



LCD Controller Manual

MCT8048K Version 1.00



3 48-6

110002

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1. MCT8048K

,

2. MCT8048K Connector

3.

4. MCT8048K Image Overwrite

[1.] MCT8048K

Special Font

1. MCT8048K

◆ MCT8048K

◆ LCD Resolution : 8bit(256) Color TFT 800*480 dots

16bit Color TFT 800*480 dots

◆ : KS5601

KS5601

◆ LCD Back Light 가

◆ LCD Back Light : Inverter _On/Off 가

◆ Font : 16*16 dots

16*16 dots

8*16 dots

8*16 dots

16*16

◆ Image File Memory

8bit(256) Color/800*480 => 37 [Page]

16bit Color/800*480 => 18 [Page]

Font /

◆ MCT8048K

◆ CPU : ARM920T 200[MHz]

◆ Display Type : 256 Color/16Bit Color TFT 640*480 dots

◆ : +12[VDC]

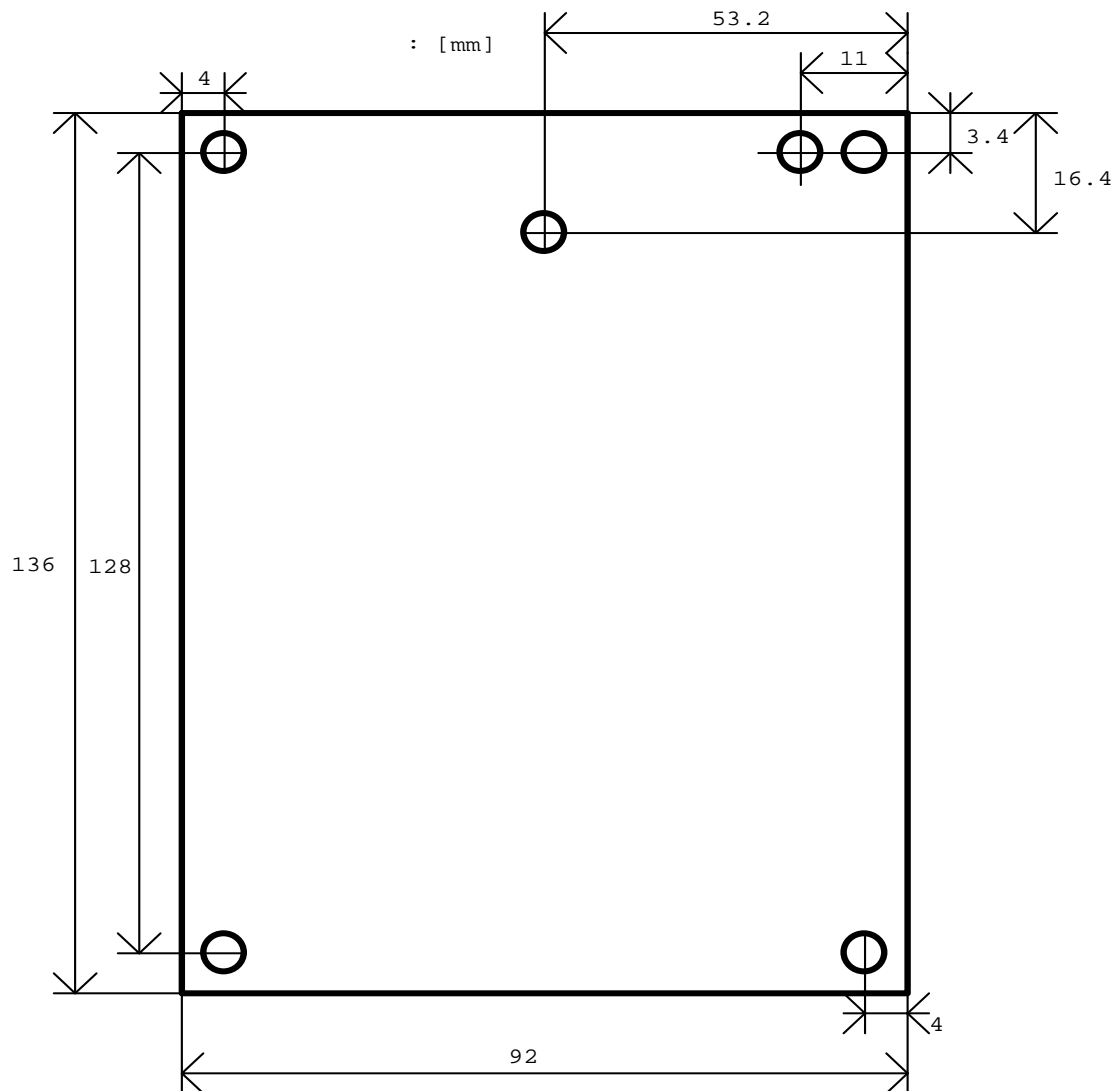
◆ LCD Backlight Inverter

◆ : RS-232C => 9600, 19200, 57600, 115200 [bps]

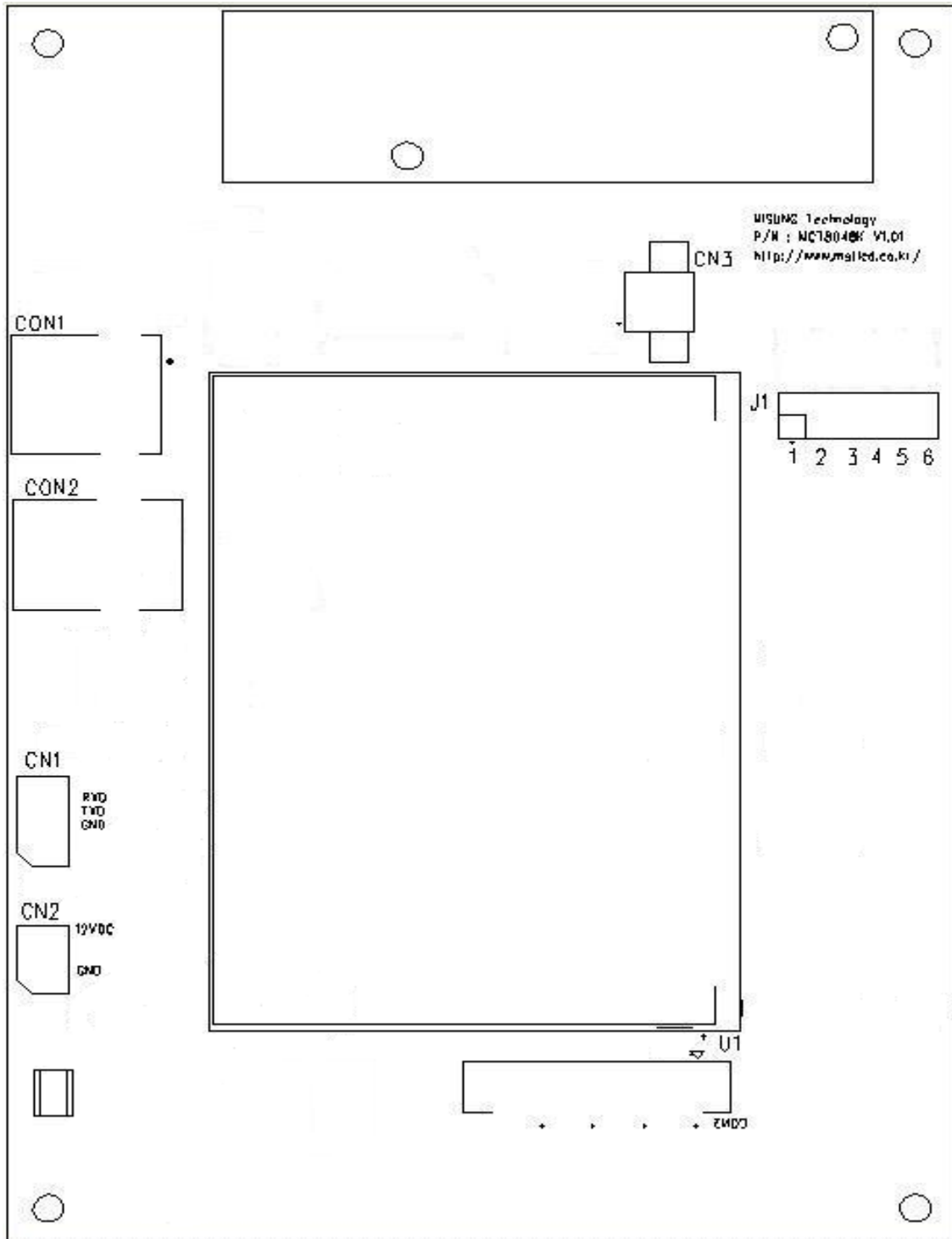
2. MCT8048K Connector

2 MCT8048K Dimensions Connector

MCT8048K Dimensions



LCD Controller Connector



2-1. Backlight Power Connector : CN3

Pin Number	Symbol	Description
1	VCC12	+12[VDC]
2	REF	Vref
3	ON_OFF	On/OFF
4	-	-
5	GND	DC Ground

2-2. RS-232C Connector : CN1

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

2-3. Power Connector : CN2

Pin Number	Symbol	Description
1	VCC12	+12[VDC]
2	GND	DC Ground

2-4. Serial Baud Rate : J1

Pin Number	Symbol	Description
1	-	BaudRate Select
2	-	BaudRate Select

**** BaudRate J1 Head pin .**

Pin NO.	J1_1	J1_2	BaudRate [bps]
	SHORT	SHORT	9,600
	SHORT	OPEN	19,200
	OPEN	SHORT	57,600
	OPEN	OPEN	115,200

2-5. LCD Color : J1-3

Pin Number	Symbol	Description
SHORT	8Bit(256) Color	8Bit(256) Color
OPEN	16Bit Color	16Bit Color

2-6. USB image preview : J1 -4

Pin Number	Symbol	Description
SHORT	USB -preview select on	USB -preview select on
OPEN	USB -preview select off	USB -preview select off

2-7. USB image download : J1 -5

Pin Number	Symbol	Description
SHORT	USB image download on	USB image download on
OPEN	USB image download off	USB image download off

2-8. Logo display : J1 -6

Pin Number	Symbol	Description
SHORT	Controller board booting logo display on (image 0 page image)	Controller board booting logo display on (image 0 page image)
OPEN	Controller board booting logo display off	Controller board booting logo display off

3.

'Esc' = 0x1b [hex]

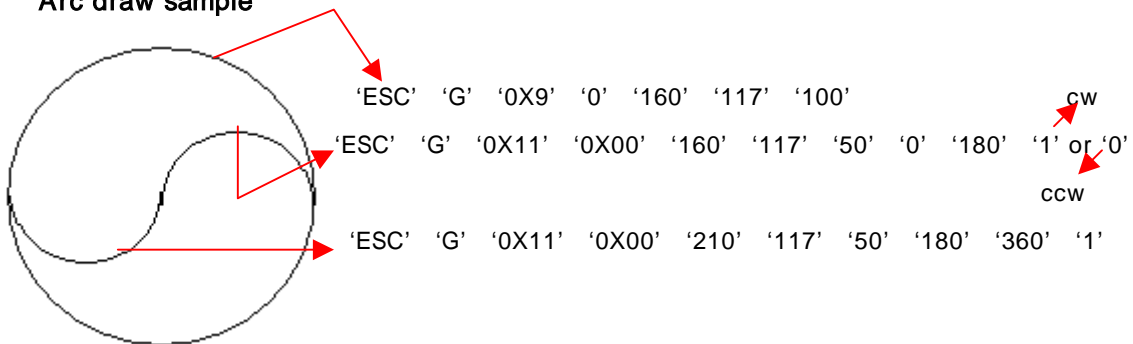
			Parameter	
'Esc'	'K'	'0x01'		
		'0x02'		KS5601
		'0x03'		(default)
		'0x04'		
'Esc'	'E'	'0x01'		
		'0x02'		
		'0x03'		(default)
		'0x04'		
'Esc'	'P'	'0x01'		Reserved
		'0x02'		Reserved
		'0x03'		Reserved
		'0x04'		Reserved
		'0x05'		Reserved
		'0x06'		Reserved
		'0x07'		Font ON
		'0x08'		Font 가 ON
		'0x09'		Font ON
		'0x0a'		Font OFF
		'0x0b'		Reserved
		'0x0c'		Reserved
		'0x0d'		Reserved
		'0x0e'		Reserved
		'0x0f'		Reserved
		'0x10'		Reserved
		'0x11'		Reserved
		'0x12'		Reserved
'0x13'		Reserved		
'0x14'		Font 가 3 , 2		
'0x15'		Font 가 2 , 3		
'0x16'		Font 가 3 , 3		
'Esc'	'D'	'0x01'		clear

			Parameter	
		'0x02'	(X1,Y1,X2,Y2)	Text Clear (X1, Y1, X2, Y2 hex X1,X2:0x00 ~ 0x63, Y1,Y2:0x00 ~ 0x1D)
		'0x03'		Reserved
		'0x04'	(X1,Y1,X2,Y2)	Graphic clear (X1, Y1, X2, Y2 hex X1,X2:0x0000 ~ 0x031f, Y1,Y2:0x0000 ~ 0x01df)
'Esc'	'C'	'0x01'	(X,Y)	Text X,Y cursor (X,Y hex X:0x00 ~ 0x63 Y:0x00 ~ 0x1d)
		'0x02'		Reserved
		'0x03'		Reserved
		'0x04'		Reserved
		'0x05'		Reserved
		'0x06'	(X,Y)	Graphic X,Y cursor (X, Y) X:0x0000 ~ 0x031f, Y:0x0000 ~ 0x01df
'Esc'	'L'	'0x01'		LCD Back Light OFF
		'0x02'		LCD Back Light ON
'Esc'	'V'	'0x01'		LCD Back Light UP
		'0x02'		LCD Back Light DOWN
'Esc'	'G'	'0x01'	(X,Y)	Graphic X:0x0000 ~ 0x031f, Y:0x0000 ~ 0x01df
		'0x02'	(X,Y)	Graphic X:0x0000 ~ 0x031f, Y:0x0000 ~ 0x01df
		'0x03'	(X1,Y1,X2,Y2)	Graphic Line X1,X2:0x0000 ~ 0x031f Y1,Y2:0x0000 ~ 0x01df
		'0x04'	(X1,Y1,X2,Y2)	Graphic Line X1,X2:0x0000 ~ 0x031f Y1,Y2:0x0000 ~ 0x01df
		'0x05'	(X1,Y1,X2,Y2)	Graphic Rectangle X1,X2:0x0000 ~ 0x031f Y1,Y2:0x0000 ~ 0x01df
		'0x06'	(X1,Y1,X2,Y2)	Graphic Rectangle X1,X2:0x0000 ~ 0x031f Y1,Y2:0x0000 ~ 0x01df
		'0x07'	(X1,Y1,X2,Y2)	Graphic Rectangle X1,X2:0x0000 ~ 0x031f Y1,Y2:0x0000 ~ 0x01df
		'0x08'	(X1,Y1,X2,Y2)	Graphic Rectangle X1,X2:0x0000 ~ 0x031f Y1,Y2:0x0000 ~ 0x01df
		'0x09'	(X,Y,radius)	Graphic X Y X:0x0000 ~ 0x031f, Y:0x0000 ~ 0x01df Radius :0x00 ~ 0xf0
		'0x0a'	(X,Y,radius)	Graphic X Y X:0x0000 ~ 0x031f, Y:0x0000 ~ 0x01df Radius :0x00 ~ 0xf0

			Parameter	
		'0x0b'	(X,Y,radius)	Graphic _____ X Y X:0x0000 ~ 0x031f, Y:0x0000 ~ 0x01df Radius :0x00 ~ 0xf0
		'0x0c'	(X,Y,radius)	Graphic _____ X Y X:0x0000 ~ 0x031f, Y:0x0000 ~ 0x01df Radius :0x00 ~ 0xf0
		'0x0d'	(X,Y,a,b)	Graphic _____ X Y X:0x0000 ~ 0x031f, Y:0x0000 ~ 0x01df a :800/2 b :480/2
		'0x0e'	(X,Y,a,b)	Graphic _____ X Y X:0x0000 ~ 0x031f, Y:0x0000 ~ 0x01df a :800/2 b :480/2
		'0x0f'	(X,Y,a,b)	Graphic _____ X Y X:0x0000 ~ 0x031f, Y:0x0000 ~ 0x01df a :800/2 b :480/2
		'0x10'	(X,Y,a,b)	Graphic _____ X Y X:0x0000 ~ 0x031f, Y:0x0000 ~ 0x01df a :800/2 b :480/2
		'0x11'	(X1H,X1L,Y1)	Graphic Arc draw <u>X1H, X1L, Y1, r1, SaH, SaL, EaH, EaL, d,</u> start angle direction ***
		'0x12'	(X,Y,a,b)	Graphic Arc delete <u>X1H, X1L, Y1, r1, SaH, SaL, EaH, EaL, d,</u> start angle direction ***
'Esc'	'A'	'0x01'		Reset (MCT8048K Rebooting)
		'0x02'		LCD Back Light .
		'0x03'		Echo '0x06' Send
		'0x04'		User font display 16Byte Send Image data 7 16Byte dummy data 16Byte .
		'0x05'	(I)	256 Mode Text color , l:0x00~0xff 16Bit Color mode l:R.G.B [Bytes]. R.G.B =>R:0x00~0xff; G:0x00~0xff; B:0x00~0xff;
		'0x06'	(I)	Text background color , l:0x00~0xff 16Bit Color mode l:R.G.B [Bytes].
		'0x07'		Reserved
		'0x08'	(I)	Text overlay on
		'0x09'	(I)	Text overlay off
		'0x0a'	(I)	Image overlay on
		'0x0b'	(I)	Image overlay off

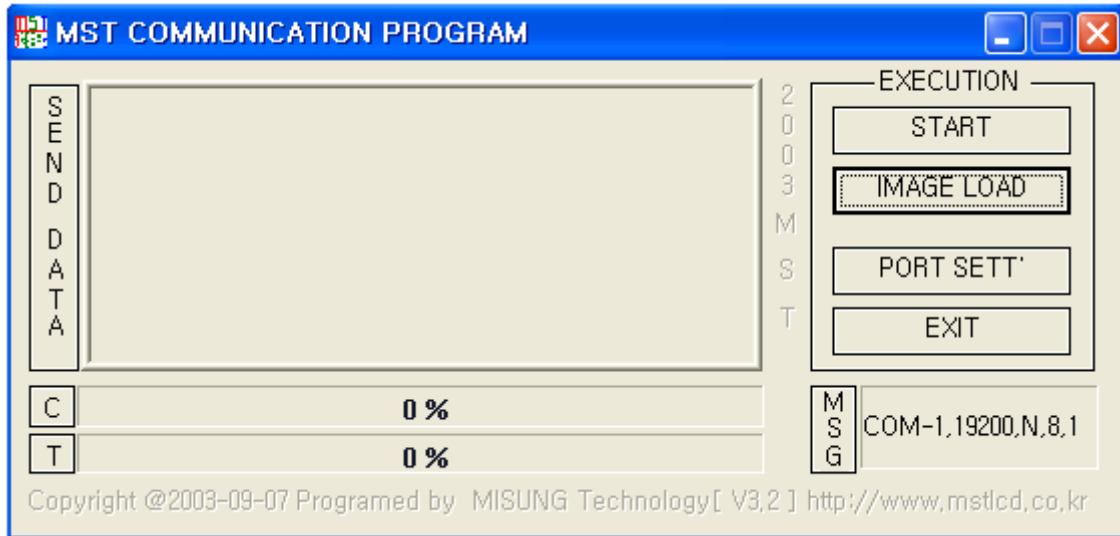
			Parameter	
		'0x0c'	(I)	Image overlay background color setting
'Esc'	'I'	'0x01'	(I)	Image One page draw (I 0x00~0x2f : 256color, 0x00~0x17 :16bit)
		'0x02'		Reserved
		'0x03'		Reserved
		'0x04'	(X,Y)	Reserved
		'0x05'	(I,J)	Reserved
		'0x06'	(I,X1,Y1,X2,Y2)	I: Page Number, X1,Y1(start point), X2,Y2(end point) 2byte
		'0x07'	(I,X1,Y1,X2,Y2)	I: Page Number, X1,Y1 - image start point X2,Y2 - image size
		'Esc'	'T'	'0x01'
'0x02'				Reserved
'0x03'				Touch start
'0x04'				Touch end
'0x05'				Touch start -> touch panel down -> 320,240 (ASCII 7byte) serial
'0x06'				Touch panel down -> 320,240 (ASCII 7byte) serial -> touch panel up -> 0xff serial
'0x07'				'0x05' 800*480 (ASCII 9byte)
'0x08'				'0x06' 800*480 (ASCII 9byte)

***Arc draw sample



4. MCT8048K Image Overwrite

Image Overwrite Application Program



MCT8048K Image display ,
 Image page Overwrite .

MCT8048K PC Serial Cable

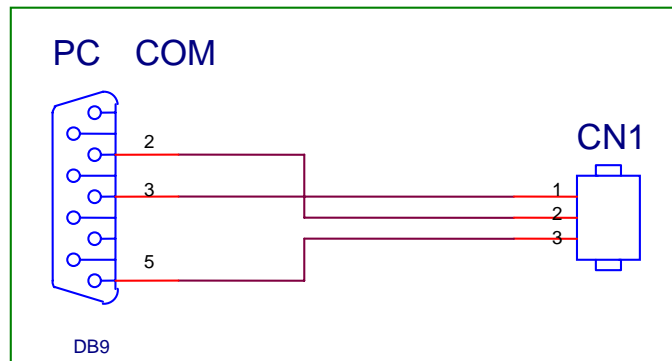
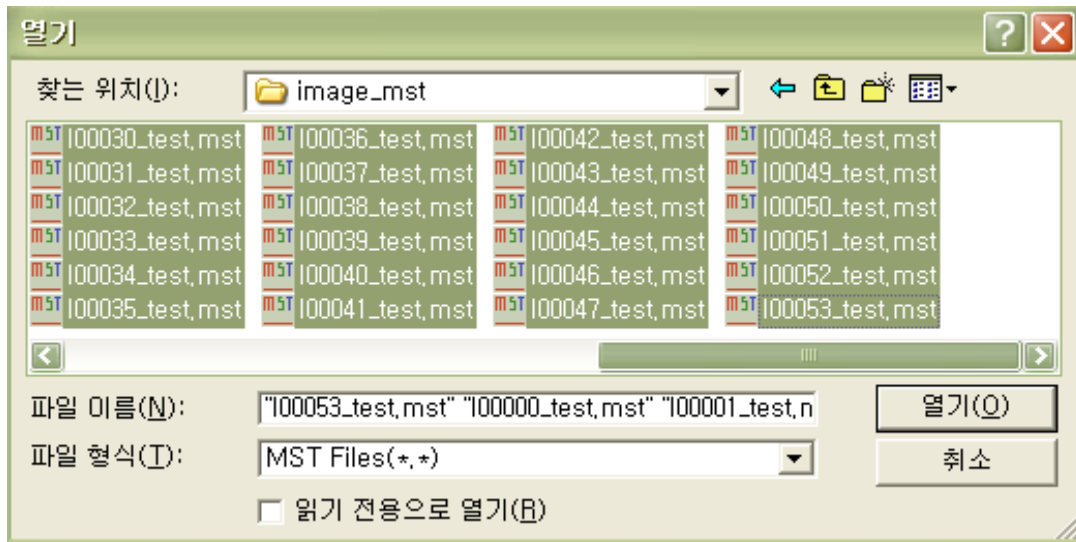
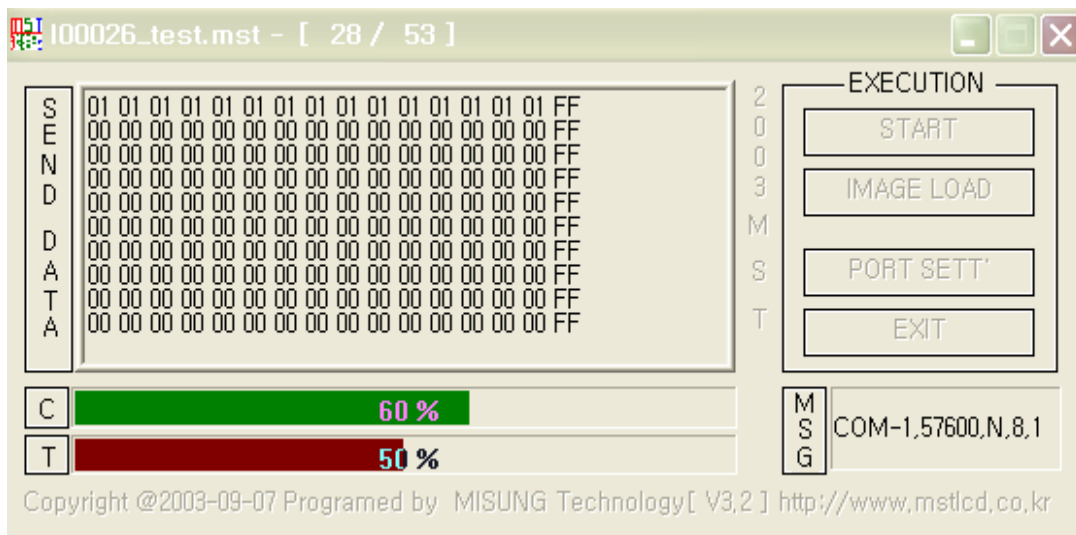


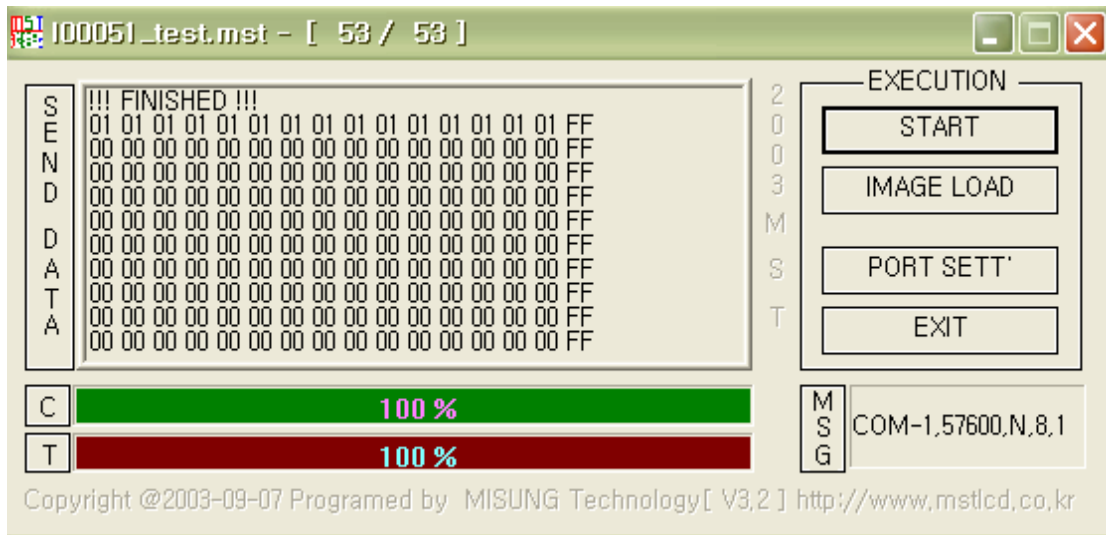
image , 'IMAGE LOAD'



, 'START' MCT8048K Overwrite

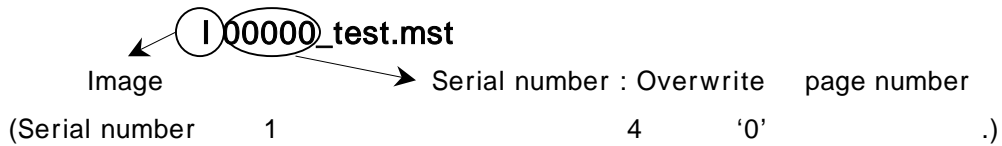


Bar Bar Download
 Bar 가 '100%' Image Overwrite



'IMAGE LOAD'

Image



Ex) 1 page Overwrite file I00001_test.mst

[1.] MCT8048K

Special Font

< 1- 1 > MCT8048K (Special Font)

Special < 1- 1 >

	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 ³ /s	m ³ /s	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 ² /s	rad ³ /s	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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