 0x0E
I	Arg.Len	14	1 Byte	Arg. Len= ([Arg.]+3)/4
J	Flag	15	1 Byte	This value will be neglected
K	Arg	16	4*N Bytes	[path]: for example "D:\\T\A" Note: path is ended with NULL(0)
L	Data	16+N	0 Byte	No data

If the file exists, the return code is 0x9000, if the file doesn't exist, the return code is 0x7E01.

8. Unlimited connection display communication (0x08)

(1). To enter into connection display status (0x0801)

This command serves to start the function of connection display, so that network display in the dot matrix format is possible. The format as the following table:

4

Table 3.8.1 To start the connection display status command format

	100	1 C 3.0. I		Juli	t tile t	COLLIGE	tion	изр	nay Sic	itus oc	mina	1011	iiut		
SYN Code	Check Sum	Data Len		urce Iress		ination dress			08	01	Arg. Len	Flag	Arg.	Data	
i :	<u> </u>	<u> </u>		:		1			- 1	i	1	<u> </u>	-	<u> </u>	
Α	В	С	[D		E			G	Н	Ī	J	K	Ĺ	
Item	Na	ame		Offset		Size	9	Description							
Α	SYN	Code		0		2 Byt	es								
В	Chec	ckSum		2		2 Byt	es								
С	Dat	a Len		4	ŀ	2 Byt	es	Б.				405			
D	Source	Addres	s	6	3	2 Byt	es			ter to	lable	1.2 for	definit	ion in	
Е		ination dress		8	3	2 Byt	es	ueu	ails.						
F	Packe	et Serial		10	0	2 Byt	es								
G	Mair	n CMD		1:	10		te		imited ommu			ection ue bei	ng 0x0	display 8	
Н	Sub	CMD		1:	3	1 By	te		rt cor eing 0		n dis	splay	status,	value	
Ī	Arg	J.Len		14	4	1 By	te	4 B	ytes a	re nee	ded, s	so 1 is	added	-	



J	Flag	15	1 Byte	Echoed Flag, 1=In-echo; 0=Echo
K	Arg	16	4*1 Bytes	[1 Byte]: Direction
L	Data	20	0 Byte	No data

(2). To terminate connection display status (0x0802)

♣ This command is used to terminate connection display function. It also can have the system been back to the previous status Schedule Mode status. The format as the following table:

Table3.8.2 Format for terminating connection display status command



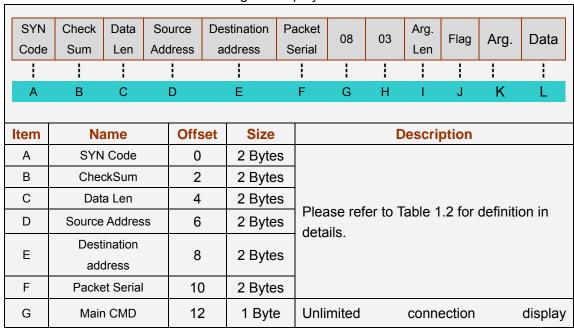
SYN	Check	Data		ource		stination		acket	08	02	Arg.	Flag	Arg.	Data	
Code	Sum	Len	Ad	Idress	address		S	erial		_	Len		_	_	
	i	- 1		!		i		i	i	- 1	i	i	i	<u> </u>	
Α	В	С		D		E		F	G	Н	- 1	J	K	L	
Item	Na	me		Offs	et	Size	Size Description								
Α	SYN	Code		0		2 Byte	s								
В	Chec	kSum		2		2 Byte	s								
С	Data	Data Len 4		4		2 Byte	s								
D	Source Address			6		2 Byte	s	Please refer to Table 1.2 for definition in details.					on in		
Е	Destination		0	0 0 0 0 1		_	uetaiis.								
	address			8 2 Bytes		S									
F	Packe	t Serial		10		2 Byte	s								
G	Main	CMD		10		1 Dute		Unli	mited		conn	ection		display	
G	IVIAIII	CIVID		12		1 Byte		communication value=0x08							
Н	Sub CMD		13		1 Byte	;	Start connection display status value=0x0					e=0x02			
I	Arg.Len 14			1 Byte)	No parameter needed, so 0 is filled in.						in.			
J	Flag 15			1 Byte)	Echoed Flag, 1=In-echo; 0=Echo									
K	Arg 16					0 Byte)	No parameter							
L	Data 16					0 Byte)	No o	data						

(3). To check reception status (0x0803)

This command is used to check the reception buffer-status of the connection display.

The format as the following table:

Table 3.8.3.1 Checking the display status command format





				communication value=0x08
Н	Sub CMD	13	1 Byte	Checking reception status value=0x03
1	Arg.Len	14	1 Byte	No parameter needed, so fill in 0
J	Flag	15	1 Byte	Echoed Flag, 1=In-echo; 0=Echo
K	Arg	16	0 Byte	No parameter
L	Data	16	0 Byte	No data

Comparison of return codes

BufPost	Buf 1	Buf 2	Buf 3	Return code
0	OLD_BUF	CUR_BUF	DISPLAY_BUF	0x8301
1	CUR_BUF	DISPLAY_BUF	OLD_BUF	0x8302
2	DISPLAY_BUF	OLD_BUF	CUR_BUF	0x8303

Nominal meaning of return codes

The 1, 2 and 3 are in the buffer-field: OLD_BUF,CUR_BUF,DISPLAY_BUF

0x8301: buffers ① and ② are being displayed, while buffer ③ is not. Among which ① is moving out, and ② is moving in;

0x8302: buffers ② and ③ is being displayed, while buffer ① is not. Among which ② is moving out, and ③ is moving in.

0x8303: buffers @ and @ is being displayed, while buffer @ is not. Among which @ is moving out, and @ is moving in.

If the system is not in the status of unlimited continuous display mode, it will return to 0x8305.

(4). Data download command (0x0804)

This command functions is to download the dot matrix data into the buffer-fields of the LED display. The format as the following table:

Table 3.8.4.1 Data download command format

	Tables.o.4.1 Data download confinant format														
SYN Code	Check Sum	Data Len	Source				cket rial	08	04	Arg. Len	Flag	Arg.	Data		
-	<u> </u>	- 1	- 1	i			<u> </u>	1	-	<u> </u>	-	i	<u> </u>		
Α	В	С	D) E		F	=	G	Н	- 1	J	K	L		
Item	Na	ıme	С	ffset	Siz	е				Descri	ption				
Α	SYN	Code		0 2 Bytes											
В	Chec	kSum		2	2 Byt	es									
С	Data	a Len		4	2 Byt	es	ы	DI () TII (0)				.1 . C . '	finition in		
D	Source Address		s	6	2 Byt	es	Please refer to Table 1.2 for definit details.				tion in				
E	Destination			0 0		O.D. de c		uctans.							
E	ado	Iress		8 2 Byte		es									
F	Packe	t Serial		10	2 Byt	es									
G	Main	CMD		12	0 4.0		Unl	imited		conti	nuous		display		
G	Main CMD			12		1 Byte		communication. Value =0x08.							
Н	Sub	Sub CMD 13 1 Byte					Data download command. Value = 0x04.								



I	Arg.Len	14	1 Byte	2 is filled in because an 8 Byte parameter is needed.
J	Flag	15	1 Byte	Echoed Flag, 1=In-echo; 0=Echo
К	Arg	16	4*2 Bytes	 [2 Bytes]: Size of package (All packages should be in the same size.) [2 Bytes]: Total packages [2 Bytes]: Current package. The value of the package 1 is 0x01. The value of package 2 is 0x02. The value of package 3 is 0x03. The other packages are valued in the same manner(Alert: Data sending should be in sequence) [2 Bytes]: Reserved.
L	Data	24	N Bytes	Format of the dot data should be decided by opening the setting of connecting display format. Please find Table 3.8.1.

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

4

9. Non Word-wrap play (0x09)

(1). Entering into non word-wrap play mode (0x0901)

This command is to activate non word-wrap function. Under non word wrap condition, it will display according to the files in the SEQUENT file. The format as the following table:

Table 3.8.1 Command format of activating non word-wrap display mode

											<u> </u>	. ,		
SYN Code	Check Sum	Data Len		urce Iress		stination ddress		acket erial	09	01	Arg. Len	Flag	Arg.	Data
-	ł	- 1		:		ŀ		1	i	- 1	i	- 1	-	-
Α	В	С	I	D		Е		F	G	Н	1	J	K	L
Item	N	ame		Offs	set	Size				D	escri	otion		
Α	SYN	l Code		0		2 Byte	s							
В	Che	ckSum		2		2 Byte	S							
С	Dat	ta Len		4		2 Byte	s	Pleas	se ref	er to T	able 1	.2 for o	definitio	n in
D	Source	e Addres	ss	6		2 Byte	s	detai	ls.					
Е	Destinati	on addı	ess	8		2 Byte	s							
F	Pack	et Seria	I	10)	2 Byte	s							
G	Maii	n CMD		12	2	1 Byte	Э		word e=0x0	l-wrap 9.	disp	lay co	ommun	ication.



Н	Sub CMD	13	1 Byte	Start non word-wrap display status. Value=0x01.
I	Arg.Len	14	1 Byte	1 is filled in, because 4 Bytes are needed.
J	Flag	15	1 Byte	Echoed Flag, 1=In-echo; 0=Echo
К	Arg	16	4*1 Bytes	[1 Byte]: Display mode 0x0 = Continuous move 0x1 = Move one frame, then followed by a pause. [1 Byte]: Direction 0x00 Move left 0x01 Move right [1 Byte]: Speed 0x00 Fastest 0x06 Slowest (7 levels) [1 Byte]: When in the second display mode, this position is duration time of pause. The unit is "second". Otherwise it carries no meaning.
L	Data	20	0 Byte	No data

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the <u>Table1.3</u> for the format of echoed data.

(2). Terminating non word-wrap display Status (0x0902)

♣ This command functions to close the non word-wrap display function. The format as the following table:

Table3.8.2 Stop command for non word-wrap display status

	Table 3.6.2 Stop confinantiation from word-wrap display status														
											1				
SYN	Check	Data	Soi	urce	De	stination	Packe			00	Arg.		Λ	D-4-	
Code	Sum	Len	Add	lress	a	ddress	Seria)9	02	Len	Flag	Arg.	Data	
•	1	•		1		1						•		•	
- :	:	:		:	:		:		:	:	:	:	:	<u>:</u>	
Α	В	С		D	Е		F	(G	Н	- 1	J	K	L	
Item	Na	ame		Offs	et	Size		Description							
Α	SYN	l Code		0		2 Bytes	6								
В	Che	ckSum		2		2 Bytes	3								
С	Dat	a Len		4		2 Bytes	S Ple	ase	refe	r to Ta	able 1.	2 for d	efinitio	n in	
D	Source	Addres	ss	6		2 Bytes	s det	ails.							
Е	Destinati	on addr	ess	8		2 Bytes	3								
F	Packe	et Seria		10)	2 Bytes	3								
G	Mair	n CMD		12	<u>)</u>	1 Byte	Sto	•		non ation. \		rd-wra :0x09	р	display	
Н	Sub	CMD		13	3	1 Byte	Sto	p no	n w	ord-wi	rap dis	splay. \	/alue=0	0x02	
I	Arç	g.Len		14		1 Byte	No	No parameter is needed. Please			ase fill i	n 0			



J	Flag	15	1 Byte	Echoed Flag, 1=In-echo; 0=Echo
K	Arg	16	0 Byte	No parameter
L	Data	20	0 Byte	No data

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

10. Log-In operation (0x0A)

(1).Log-In operation (0x0A01)

This command is to log in to the system. If Log In is required when the system configuration is being made, the user can operate on the LED sign only through this Log In. The format as the following table:

SYN Check Data Source Destination **Packet** Arg. 0A 01 Flag Arg. Data Code Sum Address address Serial Len Len Α В C D Е G н **Item** Name Offset Size **Description** 0 Α SYN Code 2 Bytes В CheckSum 2 2 Bytes С Data Len 4 2 Bytes Please refer to Table 1.2 for definition in Source Address 2 Bytes D 6 details. Ε **Destination address** 8 2 Bytes F Packet Serial 10 2 Bytes G Main CMD 12 1 Byte User management, value =0x0A Н Sub CMD 13 1 Byte Log on to the system, value=0x01 ı Arg.Len 14 1 Byte 20 Bytes parameter is needed, so fill in 5 J Flag 15 1 Byte Echoed Flag, 1=In-echo; 0=Echo 4*5 [14 Bytes]:User's name, ends with NULL K Arg 16 Bytes [6 Bytes]:password L Data 36 0 Byte No data

Table3.10.1 Format of Log In command

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(2).Log-Out operation (0x0A02)

This command is to log out the system, once it is logged out, the user can not have any operation then. The format as the following table:

Table3.10.2 Format of Log-Out command



SYN Code	Check Sum	Data Len		urce Iress		tination dress		acket erial	0A	02	Arg. Len	Flag	Arg.	Data	
	1							1	- 1	T		-	T	<u> </u>	
Α	В	С	I	D	E			F	G	Н	- 1	J	K	L	
Item	Na	ame		Off	set	Size	!	Description							
Α	SYN	l Code		C)	2 Byte	es								
В	Che	ckSum		2	2	2 Byte	es								
С	Dat	ta Len		4		2 Byte	es	Plea	se refe	er to Ta	able 1	.2 for o	definitio	n in	
D	Source	e Addres	SS	6	3	2 Byte	es	detai	ils.						
Е	Destinati	on addr	ess	8	3	2 Byte	es								
F	Pack	et Seria	I	10	0	2 Byte	es								
G	Maii	n CMD		1:	2	1 Byte	е	User	mana	igeme	nt, val	ue =0	к0А		
Н	Sub	CMD		1:	3	1 Byte	е	Ope	ration	of Use	r's log	g-out, ν	/alue=0	0x02	
ı	Arg	g.Len		14	4	1 Byte	е	No p	arame	eter is	neede	d, so 1	fill in 0		
J	F	lag		15		1 Byte	е	Echo	ed Fla	ag,1=	=In-ec	ho; 0:	=Echo		
K	,	Arg		10	6	0 Byte	е	No p	arame	eter					
L		Data		10	6	0 Byte	е	No d	ata						

If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(3). Changing password (0x0A03)

This command is to change the User's password, and this operation can be carried out only after Log-on. The format as the following table:

Table3.10.3 Format of changing password command

SYN Code	Check Sum	Data Len	Source Address		stination ddress		ket rial	0A	03	Arg. Len	Flag	Arg.	Data
-	1		1	i address				1	1		•	1	:
A	В	С	D		F	i i E F		G	Н	÷	J	K	1
												11	-
Item	Na	ame	Off	set	Size	•				Descri	ption		
Α	SYN	Code	()	2 Byte	es							
В	Chec	ckSum	2	2	2 Byte								
С	Data	a Len			2 Byte	es	Please refer to Table 1.2 for definit						
D	Source	Addres	s (6	2 Byte	es		ase re ails.	eter to	lable	1.2 for	definit	ion in
E	Dest	ination	9			26	uei	alis.					
_	ado	dress		,	2 Byte	,,,							
F	Packe	et Serial	1	0	2 Byte	es							



G	Main CMD	12	1 Byte	User management, value =0x0A
Н	Sub CMD	13	1 Byte	Changing password, value=0x03
I	Arg.Len	14	1 Byte	28 Bytes parameter is needed, so fill in 7
J	Flag	15	1 Byte	Echoed Flag, 1=In-echo; 0=Echo
К	Arg	16	4*7 Bytes	[14 Bytes]:User's name[6 Bytes]:old password[6 Bytes]:new password[2 Bytes]:reserved
L	Data	44	0 Byte	No data

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

11. Pixel Detecting Command (0x10)

- (1). Trigger Pixel Detecting Operation (0x1001)
- The function of this command is to trigger the real-time pixel detection of the displays.

 The introduction of the format is as follows:

SYN Check Data Source Destination Packet Arg. 10 01 Flag Arg. Data Code Sum Len Address address Serial Len Ĭ Ī Ŧ Ī ł Ī Т ı Α В C D Е Item Name Offset Size Description Α SYN Code 0 2 Bytes 2 В CheckSum 2 Bytes С Data Len 4 2 Bytes Please refer to Table 1.2 for definition in D Source Address 6 2 Bytes details. Ε **Destination address** 2 Bytes F 10 Packet Serial 2 Bytes G Main CMD 12 1 Byte Pixel diagnosis, value=0x10 Н Sub CMD 13 1 Byte Trigger pixel diagnosis, value=0x01 I 14 Arg.Len 1 Byte O Bytes parameter is needed, so fill in 7 J Flag 15 Echoed Flag, 0=Echo 1 Byte K Arg 16 0 Bytes L Data 36 0 Byte

Table 3.11.1 The format of triggering pixel detection command.

♣ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix.



L

Data

36

Please refer to the <u>Table1.3</u> for the format of echoed data.

(2). Read the Result of Pixel Diagnosis (0x1002)

The function of his command is to read the result of pixel diagnosis. Following is the format description.

SYN Check Source Destination Packet Arg. 10 02 Flag Data Arg. Sum Address Code Len address Serial Len I I I D Е Н Offset Item Name Size Description 0 Α SYN Code 2 Bytes 2 В CheckSum 2 Bytes C Data Len 4 2 Bytes Please refer to Table 1.2 for definition in D Source Address 6 2 Bytes details. Ε **Destination address** 8 2 Bytes F Packet Serial 10 2 Bytes G Main CMD 12 1 Byte Pixel diagnosis, value=0x10 Read the result of pixel Н Sub CMD 13 1 Byte diagnosis, value=0x02 I 14 4 Bytes parameter is needed, fill in1 1 Byte Arg.Len In the message reading command, this flag J Flag 15 1 Byte is invalid [2 Bytes]:set the size of packages Κ 4 Bytes [2 Bytes]:read the serial No. of packages, Arg 16

Table 3.11.2 The format of reading the result of pixel diagnosis.

If the command operation is successful, the echo is as follows. The status code information in details can be found in the Appendix. Please refer to the Table 1.3 for the format of echoed data.

0 Byte

start from 1

No data

SYN Check Data Source Destination Packet Arg. 0B 02 Flag Arg. Data Code Sum Len Address address Serial Len ł 1 Item Name Offset Size Description Α SYN Code 2 Bytes For definition in detail, please refer

Table3.11.3 The echo format of pixel diagnosis reading command



В	Check Sum	2	2 Bytes	to Table 1.3: The echo data format of
С	Data Len	4	2 Bytes	common communication.
D	Source Address	6	2 Bytes	
E	Destination	8	2 Putos	
	address	0	2 Bytes	
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	
Н	Sub CMD	13	1 Byte	
I	Arg. Length	14	1 Byte	8 Bytes parameter is needed, fill in2
J	Flag	15	1 Byte	value=0, data echoed.
				[2 Bytes]:Size of the file
K	Ara	16	4*2 Bytes	[2 Bytes]:Package serial NO.
IX.	Arg.	10	4 2 Dyles	[4 Bytes]: Size of the file (used
				when the file is big)
	Data	24	Read the	The file content of Pixel diagnosis
L	Dala	24	size	(Text)

12、FTP/HTTP Switch (5800 mainboard) Command(0x11)

(1).FTP/HTTP Write Switch Command (0x1101)

♣ The function of this command is to control the write switch of 5800FTP/HTTP. Format description is as follows:

Table3.12.1 Format of Write FTP/HTTP Switch Command

SYN	Check	Data	Soi	ırce	Des	tination	Pa	cket	40	0.4	Arg.		Δ	Data	
Code	Sum	Len	Add	ress	ad	dress	Se	erial	10	01	Len	Flag	Arg.	Data	
1	· ;					1		1	-		<u> </u>		1		
Α	В	С)		E		F	G	Н	1	J	K	Ĺ	
Item	N	ame		Of	fset	Size					Description				
Α	SYN	l Code		C)	2 Byte	s								
В	Che	ckSum		2	2	2 Bytes									
С	Dat	ta Len		4		2 Bytes				tion ir	n deta	ail, ple	ease r	efer to	
D	Source	Addres	SS	6	6	2 Byte	es	Table	<u>e1.2</u> .						
Е	Destinati	on addr	ess	8	3	2 Bytes									
F	Pack	et Seria	I	1	0	2 Bytes									
G	Maiı	n CMD		1:	2	1 Byte	е	FTP/HTTP switch , value: 0x11							
Н	Sub	CMD		1:	3	1 Byte	е	V	Vite F	ГР/НТ	TP sw	itch va	alue: 0	x01	
I	Arg	g.Len		1	4	1 Byte	е	0 By	tes pa	ramet	er is n	eeded	, fill in ()	
J	F	lag		1:	5	1 Byte	е	Echo	ed Fla	ag, 0=	=Echo				
K	,	Arg		1	6	4 Byte	s	No d	lata.						
L		Data		1	6	4 Byte	е	[1 By	/tes]: F	-TP	1 turn	on / 0	turn of	f	



		[1 Bytes]: HTTP 1 turn on / 0 turn off
		[2 Bytes]: Reserve

↓ If the status code is 0x9000, the command operation is successful. If not, the operation fails. The status code information in details can be found in the Appendix. Please refer to the Table1.3 for the format of echoed data.

(2).FTP/HTTP Read Switch Command (0x1102)

♣ The function of this command is to control the read switch of 5800FTP/HTTP. Format description is as follows:

SYN Source Destination Check Data **Packet** Arg. 10 02 Flag Data Arg. Sum Address address Code Len Serial Len Ŧ Ŧ Т Α В С D Ē G Н Offset Size **Item** Name Description Α SYN Code 0 2 Bytes В CheckSum 2 2 Bytes С Data Len 4 2 Bytes For definition in detail, please refer D Source Address 6 2 Bytes toTable1.2 Ε **Destination address** 8 2 Bytes F Packet Serial 10 2 Bytes G Main CMD 12 1 Byte FTP/HTTP switch, value: 0x11 Н Sub CMD 13 1 Byte Read FTP/HTTP switch value: 0x02 1 Arg.Len 0 Bytes parameter is needed, fill in 1 14 1 Byte J Flag 15 1 Byte Echoed Flag, 0=Echo K Arg 16 0 Bytes L Data 16 0 Byte No data

Table3.12.2 Format of Read FTP/HTTP Switch Command

♣ Echo FTP/HTTP status if the operation is successful. Please refer to the following table for the echo fomat. If the operation is failed, return to status code. The status code information in details can be found in the Appendix.

13. Operational order of VPU3400 (0x34)

(1). Choose video input channel (0x3401)

Use for switching video source.

Table3.11.1 log-in command format

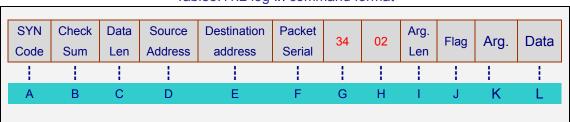


			ı															
SYN	Check	Data		urce		tination		cket	34	01	Arg.	Flag	Arg.	Data				
Code	Sum	Len	Add	Iress	ad	dress	Se	erial			Len		, u.g.					
														<u>:</u>				
Α	В	С		D		Е		F	G	Н	1	J	K	L				
	1			1														
Code	N	lame		Off	set	Size					Descrip	otion						
Α	SY	N Code	!	()	2 Byte	es											
В	Che	eckSum)	2	2	2 Byte	es											
С	Da	ata Len		4	1	2 Byte	es	DI		4 . T	-1-1-4	O fa al	_ £::4: _					
D	Sourc	e Addre	ess	6	3	2 Byte	es i	Please refer to <u>Table1.2</u> for definition in details.										
E		stination ddress	1	8	3	2 Byte		uetai	115.									
F	Pack	ket Seria	al	1	0	2 Byte	es											
G	Ма	in CMD		1	2	1 Byte	е	Oper	ration	n of VPU3400, the value=0x34								
Н	Su	b CMD		1	3	1 Byte	е	Cho	ose the	e vide	video source, the value=0x02							
1	A	rg.Len		1	4	1 Byte	е	Requ	uire 4	bytes,	fill in a	as 1						
J		Flag		1	5	1 Byte	е	Echo	Flag,	1= In	-echo;	0=E	cho					
К		Arg		1	6	4*1 Bytes	6			2: C	_Video VBS1 VBS2 VBS3 GA DI DMI	D						
L		Data		2	0	0 Byte	_	No d										

(2). Set display mode (0x3402)

Set the overlay model of DVI window and video window.

Table3.11.2 log-in command format





Code	Name	Offset	Size	Description					
Α	SYN Code	0	2 Bytes						
В	CheckSum	2	2 Bytes						
С	Data Len	4	2 Bytes						
D	Source Address	6	2 Bytes	Please refer to <u>Table1.2</u> for definition in					
Е	Destination address	8	2 Bytes	details.					
F	Packet Serial	10	2 Bytes						
G	Main CMD	12	1 Byte	Operation of VPU3400, the value=0x34					
Н	Sub CMD	13	1 Byte	Set display mode, the value=0x02					
I	Arg.Len	14	1 Byte	Require 4 bytes, fill in as 1					
J	Flag	15	1 Byte	Echo Flag, 1= In-echo; 0=Echo					
				[1 Bytes]: 0: DVI					
				1: Video					
				2: Below DVI					
				3: Below Video					
K	Arg	16	4*1	4: Mix					
I K	Aig	10	Bytes	5: Character generator					
				[1 Bytes]: In the mixed model, the byte is					
				used to set transparency; the					
				value is from 0-100.					
				[2 Bytes]: Reserve					
L	Data	20	0 Byte	No data					

(3). Set display scale of video window (0x3403)

Set display scale of video window.

Table3.11.3 log-in command format

SYN	Check	Data	Sou	urce	Des	tination	Pa	cket	34	03	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Add	Iress	ad	dress	Se	erial	54	03	Len	i iay	Alg.	Dala		
	- 1															
Α	В	С	I	D		Е		F	G	Н	1	J	K	L		
Code	N	lame		Off	set	Size					Descrip	otion				
Α	SY	N Code		C)	2 Byte	es									
В	Che	eckSum		2	2	2 Byte	es	Plea	se refe	er to T	able1.	2 for d	efinitio	n in		
С	Da	ata Len		4	1	2 Byte	es	detai	ils.							
D	Sourc	e Addre	ess	6	3	2 Byte	es									



E	Destination address	8	2 Bytes	
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	Operation of VPU3400, the value=0x34
Н	Sub CMD	13	1 Byte	Set the display scale of video window, the value=0x03
I	Arg.Len	14	1 Byte	Require 4 bytes, fill in as 1
J	Flag	15	1 Byte	Echo Flag, 1= In-echo; 0=Echo
К	Arg	16	4*1 Bytes	[1 Bytes]: 0: Fill in the window 1: 16:10 2: 16:9 3: 5:4 4: 4:3 5: 3:2 [3 Bytes]:Reserve
L	Data	20	0 Byte	No data

(4).Set DVI window (0x3404)

Set the position and the size of DVI window.

Table3.11.4 log-in command format

SYN Code	Check Sum	Data Len		urce		tination dress		cket erial	34	04	Arg. Len	Flag	Arg.	Data	
	-	-				1		1	T	1		1	1	<u> </u>	
Α	В	С	I)		Е		F	G	Н	- 1	J	K	L	
Code	N	lame		Off	set	Size		Description							
Α	SY	N Code)	C)	2 Byte	es								
В	Che	eckSum)	2	2	2 Byte	es								
С	Da	ata Len		4	ļ	2 Bytes		DI.		C .	s is it s at	O (. 		
D	Sourc	e Addre	ess	6	3	2 Bytes				fer to T	<u>abie1.</u>	2 for a	etinitio	n in	
Е		stination ddress	1	8	3	2 Byte		detai	iiS.						
F	Pack	ket Seria	al	10	0	2 Byte	es								
G	Ма	in CMD		1:	2	1 Byte	е	Ope	ratior	of VPI	J3400	, the v	alue=0	x34	
Н	Su	b CMD		1:	3	1 Byte	е			positio he valu			size	of DVI	
I	А	rg.Len		14	4	1 Byte	е	Requ	uire 4	bytes,	fill in a	as 1			



J	Flag	15	1 Byte	Echo Flag, 1= In-echo; 0=Echo
К	Arg	16	4*1 Bytes	[2 Bytes]: 0: Set the X coordinate of window. 1: Set the X coordinate of window. 2: Set the width of window. 3: Set the height of window. [2 Bytes]:The set value
L	Data	20	0 Byte	No data

(5) .Set video window (0x3405)

Set the position and the size of video window.

Table3.11.5 log-in command format

						1.0 .09								
SYN	Check	Data	Soi	urce	Des	tination	Pa	acket	34	05	Arg.	Floor	۸۳۵	Dete
Code	Sum	Len	Add	Iress	ad	address		erial	34	05	Len	Flag	Arg.	Data
	- 1							1						-
Α	В	С		D		Е		F	G	Н	- 1	J	K	L
Code	N	lame		Off	set	Size					Descri	otion		
Α	SY	N Code	!	C)	2 Byte	s							
В	Che	eckSum	1	2	2	2 Byte	s							
С	Da	ata Len		4	ļ.	2 Byte	s	Division of the Table 4.0 for the factors in						
D	Sourc	e Addre	ess	6	3	2 Byte	s		Please refer to <u>Table1.2</u> for definiti			efinitio	n in	
_	Des	stination	1			0.5.4		deta	IIS.					
Е	ac	ddress		8	3	2 Bytes								
F	Pack	ket Seri	al	1	0	2 Byte	s							
G	Ма	in CMD	ı	1:	2	1 Byte	е	Ope	ration	of VPI	J3400	, the v	alue=0	x34
Н	Su	b CMD		1	3	1 Byte	е		the p				size o	f video
I	A	rg.Len		1.	4	1 Byte	е	Requ	uire 4 l	bytes,	fill in a	as 1		
J		Flag		1:	5	1 Byte	е	Echo	Flag,	1= In	-echo;	0=E	cho	
								[2 E	Bytes]:	0: 5	Set th	e X	coordir	nate of
								wind	OW.					
1/		٨٠٩		4.	e	4*1				1: 8	Set th	e X	coordi	nate of
r.	K Arg 16	Bytes		s window.										
]		2: Set the width of windo					ow.				
					3: Set the height of window						dow.			



				[2 Bytes]: The set value
L	Data	20	0 Byte	No data

(6). Set the video parameter (0x3406)

Set the brightness, contrast ratio and saturation level of window.

Table 3.11.6 log-in command format

	Table3.11.6 log-in command format																
SYN	Check	Data	So	urce	Des	tination	Pack	et	34	06	Arg.	Floo	Ara	Deta			
Code	Sum	Len	Add	Iress	address		Seria	al	34	06	Len	Flag	Arg.	Data			
							- 1										
Α	В	С		D		Е			G	Н	1	J	K	L			
				I													
Code		lame			fset Size			Description									
Α		N Code			0 2 6			_									
В		eckSum	1	2		2 Byte											
С		ata Len		2	1	2 Byte	s P	Please refer to <u>Table1.2</u> for definition in									
D	Sourc	e Addre	ess	6	3	2 Byte	S I			JI 10 <u>1</u>	abic i.	<u>_</u> 101 u	Cilinao				
Е		stinatior ddress	1	8	3	2 Byte		details.									
F	Pack	ket Seria	al	1	0	2 Byte	s										
G	Ма	in CMD		1.	2	1 Byte	e 0	Operation of VPU3400, the value=0x34									
Н	Su	b CMD		1	3	1 Byte	e S	Set the video parameter, the value=0x05									
I	A	rg.Len		1	4	1 Byte	e R	Require 4 bytes, fill in as 1									
J		Flag		1	5	1 Byte	e E	Echo Flag, 1= In-echo; 0=Echo									
К		Arg		1	6	4*1 Bytes	10 2 3 0- 4 0- 5	0: \$\\ 60\\ 1: \$\\ 01 \\ 2: \$\\ 3: \$\\10 \\ 4: \\15 \\ : \$\\ alue \\ 60: \$\\	Set the 00 et the 00 Set the Set the 10 Set	tone. satura he sh he righ 12 e up	Effect ation lonarpne	atio. E ive va evel. E ss. Ef	ffective lue: -90 ffective ffective	value: value: value: value: value: value: value:			



				7: Revert to the default value.
				[2 Bytes]: The set value
L	Data	20	0 Byte	No data

(7). Read configuration files (0x3407)

The route of the configuration files of VPU3400 is "D:\\CUSTOM.SYS". Please use JetFileII file read command to read this file. The file consists of the file header and specific configuration information. Forms as following:

```
// the file header of configuration file
typedef struct
    INT16U SynCode;
                              //header identifier
                          //header bytes
    INT16U HeadSize:
    INT16U Version;
                          //version number
    INT16U FileType;
                         //file type
    INT16U CheckSum;
                            //check sum in data field
    INT16U Year;
                          //the established year of file (BCD code)
    INT8U Month;
                          // the established month of file (BCD code)
    INT8U Day;
                           // the established day of file (BCD code)
    INT8U Hour;
                          // the established time of file (BCD code)
    INT8U Minute;
    INT8U Second;
    INT8U Week:
                           // the established week of file (BCD code). 1 for Sunday, 2 for Monday...
    INT32U DataSize;
                          // bytes in data field
    INT8U Rev[10];
}FILE_HEAD;
// configuration information
typedef struct
    INT16U ScrX;
                         //X coordinate of display 0
    INT16U ScrY;
                         // Y coordinate of display 2
    INT16U ScrW;
                         //width of display
    INT16U ScrH;
                         //height of display
                         // X coordinate of DVI child window (relative to the screen) 8
    INT16U DviX;
    INT16U DviY;
                         // Y coordinate of DVI child window (relative to the screen) 10
    INT16U DviW;
                         // width of DVI child window
                                                                  12
    INT16U DviH;
                         // height of DVI child window
                                                                   14
                         // X coordinate of Video child window (relative to the screen) 16
    INT16U VideoX;
    INT16U VideoY:
                         // Y coordinate of Video child window (relative to the screen)
```



// width of Video child window 20 INT16U VideoW: INT16U VideoH; // height of Video child window 22 INT16U Fiber1X; //X coordinate of Optical fiber 1 (relative to the screen) 24 INT16U Fiber2X; // X coordinate of Optical fiber 2 (relative to the screen) 26 INT8U VideoSrc; //28 INT8U DispMode; //29 display mode.0:DVI;1:Video;2:PIP VGA On Top;3:PIP Video On Top;4:POP VGA On Top INT8U VideoZoom; //30 INT16U VideoOffsetX; //31 X coordinate of video offset when partially display INT16U VideoOffsetY; //33 X coordinate of video offset when partially display INT8U ColorType; //35 color temperature type.0:6500;1:9300;2:自定义 INT8U ColorRGB[3]; //36 the value of RGB in color temperature when user define INT8U LumType; //39 brightness control type.0: manual adjustment;1:automatic adjustment. INT8U LumManual; //40 brightness value of manual adjustment. INT8U LumAutoMin; //41 minimum brightness value of automatic adjustment. INT8U LumAutoMax; //42 maximum brightness value of automatic adjustment. INT8U DVIOutType; //43 DVI output type.0:input from DVI;2: input from video;1:screen monitor INT8U Language; //44 menu language.0: English;1: simplified Chinese INT8U HubCnt; //45 quantity of HUB boards //46 X and Y coordinates of 4 Hub boards INT16U HubXY[8]; INT8U Contrast; //62 contrast ratio INT8U Brightness; //63 brightness INT8U Hue: //64 tone INT8U DbgContrast; //65 contrast in debugging INT8U DbgBrightness;//66 brightness in debugging INT8U DbgHue; //67 tone in debugging INT8U DbgSaturation;//68 saturation in debugging INT8U VideoPartZoom;//69 zoom value in partial display INT8U ShortcutKey[4]; //70 the corresponding video source of shortcut key INT8U VideoRowOffset; //74 Video row offset INT8U GammaIndex: //75 Gamma data index INT8U LDUAmount: //76 quantity of LDU INT8U Alpha; //77 alpha value INT8U Chroma; //78 Chroma value . 0: black and white, 255: full color INT8U PanelType; //87 screen type.0:1920x1080; 1:1920x768 INT8U Sharpness[MAX_VIDEO_IN]; INT16U VideoOffset[MAX VIDEO IN][2]; INT8S VideoBright[MAX VIDEO IN]; INT8S VideoContrast[MAX VIDEO IN]; INT8S VideoHue[MAX_VIDEO_IN]; INT8S VideoChroma[MAX_VIDEO_IN]; INT16U StartLine; INT8S AspectRatio[MAX_VIDEO_IN]; INT8U Rev[10]; //82~90 }SYS CFG;



(8). Obtain input signal status (0x3408)

Obtain the status of DVI input signal and video input signal. Forms as following:

Table3.11. 7 obtain input signal status

SYN	Check	Data	Sour		estination	Packe	34	08	Arg.	Flag	Arg.	Data			
Code	Sum	Len	Addre	SS	address	Serial			Len						
Α	В	С	D		Е	F	G	Н	- 1	J	K	L			
Code		Name		Offs	et Size		Description								
Α	S	YN Cod	е	0	2 Byte	s									
В	Cł	neckSur	n	2	2 Byte	:S									
С	D	ata Len		4	2 Byte	s Ple	Please refer to Table 1.2 for definition in								
D	Sour	ce Addr	ess	6	2 Byte		details.								
Е	Destina	ation ad	dress	8	2 Byte	:S									
F	Pac	ket Ser	ial	10	2 Byte	s									
G	Ma	ain CM[)	12	1 Byte	e Op	Operation of VPU3400, the value=0x34								
Н	S	ub CME)	13	1 Byte	e ob	ain inpu	ut sign	al stat	us, the	value	=0x08			
I	P	Arg.Len		14	1 Byte	e Re	quire 4	bytes,	fill in a	as 1					
J		Flag		15	1 Byte	e The	value w	ill be ig	nored						
IZ.		۸		40	4*1	[4 [Bytes]:Re	serve							
K		Arg		16	Bytes	3									
L		Data		20	0 Byte	e No	data								

♣ Return to communication data format:

Table3.11. 8 acquisition of loopback format of status command of signal input

				•								
SYN Code	Check Sum	Data Len	Source Address		Destination address		34	08	Arg. Len	Flag	Flag.	Data
				- 1		- 1						
Α	В	С	D	Е		F	G	Н	- 1	J	K	L
Code		Nam	е	Offset		Size			De	scripti	on	
Α		SYN C	ode	0 2		2 Bytes						
В	(Check S	Sum	2	2	2 Bytes						
С		Data L	en	4	2 Bytes		Ple	ase re	efer to	<u>Table</u>	1.3: <u> </u>	般的通
D	Sc	urce Ac	ldress	6	2	2 Bytes	讯[可送數	女据格	式 fo	r defin	ition in
Е		Destina addre		8	2	2 Bytes	det	ails.				
F	Pa	acket S	Serial	10	2	2 Bytes						
G	ľ	Main C	MD	12		1 Byte						



Н	Sub CMD	13	1 Byte	
I	Arg. Length	14	1 Byte	Require 8 bytes, fill in as 2
J	Flag	15	1 Byte	Echo Flag
				[2 Bytes]: width of video input signal
K	Ara	16	4*2Pu#00	[2 Bytes]: height of video input signal
IX.	Arg.	10	4*2Bytes	[2 Bytes]:width of DVI input signal
				[2 Bytes]: height of DVI input signal
L	Data	24	0 Byte	No data

(9).Set system type (0x3409)

Set system type to be host or slave.

Table3.11. 9 set system type

						55.11. 9		. 0,00	•••• • • • • • • • • • • • • • • • • •					
SYN	Check	Data	Soi	urce	Des	tination	Pa	acket			Arg.			
Code	Sum	Len	Add	lress	ad	dress	Se	erial	34	09	Len	Flag	Arg.	Data
	1					1		!	-		<u> </u>		1	<u> </u>
Α	В	C		D		E		F	G	Н	Ė	J	K	Ĺ
														_
Code	N	lame		Off	set	Size					Descri	otion		
Α	SY	N Code	,	C)	2 Byte	s							
В	Che	eckSum)	2	2	2 Byte	s							
С	Da	ata Len		4		2 Byte	s	Disc			-1-1-4	O (. C . 'U' .	
D	Sourc	e Addre	ess	6 2 Bytes Please refer to Table 1.2 for definition in							n in			
E		stination	1	8	6 2 Bytes details.									
		ddress												
F	Pack	ket Seri	al	1	0	2 Byte	s							
G	Ма	in CMD		1:	2	1 Byte	е	Ope	ration	of VPI	J3400	, the v	alue=0	x34
Н	Su	b CMD		1	3	1 Byte	е	Set s	ystem t	ype, th	e value	=0x09		
ı	Aı	rg.Len		1	4	1 Byte	е	Requ	ire 4 by	/tes, fill	in as 1			
J		Flag		1:	5	1 Byte	е	Echo	Flag,	1= In	-echo	0=E	cho	
						4*1		[1 By	tes]:0:	Set to	be the	host.		
K		Arg		1	6	Bytes			1	: Set t	o be th	e slave		
						Dytes	,	[3 By	tes]:Re	serve				
L		Data		2	0	0 Byte	е	No da	ata					

The status code of the success of command operation is echoed as 0x9000, and other status code means operation fails. Please find the meaning of status code in the appendix and see the return data format in Table1.3.

(10) .Set start line of slave computer (0x340A)

When the master and the slave computers work together, set start line of the slave computer.

Table3.11. 10 set start line of the slave computer



SYN	Check	Doto	Col	urce	Doo	tination	Do	cket			Ara					
		Data				dress		cket erial	34	0A	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Aud	lress	au	uress	36	HIAI			Len					
- :	- 1	- :		:		1		:		- :	- :	- :		- :		
Α	В	С		D		Е		F	G	Н	- 1	J	K	L		
Code	N	lame		Off	set	Size					Descri	otion				
Α	SY	N Code)	C)	2 Byte	s									
В	Che	eckSum)	2	2	2 Byte	es									
С	Da	ata Len		4	ļ	2 Byte	es									
D	Sourc	e Addre	ess	6	3	2 Byte	es l	Please refer to <u>Table1.2</u> for definition in details.						n in		
Е		stination	1	8	3	2 Byte		uetai	uetans.							
F	Pack	cet Seria	al	1	0	2 Byte	es									
G	Ма	in CMD		1:	2	1 Byte	е	Oper	ration	of VPI	J3400	, the v	alue=0	x34		
Н	Su	b CMD		1	3	1 Byte	е		the st		e of	slave	comput	ter, the		
- 1	Aı	rg.Len		1.	4	1 Byte	е	Requ	ire 4 by	/tes, fill	in as 1					
J		Flag		1:	5	1 Byte	е	Echo	Flag, 1	= In-ec	:ho; 0=	Echo				
14		A		4	^	4*1		[2 Byt	tes]:Se	t the sta	art line					
K		Arg		1	0	Bytes	3	[2 Byt	tes]:Re	serve						
L		Data		2	0	0 Byte	е	No da	ata							

(11). Set temperature color of screen (0x340B)

Set temperature color of screen.

Table 3.11. 10 set temperature color of screen

							-						
SYN	Check	Data	Soi	urce	Des	tination	Packet		0.0	Arg.		Δ	D-4-
Code	Sum	Len	Add	lress	ad	dress	Serial	34	0B	Len	Flag	Arg.	Data
		- 1				1	-		-			-	- 1
Α	В	С	1	D	Е		F	G	Н	- 1	J	K	L
Code	N	lame		Off	set	Size			[Descrip	otion		
Α	SY	N Code		C)	2 Byte	s						
В	Che	eckSum		2	2	2 Byte	s			s is it s at	O (. C . 'C' .	
С	Da	ata Len		4	ļ	2 Byte	S		er to <u>l</u>	<u>abie1.</u>	Z for d	efinitio	n in
D	Sourc	e Addre	ess	6	3	2 Byte	deta	alis.					
E	Des	stination		8	3	2 Byte	es						



	address			
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	Control command of VPU3400, the value=0x34
Н	Sub CMD	13	1 Byte	Set temperature color of screen, the value=0x0B
I	Arg.Len	14	1 Byte	Require 4 bytes, fill in as 1
J	Flag	15	1 Byte	Echo Flag, 1= In-echo; 0=Echo
К	Arg	16	4*1 Bytes	[1 Bytes]: type of temperature color 0: 6500 1: 9300 2: customize [1 Bytes]: when customize temperature color, the value of red portion. [1 Bytes]: when customize temperature color, the value of green portion. [1 Bytes]: when customize temperature color, the value of blue portion.
L	Data	20	0 Byte	No data

(12). Set brightness of screen (0x340C)

Set brightness of screen.

Table3.11. 10 set brightness of screen

21.0					_								
SYN	Check	Data		ırce		tination	Packet	34	0C	Arg.	Flag	Arg.	Data
Code	Sum	Len	Add	ress	ad	dress	Serial			Len		ŭ	
						1							
Α	В	С	[)		Е	F	G	Н	1	J	K	L
					Official								
Code	N	lame		Off	Offset 0					Descrip	otion		
Α	SY	N Code		()	2 Byte	s						
В	Che	eckSum		2	2	2 Byte	s						
С	Da	ata Len		2	ļ	2 Byte	s	Diagon refer to Table 1.2 for definition					
D	Sourc	e Addre	ess	6	3	2 Byte	es l	Please refer to <u>Table1.2</u> for definitio details.					n in
F	Des	stination	1	,	,	O D. 4-		iliS.					
Е	ac	ddress		8	5	2 Byte	es						
F	Pack	ket Seria	al	1	0	2 Byte	s						
G	Ма	in CMD		12		1 Byte	e Con	trol com	mand c	of VPU3	3400, th	ne valu	e=0x34
Н	Su	b CMD		13		1 Byte	e Set I	Set brightness of screen, the value=0x0C			С		
I	A	rg.Len		14		1 Byte	e Req	uire 4 by	∕tes, fill	in as 1			



J	Flag	15	1 Byte	Echo Flag, 1= In-echo; 0=Echo
				[1 Bytes]: type of temperature color
				0: manual brightness adjustment
				1: automatic brightness adjustment
1/	Δ	40	4*1	[1 Bytes]: brightness value of manual adjustment
K	Arg	16	Bytes	[1 Bytes]: minimum brightness value of automatic
				adjustment
				[1 Bytes]: maximum brightness value of automatic
				adjustment
L	Data	20	0 Byte	No data

The status code of successful loopback of command operation=0x9000, and the loopback of LDU communication failure=0x3401,

If there is no brightness sensor, it cannot be set as automatic brightness mode, loopback 0x3402.

If the parameter exceeds effective range, return to 0x3403.

(13). Obtain brightness status of screen (0x340D)

Obtain brightness status of screen.

Table3.11. 10 Obtain brightness status of screen

SYN	Check	Data	Sol	urce	Des	tination	Pi	acket			Arg.				
Code	Sum	Len		lress		dress		erial	34	0D	Len	Flag	Arg.	Data	
	- 1	1		:		1		1	-	-		-	1	<u> </u>	
Α	В	С		D		Е		F	G	Н	1	J	K	L	
				1		1									
Code	N	lame		Off	set	Size					Descri	otion			
Α	SY	N Code	;	C)	2 Byte	s								
В	Che	eckSum	1	2	2	2 Byte	s								
С	Da	ata Len		4		2 Byte	S	D		(- I. I. A	O (. C . 'C' .		
D	Sourc	e Addre	ess	6	6	2 Byte	s			er to <u>I</u>	<u>abie1.</u>	<u>∠</u> for a	efinitio	n in	
E	Des	stination	1	8)	2 Duto	,	deta	115.						
	ad	ddress)	2 Byte	ytes								
F	Pack	ket Seri	al	1	0	2 Byte	s								
G	Ма	in CMD)	1:	2	1 Byte	æ	Contr	ol com	mand o	of VPU3	8400, th	ne valu	e=0x34	
Н	Su	b CMD		1:	3	1 Byte	9			_	ss sta	itus o	f scree	en, the	
									=0x0E						
	А	rg.Len		1	4	1 Byte	е	Requ	ire 4 by	tes, fill	in as 1				
J		Flag		1:	5	1 Byte	е	Echo	Flag, 1	= In-ed	:ho; 0=	Echo			
К		Arg		1	6	4*1		[4 By	tes]:Re	serve					
		Aig			0	Bytes	3								
L		Data		2	0	0 Byte	е	No da	ata						



The packet that the screen returns to is:

Table3.11. 10 obtain command rollback value of brightness status of screen

										1	1					
SYN	Check	Data	So	urce	Des	tination	Pa	cket	34	0D	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Add	Iress	ad	dress	Se	erial			Len			Data		
						1		1	- 1				-			
Α	В	С	I	D		Е		F	G	Н	1	J	K	L		
Code	N	lame		Off	set	Size					Descrip	otion				
Α	SY	N Code		()	2 Byte	s									
В	Che	eckSum	1	2	2	2 Byte	s									
С	Da	ata Len		4	ļ	2 Byte	s		_				<u>.</u>	_		
D	Sourc	e Addre	ess	6	3	2 Byte	es l			er to I	<u>able1.</u>	2 for d	efinitio	n in		
	Des	stination	1			•		detai	ils.							
E		ddress		3	3	2 Byte	s									
F		cet Seri	al	1	0	2 Byte	s									
G	Ма	in CMD	ı	1	2	1 Byte	е	Control command of VPU3400, the value=0x34								
Н	Su	b CMD		1	2	1 Byte		Obtain brightness status of screen, th								
11	Su	D CIVID		ı	J	г Бук	5	value=0x0D								
I	A	rg.Len		1	4	1 Byte	е	Requ	ire 4 by	ytes, fill	in as 1					
J		Flag		1	5	1 Byte	е	Echo	Flag, 1	I= In-ec	ho; 0=	=Echo				
								[1 Byt	tes]: ty	pe of te	mperat	ure colo	or			
									C): man	ual brig	htness	adjustm	ent		
									1	l: auto	matic b	rightnes	ss adjus	tment		
K		۸ra		1	6	4*1		[1 By	tes]: br	ightnes	s value	of man	ual adju	stment		
T.		Arg		I	U	Bytes	3	[1 By	tes]: m	inimum	brighti	ness va	lue of a	utomatic		
								adjus	tment							
								[1 By	tes]: m	aximum	bright	ness va	lue of a	utomatic		
							adjustment									
L		Data		2	0	0 Byte	е	No da	ata							

(14).Set Gamma value of screen (0x340E)

Set the Gamma adjusted value of screen.

Table3.11. 10 set Gamma value of screen

SYN	Check	Data	Source	Des	tination	Packet	34	0E	Arg.	Flag	Arg.	Data
Code	Sum	Len	Address	ad	dress	Serial	54	UL	Len	i iag	Aig.	Dala
Α	В	С	D		Е	F	G	Н	1	J	K	L
Code	N	lame	Of	fset	Size				Descri	otion		
Α	SY	N Code		0	2 Byte	es Dies	oo rof	or to T	abla1	o for d	ofinitio	n in
В	Che	eckSum		2	2 Byte	es deta		ei io <u>I</u>	<u>abie I.</u>	<u> </u>	efinitio	11 111
С	Da	ata Len		4	2 Byte	es	1115.					



D	Source Address	6	2 Bytes	
E	Destination	8	2 Bytes	
_	address		2 Dytes	
F	Packet Serial	10	2 Bytes	
G	Main CMD	12	1 Byte	Operation of VPU3400, the value=0x34
Н	Sub CMD	13	1 Byte	Set Gamma of screen, the value=0x0E
I	Arg.Len	14	1 Byte	Require 4 bytes, fill in as 1
J	Flag	15	1 Byte	Echo Flag, 1= In-echo; 0=Echo
K	Arg	16	4*1	[1 Bytes]: Gamma value. Effective value from 0-3
TX.	Alg	10	Bytes	[3 Bytes]:Reserve
L	Data	20	0 Byte	No data

(15). Set quantity of LDU (0x340F)

Set the quantity of LDU.

Table3.11. 10 set quantity of LDU

								<u> </u>						
SYN	Check	Data	So	urce	Des	tination	Pa	acket	34	0F	Arg.	Flag	Arg.	Data
Code	Sum	Len	Add	Iress	ad	dress	S	erial	54	OI .	Len	i iag	Aig.	Data
								1						
Α	В	С		D		Е		F	G	Н	1	J	K	L
Code	N	lame		Off	set	Size					Descrip	otion		
Α	SY	N Code)	C)	2 Byte	es							
В	Che	eckSum	1	2	2	2 Byte	s							
С	Da	ata Len		4		2 Bytes		Disc		(-1-1-4	O (. C . '	
D	Sourc	e Addre	ess	6		2 Byte	s			er to <u>I</u>	able1.	∠ tor a	efinitio	n in
E		stination	1	8	}	2 Byte	es	detai	IIS.					
F		ddress ket Seria	al .	1	<u> </u>	2 Duto								
Г						2 Byte								
G	Ма	in CMD		1:	2	1 Byte	е	Contr	ol com	mand o	f VPU3	8400, th	ne valu	e=0x34
Н	Su	b CMD		1	3	1 Byte	е	Set q	uantity	of LDU	, the v	alue=	0x0F	
I	A	rg.Len		1	4	1 Byte	е	Requ	ire 4 by	tes, fill	in as 1			
J		Flag		1:	5	1 Byte	е	Echo	Flag, 1	= In-ed	ho; 0=	Echo		
К		Arg		1	6	4*1 Bytes	6	1-8	rtes]: Q		of LD	U. Effe	ctive va	lue from
L		Data		2	0	0 Byte	е	No da	ata					



(16). Set coordinates of LDU (0x3410)

Set coordinates of LDU.

Table3.11. 10 set coordinates of LDU

SYN	Check	Data	So	urce	Des	tination	Pa	acket	34	10	Arg.	Flag	Arg.	Data		
Code	Sum	Len	Add	Iress	ad	dress	S	erial	54	10	Len	i lag	Aig.	Data		
				1		1										
Α	В	С		D		Е		F	G	Н	1	J	K	L		
Code	N	lame		Off	set	Size					Descri	otion				
Α	SY	N Code	:	C)	2 Byte	s									
В	Che	eckSum	1	2	2	2 Byte	s									
С	Da	ata Len		4	1	2 Byte	s	Disc		(-1.1.4	O (. C . 'C' .			
D	Sourc	e Addre	ess	6	3	2 Byte	s			er to <u>I</u>	<u>able1.</u>	2 tor a	efinitio	n in		
Е		stination	1	8	}	2 Byte	s	deta	IIS.							
		ddress														
F	Pack	cet Seria	al	1	0	2 Byte	s									
G	Ма	in CMD	ı	1.	2	1 Byte	е	Control command of VPU3400, the value=0x34								
Н	Su	b CMD		1	3	1 Byte	е	Set c	oordina	ites of L	_DU, th	ne valu	e=0x10	1		
I	Aı	rg.Len		1	4	1 Byte	е	Requ	ire 8 by	/tes, fill	in as 2					
J		Flag		1	5	1 Byte	е	Echo	Flag, 1	= In-ed	ho; 0=	=Echo				
								[1 By	rtes]: S	erial nu	ımber	of LDU	. Effecti	ve value		
								from	0-7							
К		Arg		1	6	4*1		[1 By	tes]: Re	eserve						
r\		Alg			U	Bytes	3	[2 By	tes]: X	coordin	ate of l	_DU.				
								[2 By	tes]: Y	coordin	ate of L	LDU.				
							[2 Bytes]: Reserve									
L		Data		2	0	0 Byte	е	No da	ata							

The status code of the success of command operation is echoed as 0x9000, and other status code means operation fails. Please find the meaning of status code in the appendix and see the return data format in <u>Table1.3</u>.

(17). Obtain VPU version information (0x3411)

Obtain VPU version information.

Table3.11. 10 obtain VPU version information



											1			
SYN	Check	Data		urce		tination		cket	34	11	Arg.	Flag	Arg.	Data
Code	Sum	Len	Add	ress	ad	dress	Se	erial			Len	ŭ		
								1						
Α	В	С)		E		F	G	Н	1	J	K	L
Code	N	lame		Offset		Size		Description						
Α	SY	N Code		0		2 Byte	es							
В	Che	eckSum	1	2	2	2 Byte	es							
С	Da	ata Len	4			2 Byte	es	Please refer to Table 1.2 for definition						
D	Sourc	e Addre	ess	6	6	2 Byte	es I			er to <u>I</u>	<u>abie1.</u>	2 for a	etinitio	n in
E	Des	stination	1	8)	2 Duto		detai	IS.					
	ac	ddress)	2 Byte	:5							
F	Pack	ket Seria	al	1	0	2 Byte	es							
G	Ма	in CMD	1	1	2	1 Byte	е	Contr	ol com	mand c	of VPU3	8400, th	ne valu	e=0x34
Н	Su	b CMD		1	3	1 Byte	е	Obtai	n VPU	versior	inform	ation, t	he value	e=0x11
I	A	rg.Len		1	4	1 Byte	е	Requ	ire 4 by	tes, fill	in as 1			
J		Flag		1	5	1 Byte	е	Echo	Flag, 1	= In-ec	:ho; 0=	Echo		
V	•		4	4**			[4 Byt	tes]:Re	serve					
K		Arg		16 Bytes		3								
L	Data		2	0	0 Byte		No data							

The data that VPU returns to is:

Table3.11. 10 obtain command rollback value of VPU version information

SYN Code	Check Sum	Data Len		urce Iress		tination dress		cket erial	34	11	Arg. Len	Flag	Arg.	Data
	- 1					1		1						
Α	В	С	ı	D		Е		F	G	Н	- 1	J	K	L
Code	N	lame		Offset		Size				[Descri	otion		
Α	SY	N Code		0		2 Byte	Bytes							
В	Che	eckSum	ı	2		2 Byte	es							
С	Da	ata Len		4		2 Byte	es		_			<u>.</u>	6	
D	Sourc	e Addre	ess	6		2 Byte	Bytes Please refer to <u>Table1.2</u> for definitio						n in	
Е		stinatior ddress)	8	,	2 Byte		details.						
F	Pack	ket Seria	al	10)	2 Byte	es							
G	Ма	in CMD		12	2	1 Byte	е	Contr	ol com	mand c	of VPU3	3400, th	ne valu	e=0x34
Н	Su	Sub CMD 13		3	1 Byte	e l	Obtain VPU version information, th value=0x11					n, the		
I	А	Arg.Len		14	1	1 Byte	е	Require 20 bytes, fill in as 5						
J		Flag 15		5	1 Byte	е	Echo Flag, 1= In-echo; 0=Echo							



К	Arg	16	4*1 Bytes	[2 Bytes]:CPU version number [2 Bytes]:FPGA1 version number [2 Bytes]:FPGA2 version number [2 Bytes]:FPGA3 version number [12 Bytes]: Serial number
L	Data	20	0 Byte	No data

(18). Set pixel mode (0x3412)

Set pixel mode of screen.

Table3.11. 10 set pixel mode

						0.11. 1									
SYN	Check	Data	So	urce	Des	tination	Pa	acket	34	12	Arg.	Flag	Arg.	Data	
Code	Sum	Len	Add	Iress	ad	dress	S	erial	0.		Len	ı iug	/ u g.	Data	
Α	В	С	1	D		Е		F	G	Н	1	J	K	L	
Code	N	lame	Offs		set	et Size		Description							
Α	SY	N Code	ode)	2 Byte	s								
В	Che	eckSum	1	2		2 Byte	s								
С	Da	ıta Len		4		2 Byte	s								
D	Sourc	e Addre	ess	6	6	2 Byte	s			er to <u>l</u>	<u>able1.</u>	2 for d	efinitio	n in	
_	Des	stination	1		,	0 D. 4a	_	deta	IIS.						
Е	ac	ddress		8)	2 Byte	S								
F	Pack	et Seri	al	1	0	2 Byte	s								
G	Ма	in CMD		1:	2	1 Byte	е	Control command of VPU3400, the value=					e=0x34		
Н	Su	b CMD		1:	3	1 Byte	е	Set p	oixel m	node, t	he va	lue=0x	12		
I	Aı	rg.Len		1.	4	1 Byte	Э	Requ	ire 4 by	tes, fill	in as 1				
J		Flag		1:	5	1 Byte	е	Echo	Flag, 1	= In-ed	:ho; 0=	Echo			
		•				4*1		[1 By	tes]:0:R	Real pix	el				
K	K Arg		1	6	Bytes	1:virtual pixel									
						Dytes	,	[3 Bytes]:Reserve							
L		Data		2	0	0 Byte	е	No da	ata						

The status code of the success of command operation is echoed as 0x9000, and other status code means operation fails. Please find the meaning of status code in the appendix and see the return data format in <u>Table1.3</u>.

(19). Obtain hardware ID of VPU (0x3413)

Obtain hardware ID of VPU.

Table3.11. 10 obtain hardware ID of VPU



		_	_		_									
SYN	Check	Data		urce		tination		cket	34	13	Arg.	Flag	Arg.	Data
Code	Sum	Len	Add	ress	ad	dress	Serial				Len	Ū		
	i							1						
Α	В	С)		E		F	G	Н	1	J	K	L
Code	N	lame		Offset		Size		Description						
Α	SY	N Code		0		2 Byte	es							
В	Che	eckSum	1	2	2 2		es							
С	Da	ata Len				2 Byte	es							
D	Sourc	e Addre	ess	6	6	2 Byte	es I			er to <u>I</u>	<u>abie1.</u>	2 for a	efinitio	n in
E	Des	stination	1	8)	2 Duto		detai	IIS.					
	ac	ddress		O)	2 Byte	:5							
F	Pack	ket Seria	al	1	0	2 Byte	s							
G	Ма	in CMD	1	1:	2	1 Byte	е	Contr	ol com	mand c	of VPU3	3400, th	ne valu	e=0x34
Н	Su	b CMD		1:	3	1 Byte	е	Obta	in har	dware	ID of	VPU, t	he value	e=0x13
I	A	rg.Len		1	4	1 Byte	е	Requ	ire 4 by	tes, fill	in as 1			
J		Flag		1:	5	1 Byte	е	Echo	Flag, 1	= In-ec	:ho; 0=	Echo		
	A		4	4*1			[4 Bytes]:Reserve							
K		Arg		I	16 Bytes		3							
L	Data		2	20 0 Byte		е	No data							

The data that VPU returns to is:

Table3.11. 10 the return value of obtaining hardware ID of VPU

SYN Code	Check Sum	Data Len		urce Iress		tination dress		cket erial	34	13	Arg. Len	Flag	Arg.	Data
	- 1					1		1						
Α	В	С	ı	D		Е		F	G	Н	- 1	J	K	L
Code	N	lame		Offset		Size					Descri	otion		
Α	SY	N Code		0)	2 Byte	es							
В	Che	eckSum		2)	2 Bytes								
С	Da	ata Len		4		2 Byte	es	Please refer to Table 1.2 for definition in						
D	Sourc	e Addre	ess	6	;	2 Byte	Please refer to <u>Table1.2</u> for definitio					n in		
E		stinatior ddress)	8	}	2 Byte		- details.						
F	Pack	ket Seria	al	10	0	2 Byte	es							
G	Ма	in CMD		12	2	1 Byte	е	Control command of VPU3400, the value=					e=0x34	
Н	Su	Sub CMD 13		3	1 Byte	е	Obta	in har	dware	ID of	VPU, t	he value	e=0x13	
1	Arg.Len		14	4	1 Byte	е	Requ	ire 16 b	ytes, fi	ll in as	4			
J		Flag		1	5	1 Byte	е	Echo Flag, 1= In-echo; 0=Echo						
K		Arg		10	ô	4*1		[16	Bytes]:	Hardwa	are ID o	of 16 by	tes	



			Bytes	
L	Data	20	0 Byte	No data

(20). VPU License Write-in (0x3414)

Write in VPU License.

Table3.11. 10 Write-in VPU License

SYN	Check	Data	Soi	urce	Des	tination	Pa	acket	34	14	Arg.	Flag	Arg.	Data	
Code	Sum	Len	Add	ress	ad	dress	S	erial			Len				
	- 1			l											
Α	В	С)		Е		F	G	Н	1	J	K	L	
Code	N	lame	Offs		set	Size		Description							
Α	SY	N Code	ode		2 Bytes										
В	Che	eckSum		2		2 Byte	s								
С	Da	ata Len		4	4 2 Bytes										
D	Sourc	e Addre	ess	6	6	2 Byte	s			er to I	<u>able1.</u>	2 for d	efinitio	n in	
	Des	stination	1					detai	IIS.						
E	ac	ddress		8	3	2 Byte	S								
F	Pack	ket Seria	al	1	0	2 Byte	s								
G	Ма	in CMD		1:	2	1 Byte	е	Contr	rol com	mand c	f VPU3	3400, th	ne valu	e=0x34	
Н	Su	b CMD		1	3	1 Byte	е	Set pixel mode, the value=0x14							
I	Aı	rg.Len		1.	4	1 Byte			ire 16 b						
J		Flag		1:		1 Byte			Flag, 1						
						4*1						f 16 byt	es.		
K		Arg		16		Bytes									
L	Data		20		0 Byte										

The status code of the success of command operation is echoed as 0x9000, and other status code means operation fails. Please find the meaning of status code in the appendix and see the return data format in Table1.3.

Part II: File Format



I. Text File Format

1. Explanation of the Text File format

Text File is the file which displays the character. It is small in size, and can be sent fast, controlled flexibly, and inserted with Picture File, String File. But it needs to be supported by the font library. The format in the following table:

Head Data **EOF** Ĭ ł C Name Offset Size **Item Description** QZ00SAX File header marker Α Head 0 7 Bytes Including display contents and control В Data 7 N Bytes characters. С **EOF** 8 1 Byte <0x04> End the file

Table4.1.1 Explanation of the Text File format

2. List for Control Character

This character list for controlling the display is applicable for Text File and parts of it also available to the String file and Logo File display format. The one beginning with 0x means HEX. And ""/ "means ASCII, and the rest means Decimal.

Dec	Hex	Description
1	01	[File Head]: it stands for the start of the file.
2	02	The Head J. It stands for the start of the file.
3	03	[reserved]
4	04	[File end character]: it stands for the end of the file.
5	05	[reserved]
6	06	[Format transfer character]: 1 bytes format This Ctrl Character Valid under the 1st communication of Jetfile II only, it's used to select display protocal. If without this control character, under the 1st communication of Jetfile II, the system will use the ADP2.0 display protocol. Otherwise, the system will use this table protocol.
7	07	[Flash control character]: 2 Bytes format 0x 07 +'0'= Flash off (Default); 0x 07 +'1'= Flash on
8	08	[Line space control character]: 2Bytes format 0x08 +'0'= line space is 0; 0x08 +'4'= line space is 4; 0x08 +'7'= line space is 7; 0x08 +'1'= line space is 1; 0x08 +'5'= line space is 5; 0x08 +'8'= line space is 8;

Table4.1.2 Text File/String File/Logo File Controlling Character List



Dec	Hex	D	escription
		0x08 +'2'= line space is 2; 0x08 +'6'	'= line space is 6; 0x08 +'9'= line space is 9;
		0x08 +'3'= line space is 3;	
9	09	[reserved]	
		[Pattern control character]: 3 Bytes form	nat; 'I'= In pattern, 'O'=Out pattern
		+ ['I' 'O'] + 0x 2F =Random	+ ['I']'O'] + 0x 48 = Fan out
		+ ['l' 'O'] + 0x 30 =Jump out;	+ ['l' 'O'] + 0x 49 =Fan in
		+ ['l']'O'] + 0x 31 = Move left;	+ ['I' 'O'] + 0x 4a = Spiral R
		+ ['i' 'O'] + 0x 32 =Move right;	+ ['l' 'O'] + 0x 4b = Spiral L
		+ ['i' 'O'] + 0x 33 = Scroll left;	+ $['l']'O']$ + 0x 4c = To four corners
		+ ['1' 'O'] + 0x 34 = Scroll right;	+ ['1' 'O'] + 0x 4d = From four corners
		+ ['1' 'O'] + 0x 35 = Move up;	+ ['I' 'O'] + 0x 4e = To four sides
		+ ['i' 'O'] + 0x 36 =Move down;	+ ['I' 'O'] + 0x 4f = From four sides
		+ ['i' 'O'] + 0x 37 = Scroll to L/R	+ $['l']'O']$ + 0x 50 = Scroll out from four blocks
		+ ['I' 'O'] + 0x 38 = Scroll up	+ $['l']'O']$ + 0x 51 = Scroll in to four blocks
		+ ['I' 'O'] + 0x 39 = Scroll down;	+ ['I' 'O'] + 0x 52 =Move out from four blocks
		+ ['I' 'O'] + 0x 3a = Fold from L/R	+ ['I' 'O'] + 0x 53 =Move in to four blocks
10	0A	+ ['I' 'O'] + 0x 3b =Fold from U/D	+ ['I' 'O'] + 0x 54 = Scroll form U/Left, square
		+ ['I' 'O'] + 0x 3c =Scroll to U/D	+ ['I' 'O'] + 0x 55 = Scroll from U/right, square
		+ ['I' 'O'] + 0x 3d = Shuttle form L/R	+ ['I' 'O'] + 0x 56 =Scroll from D/left, square
		+ ['I' 'O'] + 0x 3e =Shuttle from U/D	+ ['I' 'O'] + 0x 57 =Scroll from D/right, square
		+ ['I' 'O'] + 0x 3f = Peel off L;	+ ['I' 'O'] + 0x 58 = Scroll from U/left, slanting
		+ ['I' 'O'] + 0x 40 =Peel off R;	+ ['I' 'O'] + 0x 59 =Scroll from U/right, slanting
		+ ['i' 'O'] + 0x 41 = Shuttle from U/D	+ ['I' 'O'] + 0x 5a =Scroll from D/left, slanting
		+ ['I' 'O'] + 0x 42 = Shuttle form L/R	+ ['I' 'O'] + 0x 5b =Scroll from D/right, slanting
		+ ['I' 'O'] + 0x 43 = Raindrops;	+ ['I' 'O'] + 0x 5c =Move in from U/left corner
		+ ['l' 'O'] + 0x 44 = Random mosaic;	+ ['I' 'O'] + 0x 5d =Move in form U/right corner
		+ ['I' 'O'] + 0x 45 = Twinkle stars	+ ['I' 'O'] + 0x 5e =Move in from D/left corner
		+ ['I' 'O'] + 0x 46 = Hip-pop	+ ['I' 'O'] + 0x 5f =Move in from D/right corner
		+ ['I' 'O'] +0x 47 = Radar scan	+ ['1' 'O'] +0x 60 = Growing up
		[Special character]: 2 Bytes format	
		+ 0x20MM/DD/YY	+0x5A With time-zone HH: MIN (-6)
		+ 0x21DD/MM/YY	+0x5B With time-zone HH: MIN (-5)
		+ 0x22MM-DD-YY	+0x5C With time-zone HH: MIN (-4)
		+ 0x23DD-MM-YY	+0x5D With time-zone HH: MIN (-3)
11	0B	+ 0x24MM.DD.YYYY	+0x5E With time-zone HH: MIN (-2)
		+ 0x25YY	+0x5F With time-zone HH: MIN (-1)
		+ 0x26YYYY	+0x60 With time-zone_HH: MIN (+0)
		+ 0x27MM (number)	+0x57 With time-zone HH: MIN (-9)
		+ 0x28MMM.(char)	+0x58 With time-zone HH: MIN (-8)
		+ 0x29DD (number)	+0x59 With time-zone HH: MIN (-7)
		+ 0x2A day of week (number)	+0x61 With time-zone HH: MIN (+1)



Dec	Hex	D	escription	1							
		+ 0x2B day of week (char)	+0x62	With time-zone HH: MIN (+2)							
		+ 0x2C HH	+0x63	With time-zone HH: MIN (+3)							
		+ 0x2D MIN	+0x64	With time-zone HH: MIN (+4)							
		+ 0x2E SEC	+0x65	With time-zone HH: MIN (+5)							
		+ 0x2F HH: MIN	+0x66	With time-zone HH: MIN (+6)							
		+ 0x30HH: MIN	+0x67	With time-zone HH: MIN (+7)							
		(12 hour, AM/PM pre-set)	+0x68	With time-zone HH: MIN (+8)							
		+0x31 Temperature	+0x69	With time-zone HH: MIN (+9)							
		+0x32 Humility	+0x6A	With time-zone HH: MIN (+10)							
		+0x33 Temperature (F)	+0x6B	With time-zone HH: MIN (+11)							
		+0x34 Self-time definition	+0x6C	With time-zone HH: MIN (+12)							
		(Referring to the following explanation)	+0x6D	With time-zone HH: MIN (+13)							
		+0x35 HH (12 Hour)	+0x6E	With time-zone HH: MIN (-3:30)							
		(Reserved zone)	+0x6F	With time-zone HH: MIN (+5:30)							
		+0x53 HH: MIN(offset from GMT)	+0x70	With time-zone HH: MIN(+5:45)							
		+0x54 With time-zone HH: MIN(-12)	+0x71	With time-zone HH: MIN(+6:30)							
		+0x55 With time-zone HH: MIN(-11)	+0x72	With time-zone HH: MIN(+9:30)							
		+0x56 With time-zone HH: MIN(-10)	+0x73	With time-zone HH: MIN(+3:30)							
			+0x74	With time-zone HH: MIN(+4:30)							
		Explanation of the self-time definition:(4	Bytes form	nat)							
		0x0B + 0x34 + [time of the time zon	e] + [contro	ol character]							
		Time of the time zone (1 Byte): the	value rang	es from 0x54-0x72. When the value is							
		0x2f, it stands for inserting the current til									
		Meaning of the control character (1	Byte):								
		0 bit: value 0 = 24 hrs val	ue 1 = 12	hrs							
		1 bit: value 0 = set ":" to flash, va	lue 1 = set	":" to no flash							
		2 bit:: value 0 = without the se	econd grad	duation, value 1 = with the second							
		graduations. Flashing is invalid when se	cond is on.								
		3 bit: value 0 = with AM/PM, value	1 =withou	t AM/PM. Under 24 hrs, this feature is							
		invalid;									
		4,5,6 bit is reserved. 7 bit is1									
12	0C	[Frame change]: 1 Bytes format, Start a	new page								
13	0D	[Line feed]: 1 Bytes format, Start a new	w line								
		[Frame pause time]:									
		Different frames are allowed to have	/e differe	nt pause time							
		0x 0E +'0', Unit of the pause time:		·							
14	0E	0x 0E +'1', Unit of the pause time: N									
		0x 0E +'2', Unit of the pause time: S									
		·		Rang '0000'-'9999'(6 Bytes format)							
		Example: Pause time= 1 second:	0x0E +'0	'+'01'							



Dec	Hex	Description
Dec	ITEX	Description Example: Pause time=12 seconds: 0x0E +'0'+ '12'
		Example: Pause time=12 seconds: 0x0E + 0+ 12 Example: Pause time=68 seconds: 0x0E + '0'+ '68'
		Example: Pause time=00 seconds: 0x0E +'0'+ '0108'
		Example: Pause time=100 seconds: 0x0E +'2'+ '4500'
		Example: Pause time = 50 milliseconds: 0x0E +'1'+ '50'
		Example: Pause time=88 milliseconds: 0x0E +'1'+ '88'
		Example: Pause time=170 milliseconds: 0x0E +'3'+ '0170'
		[Speed]: 2 Bytes format (7 speed levels)
15	0F	+'0': Very Fast; + '1': Fast; + '2': Medium Fast; + '3': Medium;
		+ '4': Medium Slow; + '5': Slow; + '6': Very Slow.
16	10	[reserved]
17	11	[reserved]
18	12	[reserved]
		[String File nest invoke]: 3 Bytes format/6 Bytes format
		First format :(3 Bytes format) 0x13 + [drive] + [file label]
		[drive]: Default partition is indicated as"_", other partitions are named
		[file label]: 1 character
19	13	Second format :(6 Bytes format) 0x13 +0x0f+ [drive] +"S"+ [file label]
		[drive]: Default partition is indicated as"_", other partitions are named
		[file label]: 2 characters
		Example:
		Inserting string file A as the file label from disk D: 0x13+'D'+'A'
		Inserting string file AB as the file label from disk E: 0x13+0x0f +'E'+'S'+'AB'
		[Picture file nest invoke]: 3 Bytes format
		format : 0x14 + [drive] + [file label]
20	14	[drive]: Default partition is indicated as "_", other partitions are named
		[file label]: 1 character
		Example:
		Inserting picture file A as the file label from disk D: 0x14+'D'+'A'
		[Whole screen/line background color control character]:5 Bytes format
		0x 15 + '-' + BGR (24 Bit) background color of the line. This character should always be
21	15	put before the 1 st displaying character in a line
		0x 15 + '+' + BGR (24 Bit) background color of the screen. This character should be put
		before the 1 st displaying character in a frame
		Note: MAIN BOARD QS0925 DOES NOT SUPPROT THIS CONTROL CHARACTER
		[Marquee control character]:3 Bytes format
22	16	0x 16 + [mode] + [speed]
	10	[Mode]: 1 Byte
		'0' 3 bits clock wise turning '1' 3 bits anti clockwise turning(not applied now)
		[Speed]: 1 Byte Reserved. Not available now.



Dec	Hex	Description	
		Note: MAIN BOARD QS0925 DOES NOT SUPPROT THIS CONTROL CHARACTER	
23	47	[Insert Extended ASCII]:2 Bytes format	
	17	0x 17 + [Extended ASCII]	
		[Protocol-extended character]: N Bytes format	
		The format of the control character:	
		0x 18 + [Length] + [control character], The word length, which takes 1 Byte, indicates the	
		length of the following control character.	
		1、Display Industrial Control Data	
		0x18 + 0x 03 + 0x 01 + [Port] + [Width]	
		The format of displaying the industrial control data	
		The format of the Port and Width are shown by ASCII: E.g. the 5 th port is shown as	
		0x35, the 15 th port is shown as 0x3F. The number of Port is from 0 to 15.	
		2、Count / Countdown	
		18H+[Length]+[0x0A]+[Figure operation]+[Initial date]+[Basic figure]+[Count	
		tag]+[Reserved]+[Content]	
		[[charth]: 1 Pute indicating the length of the following central characters Its	
	18	[Length]: 1 Byte, indicating the length of the following control characters. Its maximum value is 255.	
		[OxOA]: 1 Byte, fixed value	
		[Figure operation]: 1Byte, indicating the ways of figure operation	
		0x30 = No operation; 0x31 = Addition; 0x32 = Subtraction;	
		0x33 = Multiplication; 0x34 = Division; 0x35 = Leaving the remainder	
24		[Initial date]: 4 Bytes, Date &Time, indicates the start /end date.	
		Struct	
		{	
		UWORD Date;	
		UWORD Time;	
		}	
		Date(Explanation of the field)	
		o Bit 0-4: Day of month (1-31)	
		o Bit 5-8: Month of year (1-12)	
		o Bit 9-15: Count of years from 1980 (0-127)	
		Time(Explanation of the field)	
		o Bit 0-4: 2-second count (0-29)	
		o Bit 5-10: Minutes (0-59)	
		o Bit 11-15: Hours (0-23)	
		[Basic figure]: 4Bytes, the basic figure value is ten times as the real value. E.g. when the	
		real value is 10, the basic figure value is 100. The value is in the form of ASCII code. E.g.	
		the 1000 is shown as 0x31 0x30 0x30 0x30. The figure operation is only yalid for the first parameter. E.g. "hour:%d min:%m" only	
		The figure operation is only valid for the first parameter. E.g. "hour:%d min:%m", only the %d value is operated.	
		[Count tag]: 1 Byte, indicating count or countdown. 0x30 means count, and 0x31	
		Localit lagi. I byte , indicating count of countdown. 0x30 means count, and 0x31	



Dec	Hex	Description		
		countdown.		
		[Reserved]: 3 Bytes , reserved for future use		
		[Content]: display content, consisted of [Time control character] and [Normal display		
		character].		
		Normal display character means the visible ASCII or Chinese character and so on.		
		The format of Time control character as the following table:		
		Control character Meaning		
		%d Day		
		%h Hour		
		%m Min.		
		%s Sec.		
		Note: It can be inserted with number [1 to 8] between % and d/h/m/s to show the		
		width. E.g. %8d means the width of the day is 8 characters. If the width is not as long as 8		
		characters, it is inserted with spaces before the day. %% means the % character.		
		E.g.:		
		Insert "Xx Minutes without accident" to display :		
		The format is :		
		18H + [Length] + 0x0a + 0x30 + [Date] + ["0000"] + "%m Minutes without accident"		
		Insert "Xx { Days multiply by 3.6} new stores added today" to display:		
		18H + [length] + 0x0a + 0x33 + [Date] + ["0036"] + "%d new stores added today"		
		3、Background Picture		
		18H + [Length] + 0x0B + [Drive] + [File label]		
		[Drive]:Disk name, "@"means the default drive.		
		[File label]: File name of one byte		
		Note: The background picture must be in front of every frame of the visible character		
		The background picture and the background color can't be set simultaneously.		
		4. Set the mode of stay time		
		As long as this mode is set, the stay time of file includes the time of in mode.		
		18H + [0x01] + 0x09		
		This control character should be in the first frame, which means that the stay time of		
		the file covers the time of display mode processing.		
		5. Inserting String File of Appointed width		
		0x18 + 0x18 + 0x08 + [with]+ [alignment]+[path]		
		Function: the control character above is an extension of control character of Chrise		
		Function: the control character above is an extension of control character of [String File nest invoke], and can control width of inserted characters and their alignment at the		
		width.		
		[Width (4 Bytes)]: indicating the width of appointed character string. If the appointed		
		character string file is beyond the width, only the first part of the string		
		can be shown. While if the appointed character string is less than the		
		width, the string will be arranged to the alignment noted above. The		
		Model, the starting will be distallinged to the dilignificant flotted above. The		



Dec	Hex	Description	
		width, with kilobit at the front and unit's place the back, is shown by	
		ASCII code, for example, a width of 30 pixels is shown as 0x30 0x30	
		0x33 0x30.	
		[alignment(1 Byte)]: 0x30=align center (default), 0x31=align left, 0x32=align right	
		[Path (18 Bytes)]: the path and name of a String file takes 18 bytes. If the path and	
		name of a file is less than 18 bytes, the latter bytes are filled with 0.	
		Example,	
		0x18+0x18+0x08+[0x30+0x30+0x38+0x30]+0x30 "D:\S\123 "	
		The command above means inserting file D:\S\123 of 80 pixels wide to Text File.	
		Note: to correctly calculate the width of font with the control character, please add one	
		more font control character to the first visible character in String file.	
		6、Blank Space Inserted with Appointed Width in Pixel	
		0x18 + 0x05 + 0x07 + [width(4 Bytes)]	
		[Width (4 Bytes)]: the width of inserted blank space, in pixel. Maximum value=width of	
		screen-width of character in current line. The width, which takes 4	
		bytes with kilobit at the front and unit's place the back, is shown by	
		ASCII code, for example, width of 30 pixels is shown as 0x30 0x30	
		0x33 0x30.	
		7、Font Shadow	
		0x18 + 0x05 + 0x06 + [Shadow size(1 Bytes)] +[BGR(3 Bytes)]	
		[Shadow size(1 Bytes)]:Shadow pixcel size,valid value range from 0 to 3.	
		[BGR(3 Bytes)]:Shadow color,B=Blue color,G=Green color,R=R color.	
		8、Speed	
		0x18 + 0x02 + 0x30 + [code(1 Bytes)]	
		[code(1 Bytes)]: Valid value range from 0x31 to 0x34.	
		0x31 Speed(KPH)	
		0x32 Speed(MPH)	
		0x33 Speed Limit(KPH)	
		0x34 Speed Limit(MPH)	
		0x235 vehicle number	
		9. Proportional font control characters	
		0x18 + 0x05 + 0x31 + <0x31 0x30> + < column spacing>	
		[0x31 0x30 1Byte]:ranging 0x30 – 0x31, significance as follows:	
		0x30 Close proportionalfont functions	
		0x31 Open proportionalfont functions	
		[column spacing 3Byte]:ranging0x30 0x30 0x30 - 0x30 0x39 0x39, refers to column	
		spacing,0x30 0x30 0x30 refers to no column spacing,0x30 0x30 0x31 means the column spacing	
		is one pixel. The rest can be done in the same manner.	
		Proportional Spaces or character width that fail to be displayed can be calculate	
		as:: (character height+1)/2	
		There should not be column before or after the picture. Special characters should	
		not adopt proportionalfonts!	
		10. RGYW font color control characters	



Dec	Hex	Desc	cription	
		0x18 + 0x05 + 0x32 + RGYW		
		[RGYW]:R = red,G=green,Y=yellow,W=white,each accounts for a byte		
		11. Controllable countdouw/counting		
		18H+[length]+[0x0C]+[value operation]+[initial date]+[value]+[Count flag]+reserve+ [content]		
		Note: For the format of a special countdown/cou	unting, pls refer to that of the countdowm/counting	
		[Title control character]: 3 Bytes format		
		0x 19 + '1' + mode Start the title. Mod	de value: ['1'/'0']	
25	19	'0' = Title	'1' = Footnote	
		'2' = Top the title	'3' = Base the footnote	
		0x 19 + '0' + mode End the title. The	mode value is facultative here.	
		Note: MAIN BOARD QS0925 DOES NOT S	SUPPROT THIS CONTROL CHARACTER	
		[Font & size]: 2 Bytes format		
		+ '0'(0x30) 5*5 standard English character		
		+ '1'(0x31) 7* 6 standard English character	+ 'N'(0x4E) 14 * 10 bold English character	
			+ 'O'(0x4F) 15 * 10 bold English character	
		+ '2'(0x32)14*8 standard English character + '3'(0x33)15*9 standard English character	+ 'P'(0x50) 16 * 12 bold English character	
		+ '4'(0x34)16*9 standard English character	+ 'Q'(0x51) 24 * 8 bold English character	
		+'5'(0x35)16*16 standard Chinese character	+ 'R'(0x52) 32 * 8 bold English character	
		+'6'(0x36)24*16 standard English character	+ 'S'(0x53) 11 * 7 bold English character	
		+'7'(0x37)24*24 standard Chinese character	+ 'T'(0x54) 12 * 7 bold English character	
		+'8'(0x36)32*18 standard English character	+ 'U'(0x55) 22 * 12 bold English character	
		+'9'(0x39)32*32 standard Chinese character	+ 'V'(0x56) 40 * 21 bold English character	
		+':'(0x3a)11* 9 standard English character	+ 'W'(0x57) 24 Chinese Heiti	
		+';'(0x3b)12* 7 standard English character	+ 'X'(0x58) 24 Chinese Xinwei	
		+'<'(0x3c)22*18standard English character	+ 'Y'(0x59) 24 Chinese Xingkai	
		+'='(0x3d)30*18 standard English character	+ 'Z'(0x5a) 24 Chinese Lishu	
26	1A	+'>'(0x3e)40* 21 standard English character	+ '['(0x5b) 24 Chinese Youyuan	
		+ '?'(0x3f) 16 * 16 traditional Chinese	+ '\'(0x5c) 32 Chinese Heiti	
		1 (Oxor) to To traditional offinese	+ ']'(0x5d) 32 Chinese Xinwei	
		+'@'(0x40)7*6 Self-adaptation English character	+ '^'(0x5e) 32 Chinese Xingkai	
		+'A'(0x41)14*8 Self-adaptation English character	+ '_'(0x5f) 32 Chinese Lishu	
		+'B'(0x42) 15 * 8 Self-adaptation English character	+ '`'(0x60) 32 Chinese Youyuan	
		+'C'(0x43) 16 * 8 Self-adaptation English character		
		+'D'(0x44) 24 * 12 Self-adaptation English character	+ 'a'(0x61) Customer designed character 1	
		+'E'(0x45) 32 * 16 Self-adaptation English character	+ 'b'(0x62) Customer designed character 2	
		+'F'(0x46)40 * 21 Self-adaptation English character	+ 'c'(0x63) Customer designed character 3	
		+ 'G'(0x47) Chinese 40 Songti	+ 'd'(0x64) Customer designed character 4	
		+ 'H'(0x48) Chinese 40 Heiti	+ 'e'(0x65) Customer designed character 5	
		+ 'l'(0x49) Chinese 40 Xinwei	+ 'f'(0x66) Customer designed character 6	
		+ 'J'(0x4A) Chinese 40 Xingkai	+ 'g'(0x67) Customer designed character 7	
		+ 'K'(0x4B) Chinese 40 Lishu	+ 'h'(0x68) Customer designed character 8	
		+ 'L'(0x4C) Chinese 40 Youyuan	+ 'i'(0x69) Customer designed character 9	
		, , , , , , , , , , , , , , , , , , , ,		



Dec	Hex	Description				
		+ 'M'(0x4D) Reserve 1				
		Note:				
		1. The serial number of the related file can be found in the Font list.				
		2. There is no special memory treatment for the self- adaptive English character.				
		Users only need to save the related standard English Character				
		[Disposal modes]: 3 Bytes format				
		0x 1B + '0' + 'a': Stand for constrainedly no-word wrap, no-auto typeset., but auto frame				
		change and continuous left displaying				
27	1B	0x 1B + '0' + 'b': Stands for default disposal mode: word wrap, auto frame change and				
		auto typeset.				
		0x 1B + '0' + 'c': reserved				
		This control character should be written before any other control character.				
	1C	[Font color]: 2 Bytes format				
		+ 0x30 Black				
		+ 0x31 Red palette				
		+ 0x32 Green palette				
		+ 0x33 Yellow palette				
		+ 0x34 YGR palette [Character]				
		+ 0x35 YGR palette [Horizontal]				
		+ 0x36 YGR palette [Wave]				
		+ 0x37 YGR palette [Diagonal]				
28		+ 0x38 BW palette [Vertical gradual change]				
		+ 0x39 BW palette [Horizontal gradual change]				
		+ 0x3A YW palette [Vertical gradual change]				
		+ 0x3B YW palette [Horizontal gradual change]				
		+ 0x3C RW palette [Vertical gradual change]				
		+ 0x3D RW palette [Horizontal gradual change]				
		+ 0x3E GW palette [Vertical gradual change]				
		+ 0x3F GW palette [Horizontal gradual change]				
		+ '/' + BGR (24 Bit) Self-defined color, B = Blue, G = Green, R = Red, which takes 1				
		Byte				
	1D	[background color of the font]: 2 Bytes format				
		+ '0' Black				
29		+ '1' Red				
		+ '2' Green				
		+ '3' Yellow				
		+ '/' + BGR (24 Bit) Self-defined color, B = Blue, G = Green, R = Red, which takes 1				



Dec	Hex	Description			
		Byte			
30	1E	[Align horizontal]: 2 Bytes format + '0' align center (default) + '1' align left + '2' align right + '3' reserved [Note]: Different lines can have different alignment pattern, but from the last position set, the alignment pattern of the rest lines will be the same,			
31	1F	[Align Vertical]: 2 Bytes format + '0' align center + '1' align top + '2' align bottom + '3' reserved			
130	82	[1/2 space]			

3. Explanation of all the character zones

0x00 – 0x1f [Display control character], Functional control

0x20 – 0x82 [Visual display character], Standard visual English display character

0xa1 – 0xFF [Wide Byte display character], Extended visual display character



II.String File Format

1. Explanation of String File Format

String File can not display by itself, unless it is inserted into Text File. This is why String File shares no File head or End of File. For more about inserted String File, please refer to Test File Format. The following table is about String File Format:

Table5.1.1:String file format

Ⅲ.Picture File Format

The PICTURE FILE currently supported by JetFileII is a subset of BMP file format from Microsoft Company. And it supports the BMP formats as: single color, 16 colors, 256 colors, 16Bit, 24Bit. And of the 16Bit format BMP, it only supports format 565 with palette. For more detail, please refer to BMP file format from Microsoft Company.

IV.Array Picture File Format

1. Explanation of Array Picture File format

Array Picture file is a file of array format. Compared with Picture File, an Array Picture File can have many frames, while Picture File can only have one; Array Picture File can control every frame's stay time, speed, display mode and so on to your will, while Picture File can only control them to default display configuration. The format in the following table:



Table7.1.1 Format of Array Picture File

			- '	abic i . i .	T T OITH	at OI AIT	ay i ici	ture File						
Head	Туре	Flag	Width	Height	BitPer Point	Total Frame	Data Size	Frame Data	LDW	Rev	Frame Head Struct	Data	Ext Frame Struct	
Α	В	С	D	Е	F	G	Н	- 1	J	K	L	М	N	
Item		Nar	ne	Of	fset	Size	е	Description						
Α		Н	ead		0	9 Byt	es	<0x01>	Z00<0	x02>0	CAPD fil	e head	ling	
В	Туре		3 Type 9 1		Туре		1 Byt	es	1 = GR 2 = BR 3 = BR	(16bit,8 G(16bi <mark>G(24b</mark> i	8:8 for t,565 t t,8:8:8	,	reserv	•
								tised) $5 = RGYW(4bit)$ Turn to Table7.1.3 for frame data arrangement						
С		Empty Flag			10	1 Byt	es	The function works only at non word-word play mode. 0:not skip invalid display data in the laftrame 1. skip invalid display data in the last frame		e last				
D		W	/idth		11	2 Byt	es	width o	f a fran	ne of A	Array pic	cture		
Е		Не	eight		13	2 Byt	es	height o	of a fra	me of	Array pi	icture		
F		BitPer	Point		15	2 Byt	es	Number of bit for one dot. For exam for RG arrays, we use 2 Bits to save dot. So fill in 2.		•				
G		Total F	rame		17	2 By	te	Total fra	ames.					
Н		Data	Size		19	4 Byt	es	Total da	ata size	(All c	lata in th	ne [Dat	a Field])	
- 1		Frame	Data		23	4 By		Data si		•		-		
J	La	LDW Last data width			27	2Byt	te	Function only at non word-wi mode. Record the width of last valid display data. It is reserve other modes.		f last f	rame of			
K		Re	ev		29	2Byt	es	Reserv	ed					
L	F	Frame Head Struct1			31	80 By	tes	Control of the 1 st frame to control its n display, stay time , etc.						
	F	Frame Strud						framew	ork o	f frai	mes ed	quals	control that of many as	



М	PDData1		Array data of first frame, and its size: BitsPerPoint * Width * Height/8(Bytes)
	PDData N		array data of Nth frame
N	Ext Frame Struct	4*N	[2 Bytes]: row height [1 Byte]: in mode [1 Byte]: out mode If there is one frame that exceeds 16 lines, the control for the exceeding lines is placed here. 4 Bytes for one line.

Table7.1.2 Format of Frame Head Struct

	Table 7.1.2 Format of Frame Flead Struct										
Head	Rows	Ext_Rows	Row State1	Row State2		Row State16	Time Type	Speed	Dir	Stay Time	
	1	İ		- 1	-	- 1					
Α	В	С	D	Е	F	G	Н	- 1	J	K	
Item	Na	ame	Offset	S	ize		Description				
Α		Head	0	2 E	Bytes	'FH'	Fram	e headir	ng ma	ırk.	
В		Rows	2	1 E	Bytes	Rang		6. Num	ber of	rows in the	
С	Ext_Rows		3	1 E	Bytes	are >	16.If it is . Contro	not 0, th	ere are	when lines e > rows in the t the very end of the	
D	Row State1		4	4 E	Bytes	[2 By	rtes]: i	ne first li row heig n mode out mod	ght		
E	Row State2		8	4 E	Bytes	[2 By	rtes]: i	ne seco row heig n mode out mod	ght	e	
F			12	4 E	Bytes	Cont	rol of N	Ith line			
G	Row State 16		Rows*4 + 4	4	Byte	[2 By	rtes]: i	ne 16 th li row heig in mode out mod	ght		
Н	Time Type		Rows*4 + 5	1	Byte	0 s	stands	y time. l for millis for seco	secon	d	
I	Sp	peed	Rows*4 + 6	1	Byte	'0': f	astest;	'6': sl	owest	(total 7 speeds)	

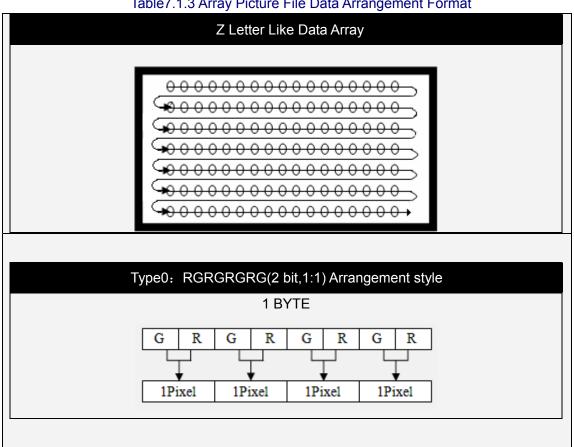


J	Dir	Rows*4 + 8	2 Byte	Valid only in the mode of non word-wrap play. Used to control direction of movement. 0x30 = Move Left 0x31 = Move Right
K	Stay Time	Rows*4 + 12	4 Bytes	Stay time. Unit decided by Time Type.
L	REV	Rows*4 + 16	4 Bytes	Reserved

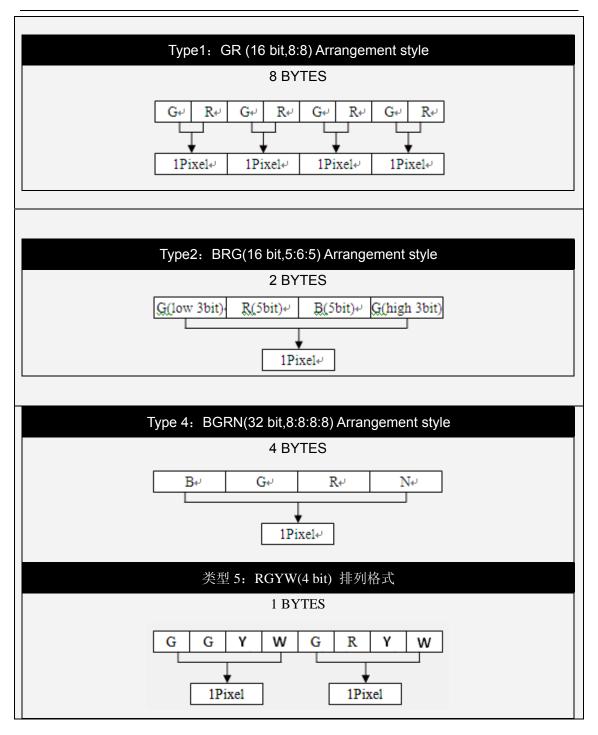
2. Explanation of Array Picture File data arrangement

Unfolding the array, the data in array picture file is saved in the sequence of letter Z, i.e. at first, data in the first line is saved, then the second and the third and so on, line by line until the last pixel. Data of different types differ in styles of arrangement. Detail as follows:

Table 7.1.3 Array Picture File Data Arrangement Format







V.FLW format files (animation format)

1. Explanation of Animation (FLW) File Format

(1), Structure of FLW file

ID: 2BYTE (QS) 51H, 53H

//file marking



FILE TYPE: 2BYTE //file type

FRAME_NUM: 2BYTE //number of frames

WIDTH: 2BYTE //display width

HEIGH: 2BYTE //display height

DEPTH: 2BYTE //display depth

SPEED: 2BYTE //frame display speed. Unit 1MS

TEXT_FRAME_SIZE: 2BYTE //not used

REV: 4BYTE //reserved

Display data

1、File type

Animation: 00H

Text display array: 01H

Text display symbol(simple character format (4BYTE one character)): 02H

Text display character(complete character format (18BYTE one

character)): 03H

2. Display depth

1) 00H: dual color single gray scale. One Byte for 4 dots (GR, GR) Valid only for text format files.

2) 01H: dual color 256 gray scale. Two Bytes for 1 dot. (RG)

3) 02H: full color16BIT (BGR: 5, 6, 5)

4) 03H: full color 256, 3 Bytes for one dot (BGR)

5) 04H: full color 256, 4 Bytes for one dot (BGRN)

(2), Definitions of Frame Headings

Frameheader=record

ID:array[0..1] of Byte; //Frame starting mark. Fixed at: BK (42H, 4BH)

Frame_size:Longword; //frame size (including frame head)

Frame_type:word; //frame type

Recv1:array[0..3] of Byte; //reserved

end;

1. Frame type



- 1) 00H non-compressed data
- 2) 01H skip row, RLE compressed
- 3) 02H xor,non compressed data
- 4) 03H xor, RLE compressed data
- 5) 04H non compressed data
- (3) Heading

LEN: 2BYTE //length of data per row

BLOCK_NUM: 2BYTE //blocks of data per row

Skip RLE compressed: Compressing each row individually. Its definition: number of blocks and value of blocks.

- ①Number of blocks: WORD type(2 Bytes). Number of blocks in current row. When D15~D8 is 11H,D7~D0fstand for rows skipped.
 - ②Value of blocks: The top two digits in the first Byte is the block type.

00B: the bottom 6 digits of the first Byte are skipped rows.

01B: The bottom 6 digits of the first Byte are the number of pixels(characters) that need to be moved from the blocks to the images. After that it's data of N continual pixels.

10B: D5~D0 in the first Byte means the number of pixel(character) that need to be moved from the blocks to the images. After that it's the data of that pixel.

W.Configuration Files (Config.sys)

The major use of System configuration file is to configure argument of a system. QS5006,QS0712,QS5003,QS0925 configuration file structure as following: (change in configuration file structure will not be notified to customers anyway)

```
typedef struct

{

UWORD wID; //0x55aa

UWORD wwidth; //Screen Width

UWORD wheight; //Screen Height

UBYTE bpriorityopt; // 0 = communication high priority, 0xf0 = display as high priority,

UBYTE blanguagesel; // 0xf0=traditional Chinese, 0=simple Chinese

UWORD wbaud rate1: //COM1 baud rate
```



```
UWORD wbaud_rate2;
                            //COM2 baud rate
UWORD
                            // TCP time out, in MS
          wtcp_time_out;
UBYTE
          bDHCPEnable;
                             //DHCP on/off
UBYTE
          bRev
                               //reserved
UWORD wcfcard_size;
                            //cfcard size
UWORD wfpga_type;
                            //fpga type
UWORD wfpga_mode;
                              //fpga mode
UWORD wfpga_grade;
                            //fpga gray scale
UWORD wfpga_light;
                            //fpga brightness
UWORD wfpga_length;
                             //fpga length
UWORD wfpga_startline;
                           //fpga starting line
UBYTE
                             //same=1,different=0
          bsameset;
UBYTE
          ledbin;
UBYTE wgroup_addr;
                             //Group address
UBYTE wunit_addr;
                            //Unit address
UBYTE poweronmsgen;
                            // 0 = power on message,
                                                              0xf0 = no power on message
UBYTE broadcastipen;
                          //rev
ULONG dwip_addr;
                             //ip_addr
UWORD wamac_addr[3];
                             //mac_addr
UWORD SoftSecVer;
                            //software section version number
UWORD wsoftver;
                               //software version number
UWORD whardver;
                               //hardware version number
POWER_TIME_STRUCT spower_time;
                                                //power on/off timer
UBYTE
                              //time zone, please turn to appendix 1
          btime_zone;
UBYTE bremote;
                              //0: remote control, 1: no remote control
UBYTE bplay_mode;
                             //0: processing file immediately, 1: processing file delayed
UBYTE bdaylight;
                           //daylight saving time
POWER_TIME_STRUCT
                                                    // half-lit time
                              shalflight_time;
UBYTE Systemstat;
                            // set the starting state of a system, value=0 means schedule mode
UBYTE uselogin;
                             //log in or not, default=no log in;
UBYTE bslavenum;
                             //number of slave board
UBYTE TempFlag;
                              // Flag=0, Celsius Centigrade; flag=1, Fahrenheit
UWORD NewLineWidth;
                               // width of a new line
UWORD NewLineHeight;
                              // height of a new line
UWORD Offline_X;
                                //X
UWORD Offline_Y;
                               //Y
UBYTE TempValue;
                               // value of temperature shift
UBYTE SerialNo[13];
                               // serial number
UBYTE DateTime[8];
                               // date/time for renewing files
UBYTE LedName[11];
                                //Led name
UBYTE BrightCtrl[18];
                            // brightness control, BrightCtrl[0] grade options, grade 1-15,
UBYTE Revfill:
                               //rev
ULONG dwgetway_addr;
                               //getway ip
 ULONG dwmask_addr;
                                  //mask address
```



```
ULONG cfglist1;
                                //sigma3000 config. select
   ULONG cfglist2;
                                      // sigma3000 config. select
   ULONG functionlist1;
                                //firmware function list
   ULONG functionlist2;
                                //firmware function list
   UBYTE Rev[40];
                                    //reserved.
}CONFIG_HEAD_STRUCT;
typedef struct
   UBYTE
                               bis_user;
                                                       //when the value is true, it stands for valid framework
    UBYTE
                              boff_hour;
   UBYTE
                               boff_min;
   UBYTE
                               bon_hour;
   UBYTE
                               bon_min;
   UBYTE
                               barev[3];
}POWER_TIME_STRUCT;
```

Ⅲ.Play List (SEQUENT.SYS)format

SEQUENT.SYS is used for controlling the display sequence of the files. The file name is fixed as SEQUENT.SYS.

1. Play List format

The format as the following table:

Table 10.1.1 SEQUENT File

Name	Offset	Size	Value	Description	
Marking	0	2Bytes	'SQ'	Mark of the file	
File type	2	1Byte		Mark of the type , Value is :<0x04>	
File type	2	тьую		schedule all files in all partitions	
valid	3	1Byte	0	0 stands for SEQUENT FILE valid	
marking	5	твую	U	1 stands for SEQUENT FILE invalid	
				Stand for the total amount of the scheduled files. It is used	
File amount	4	2Bytes		for determining the amount of the schedule structure of	
				the following related files	
Reserved	6	2Bytes	0	Reserved	
				Structure (36Bytes):	
				typedef struct	
				{	
Data	8			//Partition number	
content	8			UBYTE bdrive;	
				//File types: TEXT is abbreviated to T, ARRAY	
				PICTURE is abbreviated to A	
				UBYTE btype;	



//File name(FILE LABEL),if this field =<0x0f> , it's mean use //bafile name field for file name UBYTE bfile_label; //Week repetition. Please refer to the explanation of week repetition UBYTE bweek_rep; //Start time. Construct : DATE_TIME_STRUCT DATE TIME STRUCT sbegin data time; //End date & time DATE TIME STRUCT send data time; //Sum of verify(the content of the whole file) UWORD dwcheck_sum; //size of the file UWORD dwfile_size; //File name 8.3 format UBYTE bafile_name[12]; }FULL SEQUENT FILE STRUCT; Note: when the sum of verify is the same as that of the size of the file, system will consider the two to be the same file. [Explanation of week repetition] D7 D6 D5 D4 D3 D2 D1 D0 8bit in total , Dx stands for the sequence(No.1, No 2...) within bweek rep D0: Stands for Sunday. True time: During the period "sbegin date - send dat", this file will be played every Sunday; False time: the file will not be played on every Sunday Stands for Monday. True time: During the period "sbegin_date - send_date", this file will be played every Monday; False time: the file will not be played on every Monday D2 : Stands for Tuesday. True time: During the period "sbegin date - send date", this file will be played every Tuesday; False time: the file will not be played on every Tuesday D3 : Stands for Wednesday. True time :During the period "sbegin_date - send_date", this file will be played every Wednesday; False time: the file will not be played on every Wednesday D4: Stands for Thursday. True time: During the period "sbegin_date - send_date", this file will be played every Thursday; False time: the file will



not be played on every Thursday
D5: Stands for Friday. True time: During the period
"sbegin_date - send_date", this file will be
played every Friday; False time: the file will not
be played on every Friday.
D6: Stands for Saturday. True time: During the period
"sbegin_date - send_date", this file will be
played every Saturday; False time: the file will
not be played on every Saturday.
D7: True time: Neglect all the setting(including week,
date, time). The file will be played forever.
date, time). The me will be played horever.
[Construct: DATE_TIME_STRUCT]
typedef struct
{
//Year. 2000 Year is represent by the number
0x2000(BCD)
UWORD wyear;
//Month. January to December is represented by the
number 0x01-0x12. Other numeral will be defaulted as
January(BCD)
UBYTE bmonth;
//Date , Date 1-31 will be represent by the number
0x01-0x31. Other numeral will be defaulted as 1st
Date.(BCD)
UBYTE bday;
//Hour. Hour 0-23 will be represented by the number
0x0-0x23. Other numeral will be defaulted as the 1 st
hour.(BCD)
UBYTE bhour;
//Minute, Minute 0-59 will be represent by the number
0x00-0x59. (BCD)
, ,
UBYTE bminute;
//When true, date is neglected. Otherwise date is valid
UBYTE bdate_use_flag;
//When true, time is neglected, otherwise time is valid
UBYTE btime_use_flag;
}DATE_TIME_STRUCT;

2. Play List format (extended)

Table 10.1.2 SEQUENT file format(extended)



Marking 0 2B Mark of the file, Value is: 'SQ' File type 2 1B Mark of the type, Value is<0x05> Valid marking 3 1B 0 = SEQUENT FILE valid, 1 = SEQUENT FIL Schedule amount 2B Stand for the total file amount of schedule groups. File size 6 2B Sequent file size			
Valid marking 3 1B 0 = SEQUENT FILE valid, 1 = SEQUENT FILE Schedule amount 4 2B Stand for the total file amount of schedule groups.			
Schedule amount 4 2B Stand for the total file amount of schedule groups.			
amount 4 2B groups.	E invalid		
amount groups.	iles and		
File size 6 2B Sequent file size			
File 1 Schedule file, please refer to Table 10.1.2 structure of Schedule file field			
File 2 Schedule file, please refer to Table 10.1.2 structure of Schedule file field			
File N Schedule file, please refer to Table 10.1.2 structure of Schedule file field			
Group ID 2B Group ID, Value is GP'			
Group size 2B Size of total group file			
File num. in group 2B Number of group files			
Play type 1B 0=Play all,1=play one file in once play circle			
Group head size 1B Size of group head size, Current value is: 4	4		
Group 1 Rev. 4B reserved			
Group name 32B Group name, End with NULL.			
Group File 1 please refer to Table 10.1.2 structure of Schedule file fie	d		
please refer to Table 10.1.2 structure of Schedule file fie	d		
Group File N please refer to Table 10.1.2 structure of Schedule file fie	d		
Group ID 2B Group ID, Value is GP'			
Group size 2B Size of total group file			
File num. in group 2B Number of group files			
Play type 1B 0=Play all,1=play one file in once play circle			
Group head size 1B Size of group head size, Current value is: 4	4		
Rev. 4B reserved			
Group name 32B Group name, End with NULL.			
Group File 1 please refer to Table 10.1.2 structure of Schedule file fie	fer to Table 10.1.2 structure of Schedule file field		
please refer to Table 10.1.2 structure of Schedule file fie	d		
Group File N please refer to Table 10.1.2 structure of Schedule file fie	d		
Group ID 2B Group ID, Value is GP'			
Group size 2B Size of total group file			
File num. in group 2B Number of group files			
Play type 1B 0=Play all,1=play one file in once play circle			
Group head size 1B Size of group head size, Current value is: 4	4		
Group N Rev. 4B reserved			
Group name 32B Group name, End with NULL.			
Group File 1 please refer to Table 10.1.2 structure of Schedule file fie	d		
please refer to Table 10.1.2 structure of Schedule file fie	d		
· · · · · · · · · · · · · · · · · · ·	d		



Table 10.1.2 structure of Schedule file field

Name	Size	Description					
ID	2B	Value is:'FS'					
Size of schedule	2B	Size of schedule time field, value is: schedule times * 18					
time field	2D						
Num of		Num of sched	lule tir	me field ,If value = 0, Means: play all time			
schedule time	2B						
field							
Replay Times	1B	Replay times	in onc	ce play circle			
Size of structure	1B	Size of structu	ire he	ad , Current value is:44			
head		0,20 01 01 000		au y current value io. 11			
Rev	4B	reserved					
		The file's path	n and i	name in the sign. End with NULL. E.g.: F:\T\123.Nmg			
Schedule File		* Text file store in drive's 'T' direction, E.g. F:\T\					
path and name	32B	* Picture file store in drive's 'P' direction, E.g. F:\P\					
patir and name		* Array picture file store in drive's 'P' direction, E.g. F:\P\					
		* FLW file	store	e in drive's 'F' direction, E.g. F:\F\			
		week	1B	Refer to [Explanation of week repetition]			
schedule time	18B	Rev.	1B	Reserved			
field 1	100	Begin date	8B	Refer to [Construct: DATE_TIME_STRUCT]			
		End date	8B	Refer to [Construct: DATE_TIME_STRUCT]			
		week	1B	Refer to [Explanation of week repetition]			
schedule time	18B	Rev.	1B	Reserved			
field 2	100	Begin date	8B	Refer to [Construct: DATE_TIME_STRUCT]			
		End date	8B	Refer to [Construct: DATE_TIME_STRUCT]			
	18B						
		week	1B	Refer to [Explanation of week repetition]			
schedule time	18B	Rev.	1B	Reserved			
field N	100	Begin date	8B	Refer to [Construct: DATE_TIME_STRUCT]			
		End date	8B	Refer to [Construct: DATE_TIME_STRUCT]			

[Explanation of week repetition]

D7 D6 D5 D4 D3 D2 D1 D0

8bit in total $\,\,$ Dx stands for the sequence(No.1, No 2...) within week

- D0: Stands for Sunday. True time: During the period "begin data End date", this file will be played every Sunday; False time: the file will not be played on every Sunday
- D1: Stands for Monday. True time: During the period "begin data End date", this file will be played every Monday; False time: the file will not be played on every Monday
- D2: Stands for Tuesday. True time: During the period "begin data End date", this file will be played every Tuesday; False time: the file will not be played on every Tuesday
- D3: Stands for Wednesday. True time: During the period "begin data End date", this file will be played every Wednesday; False time: the file will not be played on every Wednesday



- D4: Stands for Thursday. True time: During the period "begin data End date", this file will be played every Thursday; False time: the file will not be played on every Thursday
- D5: Stands for Friday. True time: During the period "begin data End date", this file will be played every Friday; False time: the file will not be played on every Friday.
- D6: Stands for Saturday. True time: During the period "begin data End date", this file will be played every Saturday; False time: the file will not be played on every Saturday.

```
[ Construct: DATE_TIME_STRUCT] (C language)
typedef struct
//Year. 2000 Year is represent by the number 0x2000(BCD)
UWORD wyear;
//Month. January to December is represented by the number 0x01-0x12. Other numeral will be defaulted
as January(BCD)
UBYTE bmonth;
//Date, Date 1-31 will be represent by the number 0x01-0x31. Other numeral will be defaulted as 1st
  Date.(BCD)
UBYTE bday;
//Hour. Hour 0-23 will be represented by the number 0x0-0x23. Other numeral will be defaulted as the 1st
  hour.(BCD)
UBYTE bhour;
//Minute, Minute 0-59 will be represent by the number 0x00-0x59. Other numeral will be defaulted as 1st
 minute.(BCD)
UBYTE bminute;
//When true, date is neglected. Otherwise date is valid
UBYTE bdate_use_flag;
//When true, time is neglected, otherwise time is valid
UBYTE btime use flag;
}DATE_TIME_STRUCT;
```

WILLOGO File Format

This file is saved at "C:\\LOGO.SYS". It is used to save Logo files. The format is as follows:

Name Offset Size Value **Description** 0 'LOGO' File header File flag 4 Bytes Length 4 2 Bytes Logo length. Unit in pixel. Width 6 2 Bytes Logo width. Unit in pixel. X coordinates 8 2 Bytes Display x & y coordinates of logo. Upper left Y coordinates 10 corner is the origin. 2 Bytes

Table 12.1.1 Logo file format



Valid flag	12	1 Byte	0x01/0x00	Whether this flag is valid or not.1 means valid. 0 means invalid)
Dynamic updating flag	13	1 Byte	0x01/0x00	If this flag is not set(0), logo will not be updated dynamically. If time or other special characters or symbols are inserted, please set to 1
Transparent	14	1 Byte	0x01/0x00	1 = transparent, 0 = not transparent
Reserved	15	1 Byte		Reserved
[data]	16	N Bytes		Logo data including display character and control character. For control character, refer to Table4.1.2.
File end flag		1 Byte	0x04	Its value is 0x04



Appendix I Correspondence Relations of Time Zones and

Values

```
+0x00
       With time zone HH: MIN
                                 (-12)
+0x01
       With time zone HH: MIN
                                 (-11)
       With time zone HH: MIN
+0x02
                                 (-10)
+0x03
       With time zone HH: MIN
                                 (-9)
+0x04
       With time zone HH: MIN
                                 (-8)
+0x05
       With time zone HH: MIN
                                 (-7)
+0x06
       With time zone HH: MIN
                                 (-6)
       With time zone HH: MIN
+0x07
                                 (-5)
+0x08
       With time zone HH: MIN
                                 (-4)
+0x09
       With time zone HH: MIN
                                 (-3)
+0x0a
       With time zone HH: MIN
                                 (-2)
       With time zone HH: MIN
+0x0b
                                 (-1)
+0x0c
       With time zone HH: MIN
                                 (+0)
+0x0d
       With time zone HH: MIN
                                 (+1)
       With time zone HH: MIN
+0x0e
                                 (+2)
+0x0f
       With time zone HH: MIN
                                 (+3)
+0x10
       With time zone HH: MIN
                                 (+4)
+0x11
       With time zone HH: MIN
                                 (+5)
+0x12
       With time zone HH: MIN
                                 (+6)
+0x13
       With time zone HH: MIN
                                 (+7)
       With time zone HH: MIN
+0x14
                                 (8+)
+0x15
       With time zone HH: MIN
                                 (+9)
+0x16
       With time zone HH: MIN
                                 (+10)
+0x17
       With time zone HH: MIN
                                 (+11)
+0x18
       With time zone HH: MIN
                                 (+12)
+0x19
       With time zone HH: MIN
                                 (+13)
       With time zone HH: MIN
+0x1a
                                 (-3:30)
+0x1b
       With time zone HH: MIN
                                 (+5:30)
+0x1c
       With time zone HH: MIN
                                 (+5:45)
+0x1d
       With time zone HH: MIN
                                 (+6:30)
+0x1e
       With time zone HH: MIN
                                 (+9:30)
       With time zone HH: MIN
+0x1f
                                 (+3:30)
+0x20
       With time zone HH: MIN
                                 (+4:30)
```



Appendix II Version Compatibility Test Command and Return

Format

Send font string:

"QS:VER", which is composed of 6 fonts

Return format:

QS: + [CPU version, 2 Byte] + [FPGA version, 2 Byte] + AD: + [IP address, 4 Byte]

Appendix III Valid File Labels

A File Label is a single ASCII font. Messages are stored in or retrieved from the memory file that is defined by this label in the Memory Configuration.

60H-'`' 30H-'0' 40H-'@' 50H-'P' 70H-'p' 21H-'!' 31H-'1' 41H-'A' 51H-'Q' 61H-'a' 71H-'q' 22H-"" 32H-'2' 42H-'B' 52H-'R' 62H-'b' 72H-'r' 23H-'#' 33H-'3' 43H-'C' 53H-'S' 63H-'c' 73H-'s' 24H-'\$' 34H-'4' 44H-'D' 54H-'T' 64H-'d' 74H-'t' 25H-'%' 35H-'5' 45H-'E' 55H-'U' 65H-'e' 75H-'u' 26H-'&' 36H-'6' 46H-'F' 56H-'V' 66H-'f' 76H-'v' 27H-" 37H-'7' 47H-'G' 57H-'W' 67H-'q' 77H-'w' 28H-'(' 38H-'8' 48H-'H' 58H-'X' 68H-'h' 78H-'x' 59H-'Y' 29H-')' 39H-'9' 49H-'l' 69H-'i' 79H-'y' 2AH-'*' 4AH-'J' 5AH-'Z' 6AH-'j' 7AH-'z' 2BH-'+' 3BH-';' 4BH-'K' 5BH-'[' 6BH-'k' 7BH-'{' 2CH-',' 3CH-'<' 4CH-'L' 6CH-1' 7CH-'|' 2DH-'-' 3DH-'=' 4DH-'M' 5DH-'] ' 6DH-'m' 7DH-'}' 3EH-'>' 4EH-'N' 5EH-'^' 6EH-'n' 2FH-'/' 3FH-'?' 4FH-'0' 5FH-' ' 6FH-'o'

Table 28: Valid File Labels

Notes:

- 1. The blanks of in the above table mean that the character can not be used as a file name.
- 2. ADP only supports file names with length 1—2
- 3. Jetfile II(Chapter II) supports file names with length up to 8.3(8 Byte main file name and 3 Byte extension name). File names are comprised with characters in the above table.



Appendix IV Status Codes and Their Meanings

Status Codes	Phenomena	Meanings
0x9000	communication	Data received correctly and is
0x4B4F		being processed correctly.
0x9002	Sum check error	Sum check is incorrect
0,0002		Address is wrong is not sent
0x9003		back.
0x9004	Major category command invalid.	Major category command in the
0.004		command categories invalid.
0x9005	Minor category command invalid.	Minor category command in the
0,5005		command categories invalid.
	Package length incorrect.	Returns when the package data
0x9006		length plus the package length
0,0000		exceeds the actual received
		length.
0x9008	File not found	File does not exist when
0,3000		operating on files.
0x9009	File received till end	Package sequential number too
0,5005		big to read.
0x9010	File opening failure	File not found or file system is
0,3010		erroneous.
0x9011	Minor category command is not	Commands of this category are
0,0011	supported in this system.	not supported in this system.
0x9012	When the file is being written in	Maybe the left space of the disk
0,0012		is not enough
	When the file is being written in	When the file is being written in,
0x9013		the size of the package is bigger
CACCIC		than 1500 or the size of data is
		bigger than the package size
	When the file is being written in	When the file is written in, the
0x9014		data packages are not sent in
		sequence
0x9015	when the file is being deleted	When the file is being deleted,
3,0010		the file is open
	Please log on first, if password	
0x9030	management is pre-set, it will return	
3,0000	when the operation is being done	
	without logging on	log on the operation
0x9031	the password is wrong	log on the operation
0x9032	The user's name is wrong	
0x9033	The old password is not correct	
0x9000	The change of password is	



	successful	
0x9035	It is logged on in elsewhere	
0,0000	it is logged off in cisewhere	
0x1101	Over volume in reading absolute addresses.	Incorrect or invalid parameters in commands.
0x1102	Error in reading or writing hard disk.	May be incorrect reading of addresses.
0x1F01	When the CPU is being updated	CPU update unsuccessful
0x1F02	When the CPU is being updated	CPU is being updated
0x1F03	Check the update status of CPU	Check the update status of CPU, but the system, didn't do the update
0x2000	Management RAM application failure in writing files.	Management RAM application failure.
0x2101	Over size data in writing in.	Writing file size can not exceed 320K at a time.
0x2102	When the file is being written in, there is no enough space in the disk	The file written in is bigger than the space of disk
0x2103	When the file is being written in	When the file is written into disk C, the left space is not enough and it returns
0x2104	When the file is being written in	When the file is written into disk D, the left space is not enough and it returns
0x2105	When the file is being written in	When the file is written into disk E, the left space is not enough and it returns
0x2106	When the file is being written in	When the file is written into disk F, the left space is not enough and it returns
0x2901	Message oversize.	Emergency message can not exceed 1024 Bytes.
0x3A01	Gray scale test	When the system does no support the Gray scale test
0x5201	Time setting failure.	Time setting failure.
0x6701	No current display file.	When reading current or the next display file or content, if there is



		no file for display in the system, the system will return to previous stage.
0x6702	Failure in opening the current display file	Failure in opening the current display file
0x6703	When the current display file is being read, it is too big	The current display file is too big, the current command can not read it, please use Extended Read-back command.
0x7201	when the disk is being formatted	Failure in formatting the disk
0x7301	Failure in creating a file.	Failure in creating a file.
0x7401	Failure in changing the files' name	Failure in changing the files' name
0x7402	The path format is not correct when changing the name	The path format is not correct when changing the name, please refer to protocol
0x7501	Failure in moving a file.	Failure in moving a file.
0x7601	Failure in deleting a file.	Failure in deleting a file.
0x7B01	Failure in opening the file	Failure in opening the file
0x7D01	when the disk information is being read	Failure in reading the disk information
0x7E01	Check whether the designated file exists or not	It returns when the designated file doesn't exist
0x8301	Check unlimited connection display status.	① & ② buffer are being displayed; ③buffer is not being displayed.① is moving out and ② is moving in.
0x8302	Check unlimited connection display status.	② & ③ buffer are being displayed; ①buffer is not being displayed. ② is moving out and ③ is moving in.
0x8303	Check unlimited connection display status.	③ & ① buffer are being displayed; ②buffer is not being displayed.③ is moving out and ① is moving in.
0x8305	Check unlimited connection display status.	The system is not in the unlimited connection status.
0x8306	The data input is out of bound, the receiving buffer exceeds	When the data is bigger than the receiving buffer
0x8307	The format of the sending data is not correct. The LED screen is at 8:8:8:n but the data sent in	8:8:8 doesn't support 1:1 format



The figure on the thousandth digit represents major category of error; the figure on the hundredth digit represents minor category of error. Any code starting by 9 represents common error.

Appendix V Explanation of Terms

Default disk:

When writing ADP command, if there is no designated disk, write the file into the default disk. If the default disk is set to be "E", send the command:<0x01>Z00<0x02>AADisplay Test<0x03> then the file will be written into disk E, for more detail, please refer to the first communication.

Text File

Controlling the display text file with JetFileII display protocol, the feature is the text format is saved as character coding, and it occupies little space, but it needs the support of font base to display correctly. It is saved under the contents of T in the data disk.

String file

String file is to be inserted into the Text File and displayed. The string file itself can not display. The saving format is the same as Text, and it is saved under S contents. .

picture file

JetFileII supports RG tri-color, 16 colors, 256 colors, 16 bit and 24 bit BMP format. .

array picture

Same as BMP type, but the saved data is related to the type of LED screen. Refer to File Format for more details.

fonts.

It keeps the shape of the characters for displaying Text File.

configuration

It is used to save the setting of the system.

Play List

Control the display order, display time and date of the display files.

Default display parameters

It is the value the system gives when no display parameter is set for the display file. For example, the in-mode of a file is not set, the system will give out a default parameter as the in-mode.

♣ FONTLIST.LST

It is used to record the number of fonts and the property of fonts. .



Appendix VI Sample Function

Check Sum Function(C)

```
//**** Name:MsgCountCheckSumTwo
//**** Func:check sum
//**** Arg.:
//****
         buf
                     - Data Buffer
//****
         begin
                     - starting loction
//****
         end
                     - Ending loction
//**** Return:
//****
         Check sum
INT32U MsgCountCheckSumTwo(INT8U *buf, INT32U begin, INT32U end)
   INT32U i, check_sum;
   check_sum = 0;
   if (end >= begin)
   {
      i = end - begin;
      buf += begin;
      while(i--)
         check_sum += *buf++;
      }
   }
   return check_sum;
}
  CRC check SUM
//*************************
//**** Standard CRC-CCITT. x^0 + x^5 + x^{12}.
INT16U const crc_ccitt_table[256] =
   0x0000, 0x1189, 0x2312, 0x329b, 0x4624, 0x57ad, 0x6536, 0x74bf,
   0x8c48, 0x9dc1, 0xaf5a, 0xbed3, 0xca6c, 0xdbe5, 0xe97e, 0xf8f7,
   0x1081, 0x0108, 0x3393, 0x221a, 0x56a5, 0x472c, 0x75b7, 0x643e,
   0x9cc9, 0x8d40, 0xbfdb, 0xae52, 0xdaed, 0xcb64, 0xf9ff, 0xe876,
```

0x2102, 0x308b, 0x0210, 0x1399, 0x6726, 0x76af, 0x4434, 0x55bd,



```
0xad4a, 0xbcc3, 0x8e58, 0x9fd1, 0xeb6e, 0xfae7, 0xc87c, 0xd9f5,
   0x3183, 0x200a, 0x1291, 0x0318, 0x77a7, 0x662e, 0x54b5, 0x453c,
   Oxbdcb, Oxac42, Ox9ed9, Ox8f50, Oxfbef, Oxea66, Oxd8fd, Oxc974,
   0x4204, 0x538d, 0x6116, 0x709f, 0x0420, 0x15a9, 0x2732, 0x36bb,
   Oxce4c, Oxdfc5, Oxed5e, Oxfcd7, Ox8868, Ox99e1, Oxab7a, Oxbaf3,
   0x5285, 0x430c, 0x7197, 0x601e, 0x14a1, 0x0528, 0x37b3, 0x263a,
   Oxdecd, Oxcf44, Oxfddf, Oxec56, Ox98e9, Ox8960, Oxbbfb, Oxaa72,
   0x6306, 0x728f, 0x4014, 0x519d, 0x2522, 0x34ab, 0x0630, 0x17b9,
   0xef4e, 0xfec7, 0xcc5c, 0xddd5, 0xa96a, 0xb8e3, 0x8a78, 0x9bf1,
   0x7387, 0x620e, 0x5095, 0x411c, 0x35a3, 0x242a, 0x16b1, 0x0738,
   Oxffcf, Oxee46, Oxdcdd, Oxcd54, Oxb9eb, Oxa862, Ox9af9, Ox8b70,
   0x8408, 0x9581, 0xa71a, 0xb693, 0xc22c, 0xd3a5, 0xe13e, 0xf0b7,
   0x0840, 0x19c9, 0x2b52, 0x3adb, 0x4e64, 0x5fed, 0x6d76, 0x7cff,
   0x9489, 0x8500, 0xb79b, 0xa612, 0xd2ad, 0xc324, 0xf1bf, 0xe036,
   0x18c1, 0x0948, 0x3bd3, 0x2a5a, 0x5ee5, 0x4f6c, 0x7df7, 0x6c7e,
   0xa50a, 0xb483, 0x8618, 0x9791, 0xe32e, 0xf2a7, 0xc03c, 0xd1b5,
   0x2942, 0x38cb, 0x0a50, 0x1bd9, 0x6f66, 0x7eef, 0x4c74, 0x5dfd,
   0xb58b, 0xa402, 0x9699, 0x8710, 0xf3af, 0xe226, 0xd0bd, 0xc134,
   0x39c3, 0x284a, 0x1ad1, 0x0b58, 0x7fe7, 0x6e6e, 0x5cf5, 0x4d7c,
   0xc60c, 0xd785, 0xe51e, 0xf497, 0x8028, 0x91a1, 0xa33a, 0xb2b3,
   0x4a44, 0x5bcd, 0x6956, 0x78df, 0x0c60, 0x1de9, 0x2f72, 0x3efb,
   0xd68d, 0xc704, 0xf59f, 0xe416, 0x90a9, 0x8120, 0xb3bb, 0xa232,
   0x5ac5, 0x4b4c, 0x79d7, 0x685e, 0x1ce1, 0x0d68, 0x3ff3, 0x2e7a,
   0xe70e, 0xf687, 0xc41c, 0xd595, 0xa12a, 0xb0a3, 0x8238, 0x93b1,
   0x6b46, 0x7acf, 0x4854, 0x59dd, 0x2d62, 0x3ceb, 0x0e70, 0x1ff9,
   0xf78f, 0xe606, 0xd49d, 0xc514, 0xb1ab, 0xa022, 0x92b9, 0x8330,
   0x7bc7, 0x6a4e, 0x58d5, 0x495c, 0x3de3, 0x2c6a, 0x1ef1, 0x0f78
};
//***************************
//**** FUNC: crc_ccitt_byte
//**** DESC: CRC 1 BYTE
//**** ARGS:
//****
            crc
                        - CRC VALUE
//****
                         - char
//**** RETU:
//****
//***************************
_inline INT16U crc_ccitt_byte(INT16U crc, INT8U c)
{
   return (crc >> 8) ^ (INT16U)crc_ccitt_table[(crc ^ c) & 0xff];
}
```



```
//**** FUNC: crc_ccitt
//**** DESC: compute the CRC for the data buffer
//**** ARGS:
         buffer
//****
                    - data pointer
//****
                    - number of bytes in the buffer
         len
//****
         len
                    - crc,init value = 0xffff
//**** RETU:
//***
          CRC
//**********************
INT16U crc_ccitt(INT8U *buffer, INT32U len, INT16U *crc)
{
   while (len--)
   {
      *crc = crc_ccitt_byte(*crc, *buffer++);
   }
   *crc = (INT8U)(~((*crc) >> 8)) | ((INT8U)(~(*crc))<<8);
  return *crc;
}
♣ CRC example:
INT16U crc = 0xFFFF;
crc = crc_ccitt(buffer, buffer_len,&crc)
DATA Type
INT 8U = 1 BYTE, UNSIGNED
INT 16U = 2 BYTE, UNSIGNED
INT 32U = 4 BYTE, UNSIGNED
```