

LCD Controller Manual

MCS3224K - GS Version 1.04

3 48-6

110002

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1. MCS3224K - GS

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2. MCS3224K - GS Connector

3.

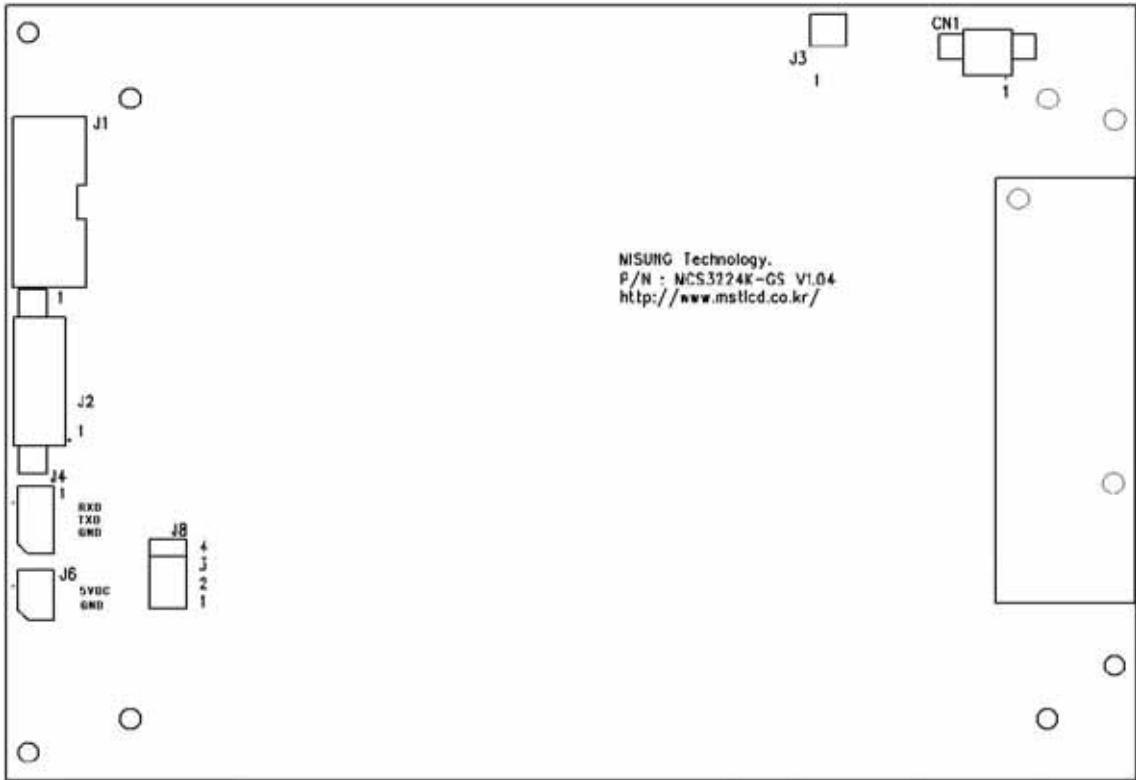
3-1.

4. MCS3224K - GS Image Overwrite

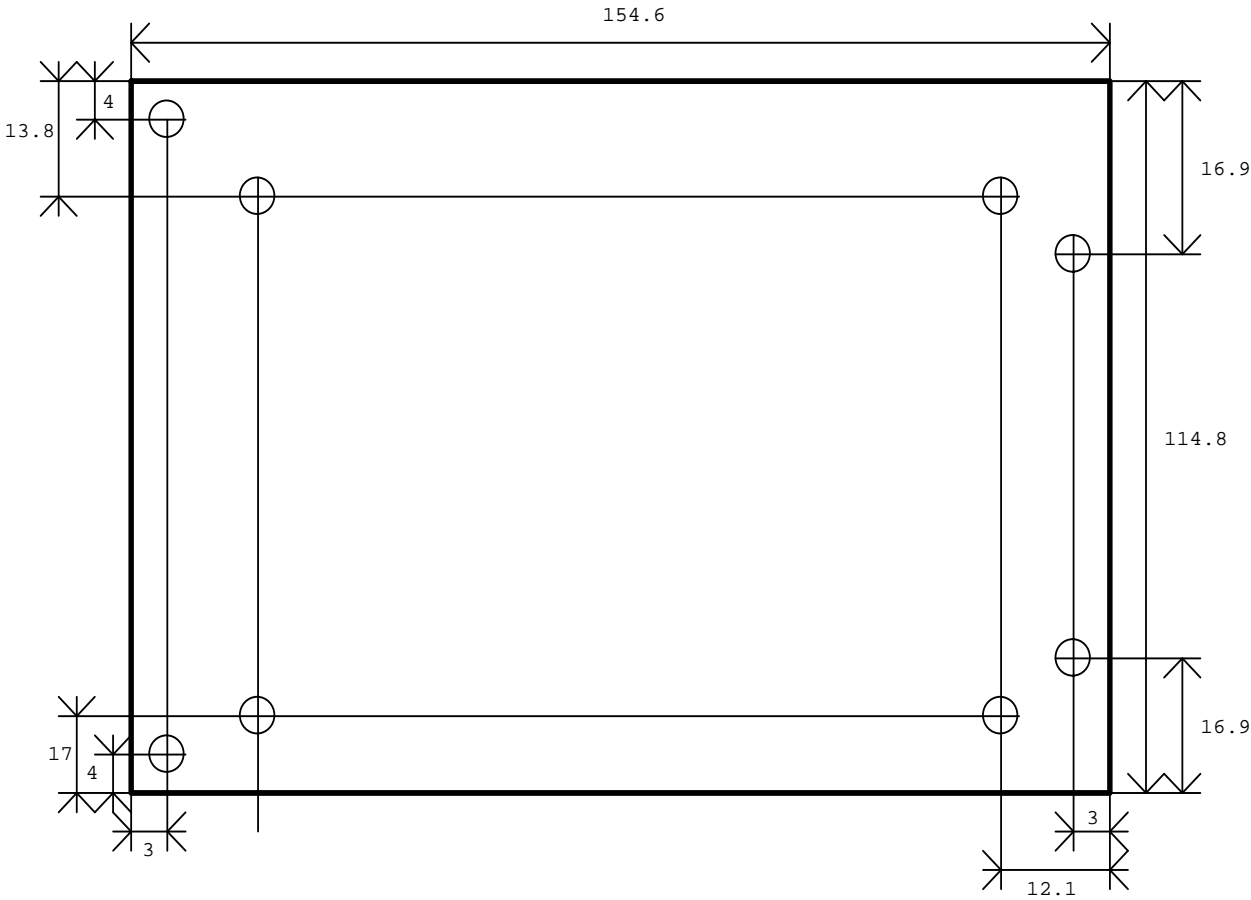
5. MCS3224K - GS Special Font

2. MCS3224K - GS Connector

MCS3224K - GS Connector



MCS3224K - GS Dimensions

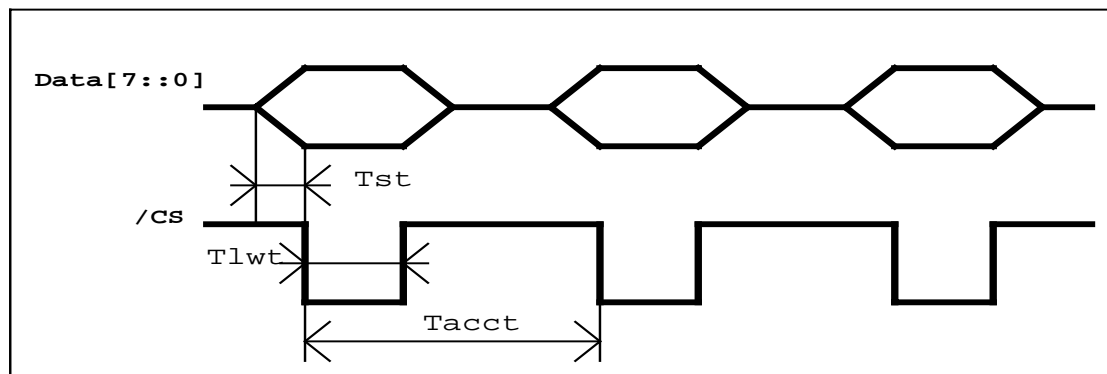


LCD Module Interface Connector : J2

Pin Number	Symbol	Description
1	FLM	Display cycle clock
2	LP	Data latch signal
3	CP	Data shift signal
4	DISP	Display Enable/Disable
5	VDD	+5[VDC]
6	GND	Ground
7	VLCD	Power supply for LCD
8	D7	Display data line
9	D6	Display data line
10	D5	Display data line
11	D4	Display data line
12	D3	Display data line
13	D2	Display data line
14	D1	Display data line
15	D0	Display data line

Parallel Connector: J1

Pin Number	Symbol	Description
1	BUSY	Busy Output
2	RESERVED	Reserved
3	RST	Reset (High Active)
4	RESERVED	Reserved
5	GND	Ground
6	/CS	Chip Select(Falling Edge Active)
7	D7	Data 7
8	D6	Data 6
9	D5	Data 5
10	D4	Data 4
11	D3	Data 3
12	D2	Data 2
13	D1	Data 1
14	D0	Data 0

Parallel Timing

$T_{st} : 1 [\mu s] : \text{Min}$

$T_{lwt} : 1 [\mu s] : \text{Min}$

$T_{acct} : 100 [\mu s] : \text{Min}$

Backlight Power Connector : CN1

Pin Number	Symbol	Description
1	+5[VDC]	-
2	BRT - ADJ	0~ +5[VDC]
3	ON/OFF	-
4	+5[VDC]	-
5	GND	

RS-232C Connector : J4

Pin Number	Symbol	Description
1	RXD	Receive Data : LCD Controller
2	TXD	Transmit Data : LCD Controller
3	GND	Ground

Power Connector : J6

Pin Number	Symbol	Description
1	VCC	+5[VDC]/1 [A]
2	GND	Ground

Touch Connector : J3

Pin Number	Symbol	Description
1	X+	
2	Y-	
3	X-	
4	Y+	

Serial Baud Rate : J8

Pin Number	Symbol	Description
1	-	Parallel Enable/Disable
2	-	Reserved
3	-	BaudRate Select
4	-	BaudRate Select

** Parallel Input : J8 1 ON
 Parallel Input : J8 1 OFF

** BaudRate J8 Head pin .

Pin NO.	J8 3	J8 4	BaudRate [bps]
	ON	ON	9,600
	ON	OFF	19,200
	OFF	ON	57,600
	OFF	OFF	115,200

3.

'Esc' = 0x1b [hex]

			Parameter	
'Esc'	'K'	'0x01'		
		'0x02'		KS5601
		'0x03'		(default)
		'0x04'		
'Esc'	'E'	'0x01'		
		'0x02'		
		'0x03'		(default)
		'0x04'		
'Esc'	'P'	'0x01'		Text Layer ON
		'0x02'		Text Layer ON
		'0x03'		Graphic Layer ON
		'0x04'		Graphic Layer ON
		'0x05'		Text Layer ON
		'0x06'		Text Layer OFF
		'0x07'		Text Layer Font ON
		'0x08'		Text Layer Font 가 ON
		'0x09'		Text Layer Font ON
		'0x0a'		Text Layer Font OFF
		'0x0b'		Reserved
		'0x0c'		Reserved
		'0x0d'		Reserved
		'0x0e'		Reserved
		'0x0f'		Text Layer ON
		'0x10'		Text Layer OFF
		'0x11'		Graphic Layer ON
'0x12'		Graphic Layer OFF		
'0x13'		Reserved		
'Esc'	'D'	'0x01'		Text Layer clear
		'0x02'	(X1,Y1,X2,Y2)	Text Layer clear (X1,Y1,X2,Y2 hex 가 :0x00 ~ 0x27 :0x00 ~ 0x0e)
		'0x03'		Graphic Layer clear
		'0x04'	(X1,Y1,X2,Y2)	Graphic Layer clear (X1, Y1, X2, Y2 hex 가 :0x0000 ~ 0x013f :0x00 ~ 0xEf)

			Parameter		
'Esc'	'C'	'0x01'	(X,Y)	Text Layer X,Y cursor Text Display (X,Y hex 가 :0x00 ~ 0x27 :0x00 ~ 0x0e)	
		'0x02'		Reserved	
		'0x03'		Text Layer cursor 8bit Line	
		'0x04'		Text Layer cursor 8 x 16 dot	
		'0x05'		Cursor off	
		'0x06'	(X,Y)	(X, Y) X:0x0000 ~ 0x013f Y:0x00 ~ 0xEf	
'Esc'	'L'	'0x01'		CCFL Power ON	
		'0x02'		CCFL Power OFF	
'Esc'	'V'	'0x01'		LCD Bias Voltage UP	
		'0x02'		LCD Bias Voltage DOWN	
		'0x03'		Backlight control up	
		'0x04'		Backlight control down	
'Esc'	'G'	'0x01'	(X,Y)	Graphic Layer _____ X:0x0000 ~ 0x013f Y:0x00 ~ 0xEf	
		'0x02'	(X,Y)	Graphic Layer _____ X:0x0000 ~ 0x013f Y:0x00 ~ 0xEf	
		'0x03'	(X1,Y1,X2,Y2)	Graphic Layer Line X1,X2:0x0000 ~ 0x013f Y1,Y2:0x00 ~ 0xEf	
		'0x04'	(X1,Y1,X2,Y2)	Graphic Layer Line X1,X2:0x0000 ~ 0x013f Y1,Y2:0x00 ~ 0xEf	
		'0x05'	(X1,Y1,X2,Y2)	Graphic Layer Rectangle X1,X2:0x0000 ~ 0x013f Y1,Y2:0x00 ~ 0xEf	
		'0x06'	(X1,Y1,X2,Y2)	Graphic Layer Rectangle X1,X2:0x0000 ~ 0x013f Y1,Y2:0x00 ~ 0xEf	
		'0x07'	(X1,Y1,X2,Y2)	Graphic Layer Rectangle X1,X2:0x0000 ~ 0x013f Y1,Y2:0x00 ~ 0xEf	
		'0x08'	(X1,Y1,X2,Y2)	Graphic Layer Rectangle X1,X2:0x0000 ~ 0x013f Y1,Y2:0x00 ~ 0xEf	
		'0x09'	(X,Y,radius)	Graphic Layer _____ X Y X:0x0000 ~ 0x013f Y:0x00 ~ 0xEf Radius :0x00 ~ 0x78	
		'0x0a'	(X,Y,radius)	Graphic Layer _____ X Y X:0x0000 ~ 0x013f Y:0x00 ~ 0xEf Radius :0x00 ~ 0x78	
		'0x0b'	(X,Y,radius)	Graphic Layer _____ X Y X:0x0000 ~ 0x013f Y:0x00 ~ 0xEf Radius :0x00 ~ 0x78	
		'0x0c'	(X,Y,radius)	Graphic Layer _____ X Y X:0x0000 ~ 0x013f Y:0x00 ~ 0xEf Radius :0x00 ~ 0x78	
					Graphic Layer _____

			Parameter	
		'0x0d'	(X,Y,a,b)	X Y X:0x0000 ~ 0x013f Y:0x00 ~ 0xEf a :320/2 b :240/2
		'0x0e'	(X,Y,a,b)	Graphic Layer _____ X Y X:0x0000 ~ 0x013f Y:0x00 ~ 0xEf a :320/2 b :240/2
		'0x0f'	(X,Y,a,b)	Graphic Layer _____ X Y X:0x0000 ~ 0x013f Y:0x00 ~ 0xEf a :320/2 b :240/2
		'0x10'	(X,Y,a,b)	Graphic Layer _____ X Y X:0x0000 ~ 0x013f Y:0x00 ~ 0xEf a :320/2 b :240/2
'Esc'	'A'	'0x01'		Reset (MCS3224K -GS Rebooting)
		'0x02'		LCD Bias Voltage .
		'0x03'		Echo '0x06' Send
		'0x04'		User font display 16Byte Send Image data 16Byte dummy data 16Byte .
		'0x05'	(X)	Text color X:0x00~0xff
		'0x06'	(X)	Text background color X:0x00~0xff
		'0x07'	(X)	Graphic color X:0x00~0xff
		'0x08'	(X)	Reserved
'Esc'	'I'	'0x01'	(X)	Image One page draw (X 0x00~0x34)
		'0x02'		Select Text Layer (default)
		'0x03'		Select Graphic Layer
'Esc'	'T'	'0x01'		Reserved
		'0x02'		Reserved
		'0x03'		Touch start -> Touch input -> Send to serial X,Y value coordinate -> Touch end

3-1.

Parameter	'+'
'Esc' = 0x1b	
Graphic Layer	X MCS3224K-GS byte
. X	가 1 byte
(byte	Graphic Layer X(X1
X2)	.)

Text Layer

	'ESC' + 'P'
	'0x07' or '0x08' or '0x09' or '0x0a'
Parameter	
	'ESC' + 'P' + '0x07' => Text Layer Font 8*16 dots => 16*32 dots 16*16 dots => 32*32 dots
	'ESC' + 'P' + '0x08' => Text Layer Font 가 8*16 dots => 16*16 dots 16*16 dots => 32*16 dots
	'ESC' + 'P' + '0x09' => Text Layer Font 8*16 dots => 8*32 dots 16*16 dots => 16*32 dots
	'ESC' + 'P' + '0x0a' => Text Layer Font OFF

Text, Graphic Layer Clear

	'ESC' + 'D'
	'0x01' or '0x02' or '0x03' or '0x04'
Parameter	'X1' + 'Y1' + 'X2' + 'Y2'
	'ESC' + 'D' + '0x01' => Text Layer Clear Text Layer (5, 0, 20, 11) Clear => 'ESC' + 'D' + '0x02' + '0x05' + '0x00' + '0x14' + '0x0b'
	'ESC' + 'D' + '0x03' => Graphic Layer Clear Graphic Layer (10, 25, 300, 210) Clear => 'ESC' + 'D' + '0x04' + '0x00' + '0x0a' + '0x19' + '0x01' + '0x2c' + '0xd2'
	Graphic Layer Clear X1 X2
	Graphic Layer X MCS3224K-GS byte
	(10, 25, 300, 210) X1 가 1 byte
	byte
	byte Graphic Layer
	X(X1 X2)

Text Layer Cursor	
	'ESC'+ 'C'
	'0x01' or '0x02' or '0x03' or '0x04' or '0x05' or '0x06'
Parameter	'X'+ 'Y' or 'None'
	'ESC'+ 'C'+ '0x01'+ 'X'+ 'Y' => Text Layer (X, Y) Cursor (Graphic Layer Cursor .) (Text Layer) : X 0x00 ~ 0x27, Y 0x00 ~ 0x0e
	'ESC'+ 'C'+ '0x02' => Reserved
	'ESC'+ 'C'+ '0x03' => Cursor Line
	'ESC'+ 'C'+ '0x04' => Cursor Block
	'ESC'+ 'C'+ '0x05' => Cursor OFF
	'ESC'+ 'C'+ '0x06'+ 'X'+ 'Y' => Text (X, Y) Display (X, Y) (0~319, 0~239) Text Dot Display가 : X : 0x0000 ~ 0x013f, Y 0x00 ~ 0xef <u>X MCS3224K-GS byte</u>

Graphic Layer /	
	'ESC'+ 'G'
	'0x01' or '0x02'
Parameter	'X'+ 'Y'
	'ESC'+ 'G'+ '0x01'+ 'X'+ 'Y' => (X, Y) .) Graphic Layer (50, 80) => 'ESC'+ 'G'+ '0x01'+ ' <u>0x00</u> '+' <u>0x32</u> '+'0x50'
	'ESC'+ 'G'+ '0x02'+ 'X'+ 'Y' => (X, Y) .) Graphic Layer (310, 80) => 'ESC'+ 'G'+ '0x02'+ ' <u>0x01</u> '+' <u>0x36</u> '+'0x50'
	X (Graphic Layer) : X 0x0000 ~ 0x013f, Y 0x00 ~ 0xef <u>Graphic Layer X MCS3224K-GS byte</u> <u> (50, 80) X 가 1</u> <u>byte byte .</u>

Graphic Layer Line /	
	'ESC'+ 'G'
	'0x03' or '0x04'
Parameter	'X1'+ 'Y1'+ 'X2'+ 'Y2'
	'ESC'+ 'G'+ '0x03'+ 'X1'+ 'Y1'+ 'X2'+ 'Y2'=> (X1,Y1,X2,Y2) Line .) Graphic Layer (0, 10, 319, 229) Line => 'ESC'+ 'G'+ '0x03'+ ' <u>0x00</u> '+' <u>0x00</u> '+'0x0a'+ ' <u>0x01</u> '+' <u>0x3f</u> '+'0xe5'
	'ESC'+ 'G'+ '0x04'+ 'X1'+ 'Y1'+ 'X2'+ 'Y2'=> (X1,Y1,X2,Y2) Line .) Graphic Layer (0, 10, 319, 229) Line => 'ESC'+ 'G'+ '0x04'+ ' <u>0x00</u> '+' <u>0x00</u> '+'0x0a'+ ' <u>0x01</u> '+' <u>0x3f</u> '+'0xe5'
	X1, X2 (Graphic Layer) : X 0x0000 ~ 0x013f, Y 0x00 ~ 0xef

Graphic Layer / Rectangle /	
	'ESC'+ 'G'
	'0x05' or '0x06' or '0x07' or '0x08'
Parameter	'X1'+ 'Y1'+ 'X2'+ 'Y2'
	<pre>'ESC'+ 'G'+ '0x05'+ 'X1'+ 'Y1'+ 'X2'+ 'Y2' => (X1,Y1,X2,Y2) Rectangle) Graphic Layer (10, 10, 100, 100) Rectangle => 'ESC'+ 'G'+ '0x05'+ '0x00'+ '0x0a'+ '0x0a'+ '0x00'+ '0x64'+ '0x64'</pre> <pre>'ESC'+ 'G'+ '0x06'+ 'X1'+ 'Y1'+ 'X2'+ 'Y2' => (X1,Y1,X2,Y2) Rectangle) Graphic Layer (10, 10, 100, 100) Rectangle => 'ESC'+ 'G'+ '0x06'+ '0x00'+ '0x0a'+ '0x0a'+ '0x00'+ '0x64'+ '0x64'</pre> <pre>'ESC'+ 'G'+ '0x07'+ 'X1'+ 'Y1'+ 'X2'+ 'Y2' => (X1,Y1,X2,Y2) Rectangle) Graphic Layer (10, 10, 100, 100) Rectangle => 'ESC'+ 'G'+ '0x07'+ '0x00'+ '0x0a'+ '0x0a'+ '0x00'+ '0x64'+ '0x64'</pre> <pre>'ESC'+ 'G'+ '0x08'+ 'X1'+ 'Y1'+ 'X2'+ 'Y2' => (X1,Y1,X2,Y2) Rectangle) Graphic Layer (10, 10, 100, 100) Rectangle => 'ESC'+ 'G'+ '0x08'+ '0x00'+ '0x0a'+ '0x0a'+ '0x00'+ '0x64'+ '0x64'</pre> <p style="text-align: center;">X1, X2</p> <hr/> <p style="text-align: center;">(Graphic Layer) : X 0x0000 ~ 0x013f, Y 0x00 ~ 0xef</p>

Graphic Layer / /	
	'ESC'+ 'G'
	'0x09' or '0x0a' or '0x0b' or '0x0c'
Parameter	'X'+ 'Y'+ radius
	<pre>'ESC'+ 'G'+ '0x09'+ 'X'+ 'Y'+ 'radius' => (X,Y) 'radius') Graphic Layer (100, 100) radius = 50 => 'ESC'+ 'G'+ '0x09'+ '0x00'+ '0x64'+ '0x64'+ '0x32'</pre> <pre>'ESC'+ 'G'+ '0x0a'+ 'X'+ 'Y'+ 'radius' => (X,Y) 'radius') Graphic Layer (100, 100) radius = 50 => 'ESC'+ 'G'+ '0x0a'+ '0x00'+ '0x64'+ '0x64'+ '0x32'</pre> <pre>'ESC'+ 'G'+ '0x0b'+ 'X'+ 'Y'+ 'radius' => (X,Y) 'radius') Graphic Layer (100, 100) radius = 50 => 'ESC'+ 'G'+ '0x0b'+ '0x00'+ '0x64'+ '0x64'+ '0x32'</pre> <pre>'ESC'+ 'G'+ '0x0c'+ 'X'+ 'Y'+ 'radius' => (X,Y) 'radius') Graphic Layer (100, 100) radius = 50 => 'ESC'+ 'G'+ '0x0c'+ '0x00'+ '0x64'+ '0x64'+ '0x32'</pre> <p style="text-align: center;">X</p> <hr/> <p style="text-align: center;">(Graphic Layer) : X 0x0000 ~ 0x013f Y 0x00 ~ 0xef radius '0x01' ~ '0x78'</p>

Graphic Layer / /	
	'ESC'+ 'G'
	'0x0d' or '0x0e' or '0x0f' or '0x10'
Parameter	'X'+ 'Y'+ 'a'+ 'b'
	'ESC'+ 'G'+ '0x0d'+ 'X'+ 'Y'+ 'a'+ 'b' => (X,Y) 가 'a', 'b') Graphic Layer (150, 120) 'a'= 50, 'b'= 20 => 'ESC'+ 'G'+ '0x0d'+ ' <u>0x00</u> '+' <u>0x96</u> '+'0x78'+ '0x32'+ '0x14' 'ESC'+ 'G'+ '0x0e'+ 'X'+ 'Y'+ 'a'+ 'b' => (X,Y) 가 'a', 'b') Graphic Layer (150, 120) 'a'= 50, 'b'= 20 => 'ESC'+ 'G'+ '0x0e'+ ' <u>0x00</u> '+' <u>0x96</u> '+'0x78'+ '0x32'+ '0x14' 'ESC'+ 'G'+ '0x0f'+ 'X'+ 'Y'+ 'a'+ 'b' => (X,Y) 가 'a', 'b') Graphic Layer (150, 120) 'a'= 50, 'b'= 20 => 'ESC'+ 'G'+ '0x0f'+ ' <u>0x00</u> '+' <u>0x96</u> '+'0x78'+ '0x32'+ '0x14' 'ESC'+ 'G'+ '0x10'+ 'X'+ 'Y'+ 'a'+ 'b' => (X,Y) 가 'a', 'b') Graphic Layer (150, 120) 'a'= 50, 'b'= 20 => 'ESC'+ 'G'+ '0x10'+ ' <u>0x00</u> '+' <u>0x96</u> '+'0x78'+ '0x32'+ '0x14' X (Graphic Layer) : X 0x0000 ~ 0x013f Y 0x00 ~ 0xef 'a' '0x01' ~ '0xa0' 'b' '0x01' ~ '0x78'

Reset

	'ESC'+ 'A'																																																			
	'0x01' or '0x02' or '0x03' or '0x04' or '0x05' or '0x06' or '0x07' or '0x08'																																																			
Parameter	['X' + 'Y'] => 가 '0x04'																																																			
	'ESC'+ 'A'+ '0x01' => Rebooting 'ESC'+ 'A'+ '0x02' => LCD Bias Voltage , Rebooting 'ESC'+ 'A'+ '0x03' => MCS3224K - GS System check Serial '0x06' , MCS3224K - GS 'ESC'+ 'A'+ '0x04' => User font display) 'ESC'+ 'A'+ '0x04'+ '0x00'+ '0x18'+ '0x18'+ '0x18'+ '0x18'+ '0x18'+ '0x18'+ '0x18'+ '0x18'+ '0x18'+ '0x18'+ '0x18'+ '0x18'+ '0x18'+ '0x18'+ '0x18'+ '0x18'+ '0x18'+ '0x18'+ '0x00' => display <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>NO</th> <th>IMAGE</th> <th>DATA</th> </tr> </thead> <tbody> <tr><td>0x00</td><td></td><td>0x00,</td></tr> <tr><td>0x01</td><td></td><td>0x18,</td></tr> <tr><td>0x02</td><td></td><td>0x18,</td></tr> <tr><td>0x03</td><td></td><td>0x18,</td></tr> <tr><td>0x04</td><td></td><td>0x18,</td></tr> <tr><td>0x05</td><td></td><td>0x18,</td></tr> <tr><td>0x06</td><td></td><td>0x18,</td></tr> <tr><td>0x07</td><td></td><td>0x18,</td></tr> <tr><td>0x08</td><td></td><td>0x18,</td></tr> <tr><td>0x09</td><td></td><td>0x18,</td></tr> <tr><td>0x0a</td><td></td><td>0x18,</td></tr> <tr><td>0x0b</td><td></td><td>0x18,</td></tr> <tr><td>0x0c</td><td></td><td>0x18,</td></tr> <tr><td>0x0d</td><td></td><td>0x18,</td></tr> <tr><td>0x0e</td><td></td><td>0x18,</td></tr> <tr><td>0x0f</td><td></td><td>0x00</td></tr> </tbody> </table> '0x05' => Text color) 'ESC'+ 'A'+ '0x05'+ '0x00' => Text color가 '0x06' => Text background color) 'ESC'+ 'A'+ '0x06'+ '0xff' => Text background color가 '0x07' => Graphic color) 'ESC'+ 'A'+ '0x07'+ '0x00' => Graphic color가	NO	IMAGE	DATA	0x00		0x00,	0x01		0x18,	0x02		0x18,	0x03		0x18,	0x04		0x18,	0x05		0x18,	0x06		0x18,	0x07		0x18,	0x08		0x18,	0x09		0x18,	0x0a		0x18,	0x0b		0x18,	0x0c		0x18,	0x0d		0x18,	0x0e		0x18,	0x0f		0x00
NO	IMAGE	DATA																																																		
0x00		0x00,																																																		
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0x0e		0x18,																																																		
0x0f		0x00																																																		

Image display

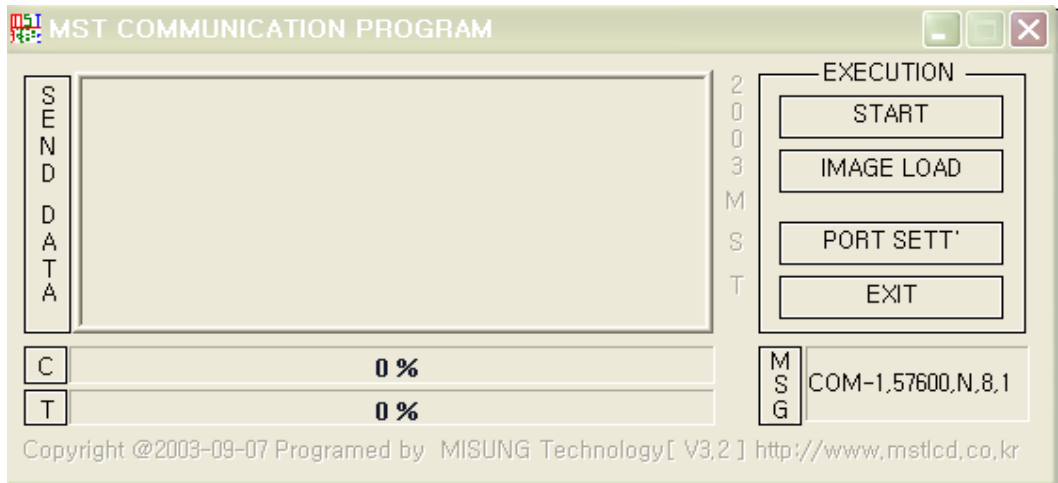
	'ESC'+'I'
	'0x01' or '0x02' or '0x03'
Parameter	'X'
	<p>'ESC'+'I'+ '0x01'+ 'X' => Image display x (page number) Memory Image display . 'X' : [0x00 ~ 0x34] Display default가 Text Layer , Graphic Layer 가 .) Image Text Layer(default) Display 'ESC'+'I'+ '0x01'+ '0x02' => 320*240 Text Layer . 'ESC'+'I'+ '0x02' => Image display at Text Layer (default) 'ESC'+'I'+ '0x03' => Image display at Graphic Layer</p>

Touch

	'ESC'+'T'
	'0x03'
Parameter	
	<p>'ESC'+'T'+ '0x03' => Touch Panel X,Y ASCII format (xxx,yyy) Touch . (Touch event) ** (10, 200) 0x30 0x31 0x30 0x2C 0x32 0x30 0x30 [Hex Format]</p>

4. MCS3224K - GS Image Overwrite

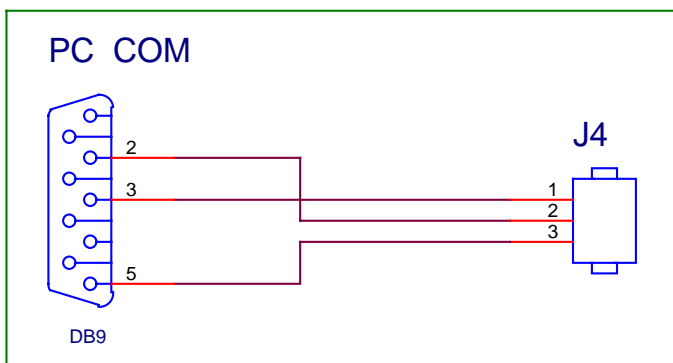
Image Overwrite Application Program



Overwrite Application Program

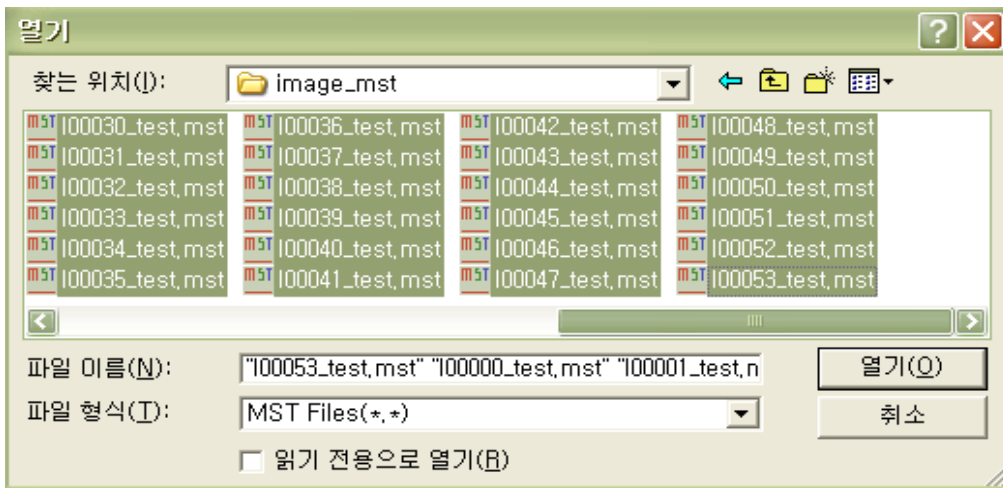
MCS3224K - GS Image display ,
 Image page Overwrite .

, MCS3224K-GS PC Serial Cable

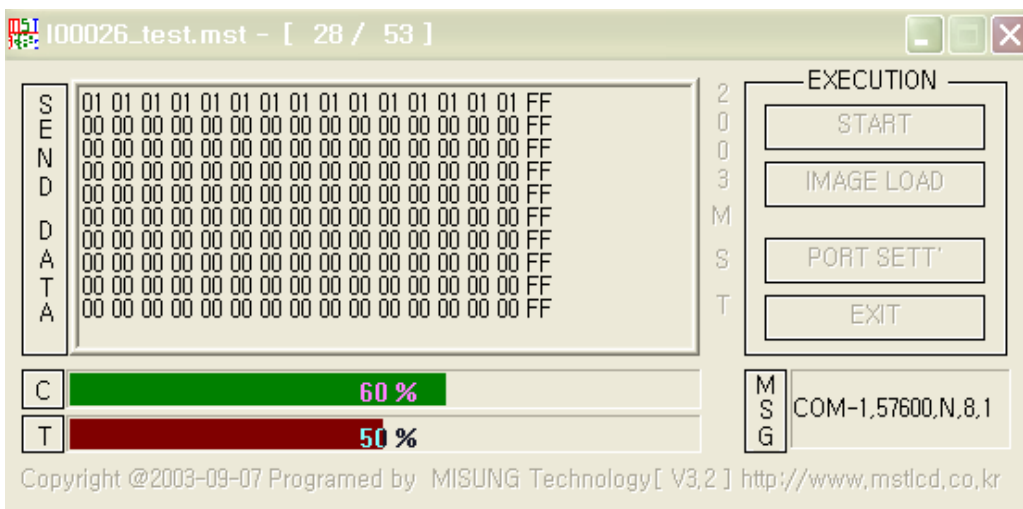


'IMAGE LOAD'

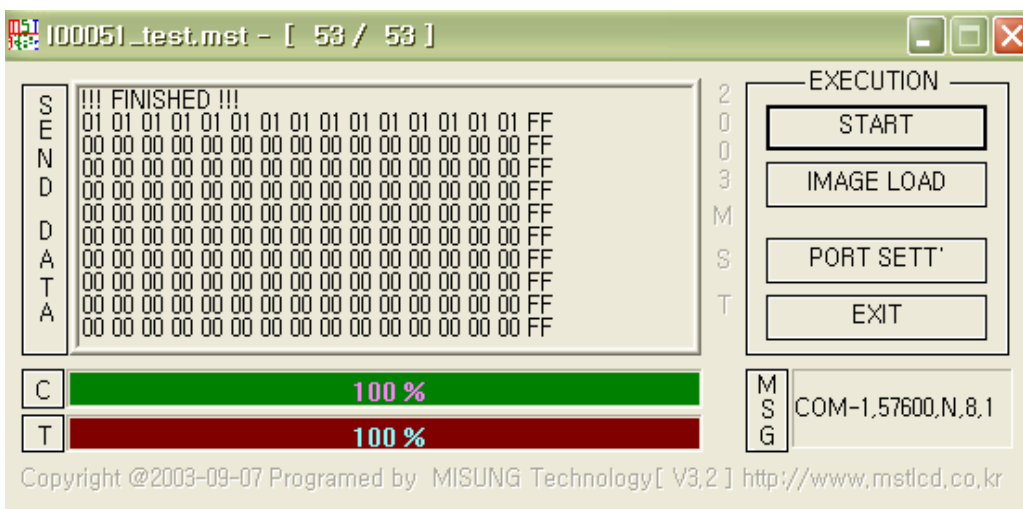
image



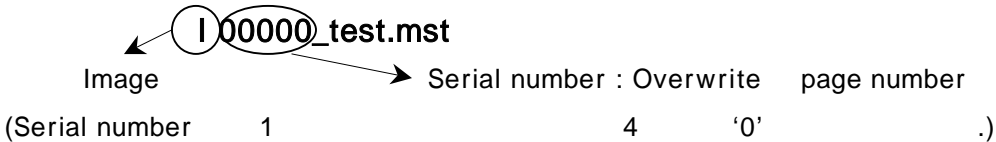
, 'START' MCS3224K-GS Overwrite



Bar Bar Download
, Bar
Bar 가 '100%' Image Overwrite



'IMAGE LOAD' Image



Ex) 1 page Overwrite file I00001_test.mst

5. MCS3224K - GS

Special Font

MCS3224K - GS

(Special Font)

Special

	0x00	0x01	0x02	0x03	0x04	0x05	0x06	0x07	0x08	0x09	0x0A	0x0B	0x0C	0x0D	0x0E	0x0F
0x00		☎	☎	☎	☎	☎	☎	☎		No.	Co.	TM.	am.		FM.	Tel.
0x10	I	II	III	IV	V	VI	VII	VIII	IX	X	ℓℓ	mℓ	dℓ	ℓ	kℓ	cc
0x20	mm ³	cm ³	m ³	km ³	fm	nm	μm	mm	cm	km	mm ²	cm ²	m ²	km ²	ha	ℓg
0x30	m _g	k _g	kt	cal	kcal	dB	m/s	m/s ²	ps	ns	μs	ms	pV	nV	μV	mV
0x40	kV	MV	PA	nA	μA	mA	KA	FW	nW	μW	mW	kW	MW	Hz	kHz	MHz
0x50	GHz	THz	Ω	kΩ	MΩ	PF	nF	μF	mol	cd	rad	rad/s	rad/s ²	sr	Pa	kPa
0x60	MPa	GPa	Wb	Im	lx	Bq	Gy	Sv	°/kg	㉿	㊀	㊁	㊂	㊃	㊄	㊅
0x70	㊆	㊇	㊈	㊉	㊊	㊋	㊌	㊍	㊎	㊏	㊑	㊒	㊓	㊔	㊕	㊖
0x80	㊗	㊘	㊙	㊚	㊛	㊜	㊝	㊞	㊟	㊠	㊡	㊢	㊣	㊤	㊥	㊦
0x90	㊧	㊨	㊩	㊪	㊫	㊬	㊭	㊮	㊯	㊰	㊱	㊲	㊳	㊴	㊵	㊶
0xA0	㊷	㊸	㊹	㊺	㊻	㊼	㊽	㊾	㊿	①	②	③	④	⑤	⑥	⑦
0xB0	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯	⑰	⑱	⑲	⑳	㉑	㉒	㉓
0xC0	㉔	㉕	㉖	㉗	㉘	㉙	㉚	㉛	㉜	㉝	㉞	㉟	㊀	㊁	㊂	㊃
0xD0	㊄	㊅	㊆	㊇	㊈	㊉	㊊	㊋	㊌	㊍	㊎	㊏	㊑	㊒	㊓	㊔
0xE0	㊕	㊖	㊗	㊘	㊙	㊚	㊛	㊜	㊝	㊞	㊟	㊠	㊡	㊢	㊣	㊤
0xF0	㊥	㊦	㊧	㊨	㊩	㊪	㊫	㊬	㊭	㊮	㊯	㊰	㊱	㊲	㊳	㊴

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