# Motorola DSP Programmer (Model : MDProg16)

# <u>User Manual</u>





Web: <u>www.realsys.co.kr</u> Tel: 031-420-4326 Fax: 031-420-4329

# 1. Motorola DSP Programmer Program Feature

- A. Motorola DSP interior flash memory writing and verifying that take advantage of JTAG & OnCE function.
- B. User program of Motorola S file can be saved to POD's interior serial EEPROM
- C. User program stored to POD's interior serial EEPROM is written to Motorola DSP's interior flash memory and verified
- D. After load Motorola S file to buffer, and user can designate memory writing area
- E. USB Communication Interface for fast writing & verifying (  $\mbox{PC}\xspace <-\mbox{POD}$  )
- F. Power Supply : USB(5V) or Target Board VCC(5V)
- G. Supported OS : Windows98/Me/2K/XP

# 2. MDProg16 POD Description

1. POD Composition



< PC side connection part >



< DSP Target side connection part >



< Caution >: 3.3V is selected for SV-iG and 5V for SV-iP series of LGIS invertor

1	2	3	4	5	6	7	8
TRST	GND	/RESET	TMS	TDO	ТСК	VCC	TDI
То	GND	То	То	From	То	5V or	То
DSP		DSP	DSP	DSP	DSP	3.3V	DSP

#### < Target Board Connector Pin Arrary >

# 2. USB POD Device Driver Installation

Before install device driver, please confirm that you have MDProg16 USB Programmer POD, USB cable and application & device driver software for MDProg16 in CD offered.

 If connected by USB cable between PC and USB POD offered, following screen comes. As followed this time, click next button after selecting "At specification location installation" option.



2) Click next button after appointing folder location with device driver software.

새 하드웨어 검색 마법사
검색 및 설치 옵션을 선택하십시오.
이 위치에서 가장 적합한 드라이버 검색(S) 마래 확인란을 사용하여 기본 검색 위치(로컬 경로 및 미동식 미디어)를 제한하거나 확장하십 시오, 검색한 것 중 최적의 드라이버를 설치할 것입니다.
<ul> <li>□ 미동식 미디어 검색(플로피, CD-ROM,)(M)</li> <li>✓ 검색할 때 다음 위치 포함(<u>0</u>):</li> </ul>
E:₩Project₩VC₩RealSYS2003₩LGDSP₩USB_POD♥ ✔ 찾마보기(편) ○ 검색 안 함. 설치할 드라이버를 직접 선택(D) 목록에서 장치 드라이버를 선택하려면 이 옵션을 선택하십시오, 사용자가 선택한 드라이버가 사용자 하드웨어에 가장 일치하는 것임을 보장하지 않습니다.
< 뒤로(B) 다음(N) > 취소

Device driver offered yet did not receive "Windows Device Driver Compatible Authentication". Therefore, if screen such as lower part appears, continue installation by clicking next button. Because this is no any effect in product performance, user need to feel anxiety.



 If did to above direction, device installation is completed normally.
 If problem happens when installation, In forst, confirm that USB cable was linked or PC's USB Host controller acts normally.



If you see device administrationist of control panel after devicer driver installation, it appears with below picture.

의 장치 관리자	
파일(E) 동작( <u>A</u> ) 보기( <u>V</u> ) 도움말( <u>H</u> )	
	~
표 🥶 네트워크 여입러 후 🥌 디스크 드라이브	
🗉 😏 디스플레이 어댑터	
표 이 마우스 및 기타 포인팅 장치	
🗇 😋 범용 직렬 버스 컨트롤러	
- 국 일반 USB 허브 	
Gentel(r) 62601BA/BAM USB Universal Host Controller - 2442 Gentel(r) 82801BA/BAM USB Universal Host Controller - 2444	
RealSYS USB POD Device	
● USB 루트 허브 ♣ USB 루트 허브	
🗉 🧟 사운드, 비디오 및 게임 컨트롤러	
표 물 치스템 장치	
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🕀 💆 포트 (COM 및 LPT)	
표 😿 프로세지 표 👢 플로피 디스크 드라이브	
🗉 🗃 플로피 디스크 컨트롤러	~

# 3. MDProg16 Application Program Setup

1) If double-click MDProg161.exe file in offered CD, installation process begin.



2) If click next button after designate folder to installation, installtion process is completed normally. and short-cut icon is created on main screen.



# 3. How to use MDProg16 Application Program

First, before use this applcation program, confirm that PC, USB POD and user target are linked rightly according to above hardware setup description.

#### < Main Program Screen >

Programmer Ac	tion Environment S	Setting									
	807 💌	🔽 Erase All Boot	Flash	∏ Tar	rget Res	set After Fla	ash Writin	g			
S File Path	D:\Project\용역\lg_	.mot_dsp\MD Prog	)용 파일(040	)726)\Fla	ish.elf.S					•	
S File Time	2004/07/23 16:08:	20									
Current Statu	IS							0	0	0	9
			05	%							
File Loa	d F	OD Write	POD	Verify							
Target Re	set Ta	arget Write	Target Wr	ite & Veri	ify	Target	Verify	7			
5 AMADA 65											
	iokiii I										
, en ang e i lie k	I										
Buffer Window -	I										
Buffer Window	Start Address	Data Size	0000	FFFF F	7FFF F	FFF FFF	F E9C8	0086	E9C8	0086	*
Buffer Window — Memory Name ☑ PFLASH	Start Address	Data Size		FFFF F E9C8 ( E9C8 (	FFF 5 0086 E	FFF FFF 59C8 008	F E9C8 6 E9C8 6 E9C8	0086 0086 0086	E9C8 E9C8 E9C8	0086 0086 0086	
Buffer Window Memory Name PFLASH P2FLASH	Start Address 0x0004 0x5000	Data Size 0x7FFC Words 0x6FC3 Words	0000 0008 0010 0018 0020	FFFF 5 E9C8 ( E9C8 ( E9C8 ( E9C8 (	FFFF P 1086 P 1086 P 1086 P	FFF FFF 19C8 008 19C8 008 19C8 008	F E9C8 6 E9C8 6 E9C8 6 E9C8 6 E9C8	0086 0086 0086 0086 0086	E9C8 E9C8 E9C8 E9C8 E9C8	0086 0086 0086 0086 0086	
Buffer Window – Memory Name PFLASH P2FLASH BFLASH BFLASH	Start Address 0x0004 0x8000 0x7800 0x2000	Data Size 0x7FFC Words 0x6FC3 Words 0x196 Words 0x196 Words	00000 0008 0010 0018 0020 0028	FFFF F E9C8 ( E9C8 ( E9C8 ( E9C8 ( E9C8 (	FFF F 1086 F 1086 F 1086 F 1086 F	FFF FFF 19C8 008 19C8 008 19C8 008 19C8 008	F E9C8 6 E9C8 6 E9C8 6 E9C8 6 E9C8 6 E9C8	0086 0086 0086 0086 0086 0086	E9C8 E9C8 E9C8 E9C8 E9C8 E9C8 E9C8	0086 0086 0086 0086 0086 0086	

Programmer Action Environment Setting							
CPU DSP56F807	•	Erase All Boot Flash	🥅 Target Reset After Flash Writing				

#### ① Programmer Action Environment Setting

CPU Type: DSP56F803/805/807 is supported at current version.

Erase All Boot Flash: If check this option, erase whole boot flash area when erasing time and if unchecked, erase necessary boot flash area according to user program data.

Target Reset After Flash Writing: If check this option, reset target board after writing & verifying action and if unchecked, don't reset.



#### ② User program (Motorola S File) Path Setting and display last write time

This part is used when specify whole file path(Motorola S File) to write target board. you click "..." button when search user program file(Motorola S File). This program save recent file path list up to 10 and therefore, if you re-load file, which is loaded recently, please select one item in list of Combo-Box

S File Time : Display last write time of specified Motorola S File.



#### ③ Function Button

#### A. File Load

Load user program data to PC side buffer ater reading selected Motorola S File.

#### B. POD Write

Write user program data to interior serial EEPROM in USB POD.

#### C. POD Verify

Compare and examine user program that read to PC's buffer with contents of USB POD's interior serial EEPROM.

#### D. Target Reset

Reset target board and initialize JTAG TAP controller of target MCU.

#### E. Target Write

Write user program data to interior flash memory of target board MCU by page(0x100 words) unit.

#### F. Target Write & Verify

Verify after write user program data to interior flash memory of target board MCU by page(0x100 words) unit.

#### G. Target Verify

Compare and examine user program that read to PC's buffer with contents of interior flash memory of target board MCU.

Current Status	0000
05	6

#### ④ Display Current Write & Verify Status

When doing "POD Write, POD Verify, Target Write, Target Write & Verify and Target Verify", display current action process status.

Message Window			
Reading S File is OK !!!	I		

# (5) Message Window

Display error, waring and notification meeage in running on MDProg16 application program.

Buffer Window -			
Memory Name	Start Address	Data Size	0000 FFFF FFFF FFFF FFFF E9C8 0086 E9C8 0086
PFLASH	0x0004	0x7FFC Words	0008 E9C8 0086 E9C8 0086 E9C8 0086 E9C8 0086
P2FLASH	0x8000	0x6FC3 Words	0018 E9C8 0086 E9C8 0086 E9C8 0086 E9C8 0086
BFLASH	0xF800	0x196 Words	0020 E9C8 0086 E9C8 0086 E9C8 0086 E9C8 0086
DFLASH	0x2000	0x1F84 Words	0030 E9C8 0086 E9C8 0086 E9C8 0086 E9C8 0086 E9C8 0086
			0038 E9C8 0086 E9C8 0086 E9C8 0086 E9C8 0086 0040 E9C8 0086 E9C8 0086 E9C8 0086 E9C8 0086
			0048 E9C8 0086 E9C8 0086 E9C8 0086 E9C8 0086
			0058 E9C8 DCA0 E9C8 DCA8 E9C8 0086 E9C8 DCB0
			0060 E9C8 0086 E9C8 DCB8 E9C8 DCC0 E9C8 DCC8 0068 E9C8 0086 E9C8 DCD0 E9C8 0086 E9C8 36E0
			0070 E9C8 DCD8 E9C8 0086 E9C8 DCE0 E9C8 DCE8
			0078 E9C8 0086 E9C8 0086 E9C8 0086 E9C8 0643

6 Buffer Window which display PC's buffer data of user program data by hex value

After read and load specified Motorola S File to PC's buffer, display data by hex value according to interior flash memory area section.

By checking or unchecking check-box located at left size, you can write and verify only selected memory area when doing "Target Write, Target Write & Verify and Target Verify".