SONIX SN-LINK ISP User Guide

V2.5

1 OVERVIEW

SN-Link is a debug tool used in Sonix cortex-M0 series chips. In this debug tool user can use such as breakpoint, single step, watch and memory functions in debug mode during development. There two kinds of chips on SN-link hardware, SN8F2288 and SN32F700, respectively. These two chips' firmware can be updated by ISP tool. The ISP tool operation will be described in the following section.

The ISP tool supports on many kinds of O.S such as WinXP, Vista, Win7. According these two chips on SN-Link hardware, there are two ISP methods which update each chip, respectively.



Sonix 32-bit Series Start-kit

SN-LINK

ISP Tool AP

2 OPERATION

2.1 SN-LINK SN8F2288 ISP

Before using keil c download code to start kit, please install ICE DLL which file name is "*SA1ARMCortexM0Tooling_20130731_V2.00.39.exe"*.

2.2 SN-LINK SN8F2288 ISP

SN-Link must be connected to PC through USB port. The following figure shows connection flow.



STEP 1: SN-Link connected to USB port on PC, the LED will light green color. This means that SN8F2288 has been detected.

STEP 2: Opening USB ISP Tool and click Start then SN8F2288 will be updated.

SONIX USB MCU ISP Tool	SONIX USB MCU ISP Tool
SONIX TECHNOLOGY CO_LTD Version 1.4.4.0	SONIX TECHNOLOGY CO_LTD Version 1.4.4.0
ISP Program	Chip Erasing
Chip Name : SN8F2288 SN8 Check Sum : D907 Password *******	Chip Name : SN8F2286 SN8 Check Sum : D907 Password *******
Build Time : 2012/08/29-10:04 VID 0C45	Build Time : 2012/08/29 10:04 VID 0C45
PID 7601	Start PID 7601
SNR Check Sum : D907 X'tal seting: 12MHz Security bit : Disable	SN8 Check Sum : D907 X tal setting : 12MHz Security bit : Disable Ocen USB HID Device
	ŸID: 0⊂45 PID: 7601 No. 001
None Not Connected	None USB Device Connected

STEP 3: After ISP download finished, DATA verify OK and Total Time were be displayed.

💐 SONIX USB MCU ISP Too	ol	×		
SONIX TECHNOLOGY CO., LTD Version 1.4.4.0				
Programming				
Chip Name : SN8F2288				
SN8 Check Sum : D907	Password	******		
Build Time : 2012/08/29 10:04	VID	0C45		
Start Start	PID	7601		
SN8 Check Sum : D907 X tal setting : 12MHz Security bit : Disable Open USB HID Device YID: OC45 PID: 7601 : Chip Erase OK!! Blank Check OK!! Data Verify OK!! Total Time = 16.8 sec	No. 001			
None		Not Connected		

STEP 4: when ISP download finished SN8F2288 must power-on reset.

2.3 SN-LINK SN32F700 ISP

Circuit connection:



STEP 1 : SN-Link and start kit must be connected together. The Ex-reset IO on Start-kit tied to GND (In this document using SN32F700 start-kit. The Ex-reset P3.6 connected to GND). Then Start kit and SN-link must power-on reset that resulted SN32F700 which on SN-link will enter boot loader.

NOTE SN-Link support SN32F700 and SN32F100 Start-Kit:

1.When using 32F700 Start-Kit and want to update SN-Link 32F700 firmware. Then P3.6 needs connect to GND and power on Start-Kit. 2.When using 32F100 Start-Kit and want to update SN-Link 32F700 firmware. Then P0.15 needs to connect to GND and power on Start-Kit.

STEP 2: First opening SN32700 ISP Tool. Then select SN32F707 chip and click OK.

SN32F700 MCU ISP T	ool V1.1	
ISP Program		0 %
Select Chip	Load File Start	Clear Message
Code Option	Code Security	
Read	Code Security C CS0 C Boot Loader C	CS1 CS2 Enable CDisable
Set	FF FF	FF FF
CHIF Name: SN32F700 Handshake Ok. IAP Version: V1.0 Chip Size: 0x00008000		

NOTE When opening SN32700 ISP Tool shows **Handshake fail** message then repeat step 1.

STEP 3: When opening SN32700 ISP Tool shows **Handshake OK** message this means SN32F700 firmware can be update via this tool. After click start, ISP updates beginning.

SN32F700 MCU ISP Tool V1.1	SN32F700 MCU ISP Tool V1.1	
SONIX TECHNOLOGY CO., LTD		
ISP Program	ISP Program	0 %
Select Load File Start Clear Message	Select Load File Start	Clear Message
Code Option Code Security CS0 CS1 CS2 Boot Loader C Enable Disable Password FF FF FF FF CHIP Name: SN32F700 Handshake fail. Please check cable connection. Nease check cable connection.	Code Option Code Security © CS0 CO Boot Loader Password FF FF F CHIP Name: SN32F700 Handshake 0k. IAP Version: Y1.0 Chip Size: 0x00008000	S1 C CS2 inable C Disable F FF

STEP 4: After ISP updates finished, it shows Update success message.

SN32F700 MCU ISP Too	V1.1	
SONIX TECHNOLOGY CO ,, LTD		
ISP Program		100%
Select Chip	Load File Start	Clear Message
Code Option		
	Code Security	C (??)
Read	Poot Loador G Ena	bla O Dicobla
	Deceword	Die (Disable
🚺 Set	FF FF FF	FF
CHIP Name: SN32F700 Handshake Ok. IAP Version: V1.0 Chir Size: Ux00008008		
Handshake Ok. Status: Update success !! Elapsed time: 16146(ms)		

2.4 SN-LINK firmware version

After update SN8F2288 and SN32F700 via ISP tool, the firmware version is V04.06. If firmware version can't be read please power on reset SN-Link and start-kit.

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