

SN-Link Adapter V3

User Guide

Version 1.0

32-Bit Cortex-M0 Series
8051 Flash Series
8-Bit Embedded ICE Series

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AMENDENT HISTORY

Version	Date	Description
1.0	2016/05/26	First Version

Table of Content

AMENDMENT HISTORY.....	2
1 產品介紹.....	4
1.1 性能特點.....	4
1.2 外觀簡介.....	4
1.3 仿真排線腳位配置.....	5
1.4 仿真排線連接方式.....	5
1.5 適用模擬軟體.....	5
2 如何安裝.....	6
2.1 硬體安裝示意圖.....	6
2.1.1 32-Bit Cortex-M0 Series.....	6
2.1.2 8051 Flash Series.....	6
2.1.3 8-Bit Embedded ICE Series.....	6
2.2 軟體安裝.....	7
2.2.1 32-Bit Cortex-M0 Series.....	7
2.2.2 8051 Flash Series.....	7
2.2.3 8-Bit Embedded ICE Series.....	7
3 開始偵錯功能.....	8
3.1 操作步驟.....	8
3.1.1 32-Bit Cortex-M0 Series.....	8
3.1.2 8051 Flash Series.....	8
3.1.3 8-Bit Embedded ICE Series.....	9

1 產品介紹

SN-Link Adapter V3 提供 PC 與 Target Board 裝置之間溝通的介面，可搭配模擬軟體當作 Debugger 進行程式開發/偵錯，亦可搭配 SN-Link ISP 進行 MCU 燒錄；其支援 32-bit Cortex-M0/8051/8-Bit Embedded ICE 系列 MCU。

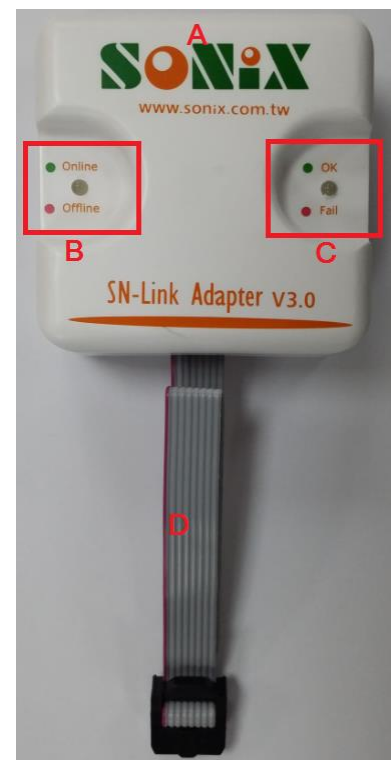
1.1 性能特點

- 可當 Debugger。
- 可實現連線燒錄功能。
- 可實現離線燒錄功能。
- USB HID Class driver，即插即用。
- Target Board 上電自動偵測並完成 Link。

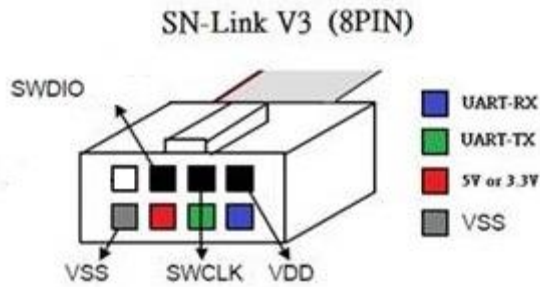
● Note：燒錄功能請參考 SONiX_SN-Link ISP_Uesr_Guide。

1.2 外觀簡介

代號	說明
A	USB 接口
B	Power/ Link LED
	1. USB Link 成功，LED 顯示綠色 2. 利用 USB 接口外接電源，LED 顯示紅色
C	SN-Link 模式 LED
	1. 與 Target Board 連結成功，LED 顯示綠色
	2. 進入除錯環境，LED 顯示綠色
	3. 與 Target Board 斷線，LED 滅燈
	4. 離線燒錄過程，LED 閃爍綠色
	5. 離線燒錄成功，LED 顯示綠色
6. 離線燒錄失敗，LED 顯示紅色	
D	8 pin cable connect to target board



1.3 仿真排線腳位配置



1.4 仿真排線連接方式

各系列 MCU 仿偵介面與 SN-Link Adapter V3 接線方式，如下表所示：

MCU Type	MCU Debug Pin Name	SN-Link Adapter V3 Pin Name
32-bit Cortex-M0 Series	VDD	VDD
	VSS	VSS
	SWCLK	SWCLK
	SWDIO	SWDIO
8051 Flash Series	VDD	VDD
	VSS	VSS
	SWAT	UART-RX UART-TX
8-Bit Embedded ICE Series	VDD	VDD
	VSS	VSS
	EICK	SWCLK
	EIDA	SWDIO

- Note : 5V/3.3V 可提供電源給 Target Board 。
- Note : 設定方式請參考 SONiX_SN-Link ISP_Uesr_Guide 。

1.5 適用模擬軟體

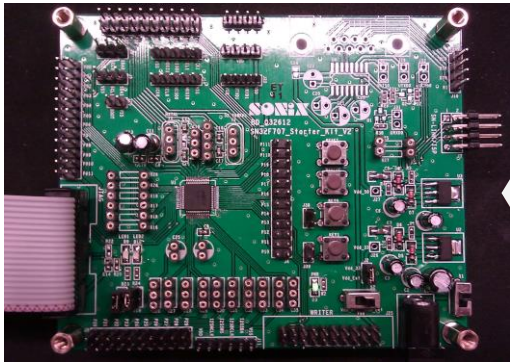
各系列 MCU 須搭配的模擬軟體，如下表所示：

MCU Type	模擬軟體	支援版本
32-bit Cortex-M0	Keil MDK-ARM	V4.53 或之後版本
8051	Keil C51	V9.50a 或之後版本
8-Bit Embedded ICE	1. M2IDE 2. SN8 C Studio	1. M2IDE V143 或之後版本 2. SN8_C_Studio_V153 或之後版本

2 如何安裝

2.1 硬體安裝示意圖

2.1.1 32-Bit Cortex-M0 Series



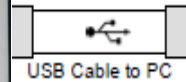
Target Board

SONiX 32-bit Series MCU Starter-kit



SN-LINK

SN-Link Adapter V3



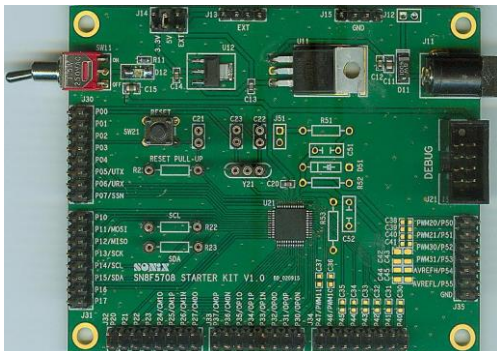
USB Cable to PC



PC AP

KEIL

2.1.2 8051 Flash Series



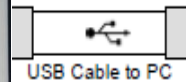
Target Board

SONiX 8-bit Series Starter-kit



SN-LINK

SN-Link Adapter V3



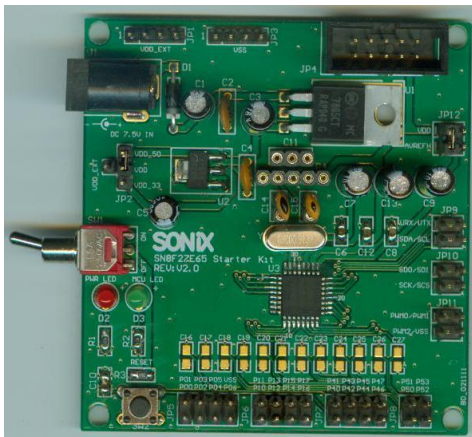
USB Cable to PC



PC AP

KEIL

2.1.3 8-Bit Embedded ICE Series



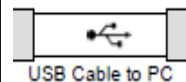
Target Board

8-bit Embedded ICE Series MCU Start-kit



SN-LINK

SN-Link Adapter V3



USB Cable to PC



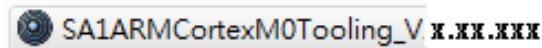
PC AP

M2IDE/SN8 C Studio

2.2 軟體安裝

2.2.1 32-Bit Cortex-M0 Series

1. 請先安裝 Keil MDK-ARM。
2. 請至 SONiX 官網<http://www.sonix.com.tw/article-tw-269-22253>下載 SN-Link Driver 並執行安裝。
 - 操作方法
 - 下載 SN-LINK driver，檔案名稱為“SA1ARMCortexM0Tooling_Vx.xx.xxx.exe”，點選兩下即可進行安裝，執行檔樣式如下圖。



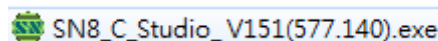
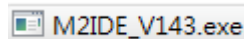
2.2.2 8051 Flash Series

1. 請先安裝 Keil C51。
2. 請至 SONiX 官網<http://www.sonix.com.tw/article-tw-269-22253>下載 SN-Link Driver 並執行安裝。
 - 操作方法
 - 下載 SN-LINK driver，檔案名稱為“SN-Link Driver for Keil C51 vx.xx.xx.exe”，點選兩下即可進行安裝，執行檔樣式如下圖。



2.2.3 8-Bit Embedded ICE Series

1. 如使用 Assembly 開發程式，請至 SONiX 官網<http://www.sonix.com.tw/article-tw-3323-8703>下載 M2IDE 並執行安裝。
 - 操作方法
 - 下載 M2IDE，檔案名稱為“M2IDE_Vxxx.zip”，解壓縮後點選兩下即可進行安裝，執行檔樣式如下圖。
2. 如使用 C 語言開發程式，請至 SONiX 官網<http://www.sonix.com.tw/article-tw-1162-6207>下載 SN8_C_Studio 並執行安裝。
 - 操作方法
 - 下載 SN8_C_Studio，檔案名稱為“SN8_C_Studio_Vxxx”，解壓縮後點選兩下即可進行安裝，執行檔樣式如下圖。

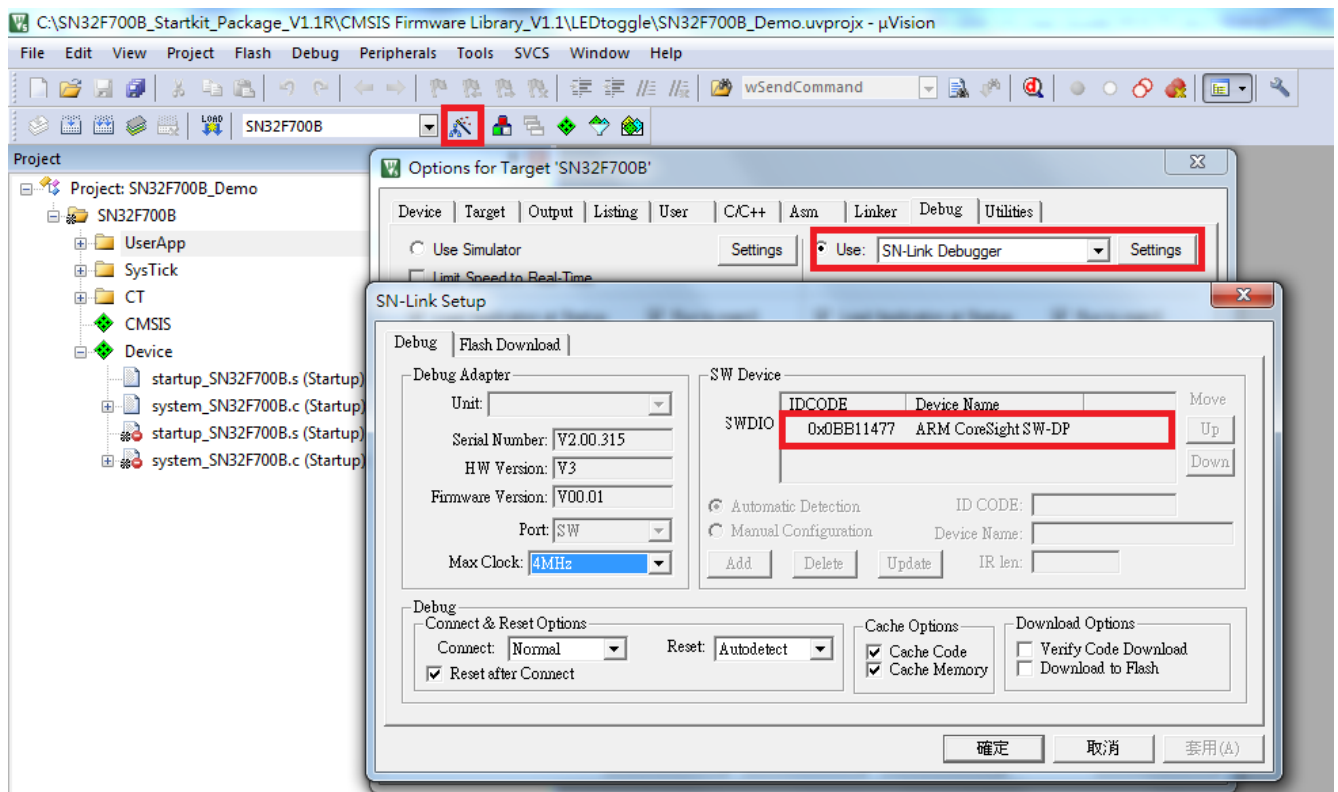


3 開始偵錯功能

3.1 操作步驟

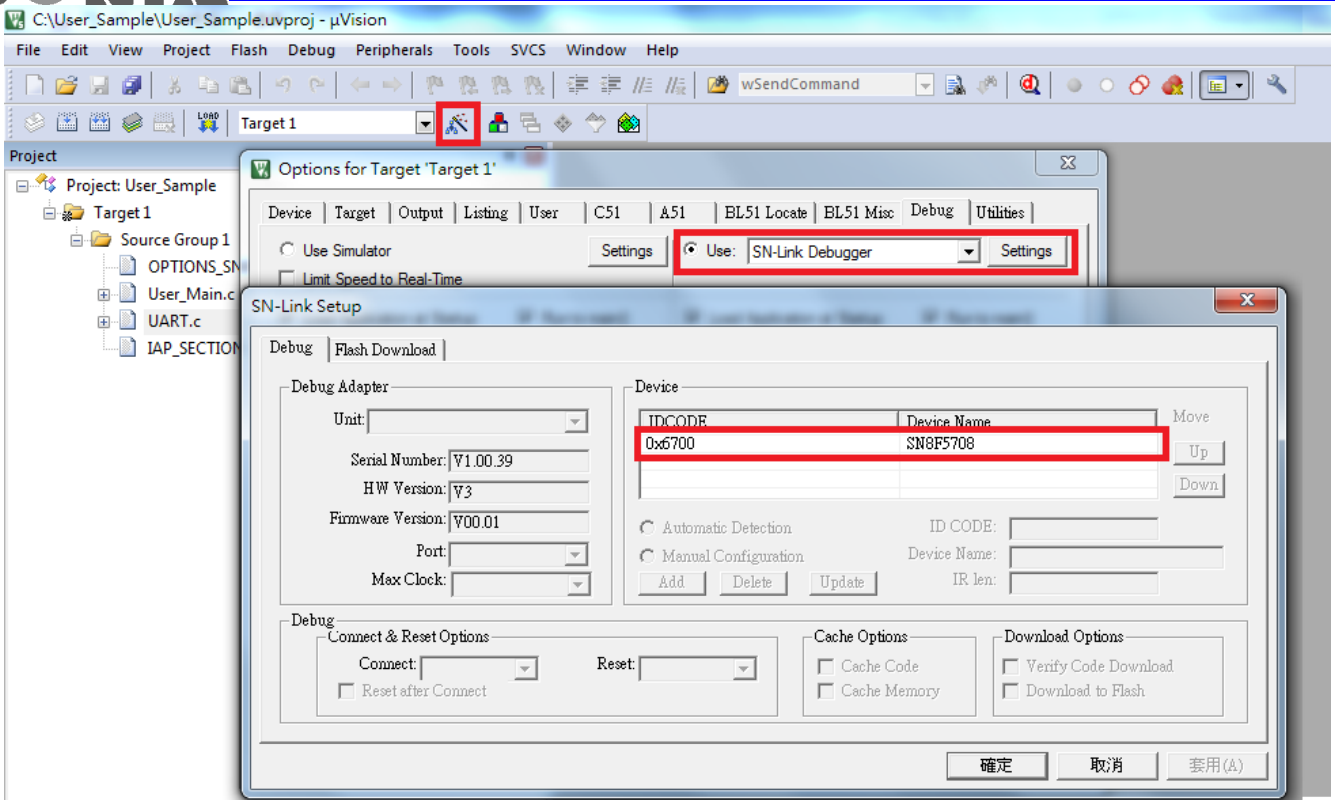
3.1.1 32-Bit Cortex-M0 Series

1. 將 SN-Link Adapter V3 與 Starter-Kit 連接並確認 LED OK 燈號有亮。
2. 執行 Keil uVision4 or uVision5
3. 選取 Options for Target→Debug→選擇 SN-LINK Dedugger→Setting，可於畫面中看到 IDCODE，即可進行偵錯功能。



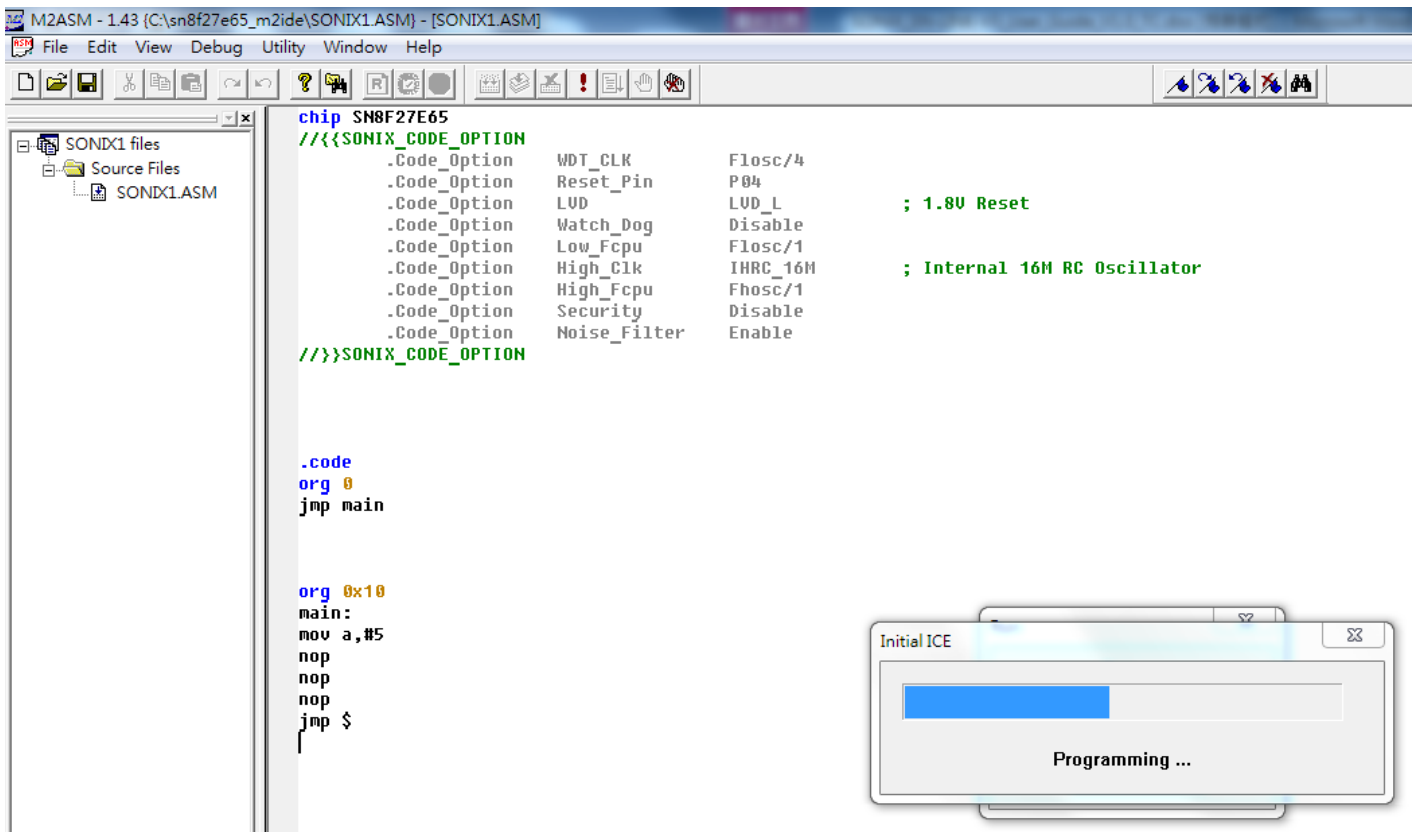
3.1.2 8051 Flash Series

1. 將 SN-Link Adapter V3 與 Starter-Kit 連接並確認 LED OK 燈號有亮。
2. 執行 Keil uVision4 or uVision5
3. 選取 Options for Target→Debug→選擇 SN-LINK Dedugger→Setting，可於畫面中看到 IDCODE，即可進行偵錯功能。

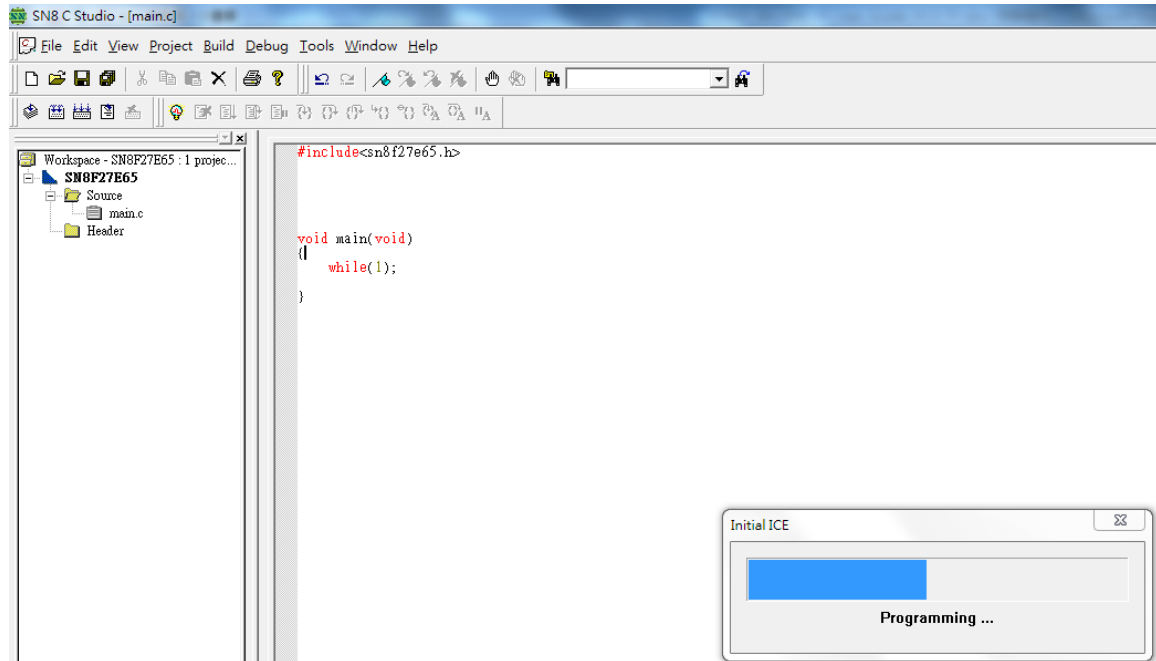


3.1.3 8-Bit Embedded ICE Series

1. 將 SN-Link Adapter V3 與 Starter-Kit 連接並確認 LED OK 燈號有亮。
2. 執行 M2IDE，Compile 後並執行 F5，如下圖所示即可進行除錯功能。



3. 執行 SN8_C_Studio，Compile 後並執行 F5，如下圖所示即可進行偵錯功能。



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