

# Notes and Points for LM3Sxxx Flash memory

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# 1 Introduction

This manual describes notes and points especially for writing to Flash memory.

For details of ICE operating instructions, see the microVIEW-PLUS User's Manual (Common Edition) and microVIEW-PLUS User's Manual (MPU-Specific Edition).

# 2 Supported SLX(ZX) Versions

SoC	Supported Versions	
	SLX600	ZX600
LM3Sxxx	1.00 or later	3.10 or later

## **3** Advance Preparation

#### 3.1 Protection

Please disable any protection of flash memory.

#### 3.2 If Nothing is Recorded on the Built-in Flash Memory

microVIEW-PLUS dumps a reset vector area to display a program (disassemble display) after connecting by reset commands.

In case nothing is recorded in the built-in flash memory (a vector table is 0xFFFFFF), 0xFFFFFFE will be dumped and "ICE Error No.f58: Sticky error" may occur.

#### [Provision]

Right-click the Reset button on the toolbar, and then open the Reset Sync. Setting dialog box.

Reset Synchronous Settings	
Issue the command in sync with Reset	
Command File Command	Clear the "Display the program in sync with Reset" check box. (= does not dump by the reset
Display the program in sync with Reset	commandy
OK Cancel	

After downloading the program to the built-in flash memory (correct vector table values are written), select this check box again.

# 3.3 MPU-Specific Settings

Select **VECTRESET** for the reset type.

Notes and Points for when setting MPU-specific settings of [MPU] menu:

MPU-Specific Settings	
MPU-Specific Settings User System RESET CoreSight Synchronous memor When User System's Reset is detected Reset ICE and Go Notify Only Ignore Break Settings after Reset Command at Reset Vector Break Assert nSRST Break timing after 100ms Assert nIRST Break timing after 300ms Software reset OK Cancel	Select JTAG or SWD in accordance with the target system. (It varies depending on the target system) Select VECTRESET

## 4 Setting the Memory Mapping

#### 4.1 Setting up Flash Memory Mapping

Open the memory mapping window by clicking Environments – Mapping.



Memory map window as below is opened.

: Mapping					
Mapping	CS				
No Address Range Memory Typ		pe 🔰 Access Type	Flash Memory Type	Memory I/F Type	

Set the mapping.

Right-click on the memory mapping window, and then select Add.



Set Mapping		Start address of built-in flash memory Using 0x0 as an example here.
Start Address		Select Flash memory
Memory Type Flash Memory Type	LM3S102	Select <b>model name.frd</b> file. * Using LM3S102 as an example here.
Memory I/F Type	32bitx1	Select 32bit x 1
	OK キャンセル	

Configure the setting as the example below.

## 4.2 Setting up User RAM for ICE

You can increase a download speed for flash memory by mapping a user RAM for ICE.

You can download to flash memory without the mapping setting though.

For User RAM for ICE, specify an area where ICE can occupy.

The following example is for when setting 16KB from 0x20000000.

For the actual settings, refer to the Soc memory map of yours.

Set Mapping	
Start Address	20000000
Memory Type	User RAM for ICE 🛛 👻
Usable Size	16KB 💌
	OK Cancel

#### 5 Download to Flash Memory

For details, see the microVIEW-PLUS User's Manual (MPU-Specific Edition).

Details of memory mapping settings are described on this manual. Please refer to microVIEW-PLUS User's Manual (MPU-Specific Edition) for other contents.

### 6 Software Break in Flash Memory

For details, see the microVIEW-PLUS User's Manual (MPU-Specific Edition). Details of memory mapping settings are described on this manual. Please refer to microVIEW-PLUS User's Manual (MPU-Specific Edition) for other contents.

You are not allowed to set up software break for flash memory in the initial state. In case you

try to set up software break for flash memory in the disabled status, it results in "ICE Error

No. 8c4: Set Software Break Verify Error".

To enable software break setting for flash memory, check Enable for S/W Break in Flash

Memory on the Others tab of the MPU-Specific Settings dialog box.

M	MPU-Specific Settings 🛛 🛛 🔀					
	Reset	OCD Daisy Cha	in H/W Synchro Others	>		
	ſ	Access Size for loadi	ng and others			
			MPU's Max Size 🔽			
	1	lemory				
		Sector Retry Count	0×0			
		Memory				
		🗹 Enable		J		
		pramming in JEDEC				
		for Maintenance				
		Set TCK Driver	0 🗸			