Revision 1.4

User's Manual
GW-uni2

Universal gang programmer

SEMINIX

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1. Overview

GW-uni2 is the gang programmer for all SAMSUNG MCU and Fujitsu MCU with standard serial writing. The Gang programmer consists of a master unit (GW-uni2) which connects to various programming adapter sockets for programming all devices with a different package.

This gang programmer can program 8 devices with very fast programming speed once. It is good for mass production. A data is saved in GW-uni2 memory by PC so it works without PC (Stand-alone mode). User can easily set a device information by a device part number selection.

1.1 Features and Specifications

1) Support all SAMSUNG MCUs and Fujitsu MCUs with Standard Serial Writing.
2) Internal Memory: 100Mbyte
3) GW-uni2 setup and initialize with PC application program.
4) Stand-alone operation mode without PC.
   (GW-uni2 should be setup by PC application program for the stand-alone mode in advance)
5) Program maximum 8 devices once.
6) Display a current state and a working state by LCD
7) Device selection can be set by a device part number.
8) Program : Data programming to a device.
   - Other functions can be worked with program option
9) Program Option
   - Auto Chip Erase : Erase before program.
   - Auto Verification : Verify after program
   - Read Protection : A device ROM data can't be read
   - SMART Option
10) Erase : Erase a device ROM data.
11) Verify : Compare a butter memory data to a device data
12) Blank check: Check a device ROM data initialized (0xFF)
13) Device Checksum : Display a checksum of a device in the first socket.
14) Buffer Checksum : Display a checksum of GW-uni2 buffer memory data.
15) Dump : Display a device ROM data or a buffer memory data.
16) Read buffer : Save a buffer memory data as a PC file.(Intel hex format).
17) Read device : Save a device ROM data in buffer memory.
18) Program counter : Display the number of programed device.
19) Key Lock : Restrict functions in stand-alone mode.
20) Password Change : Change a password
21) GW-uni2 setting information: Display GW-uni2 setting information
22) Socket State : Display each socket state
23) User can use the latest software with a simple upgrade.

24) Data download speed: 860Kbps (MAX)
25) Program speed(average)
    Samsung : OTP = 2KBps, MTP = 10KBps
    Fujitsu : 4KBps
26) Power : 19VDC 500mA power adapter (110/220VAC[60HZ])
27) Operating system: Windows NT/2000/XP/Win7 (only 32bit)
28) Support Intel hex format, SAMSUNG hex format, Binary format.
29) Size: 350mm x 220mm x 35mm Weight: 1.4kg

1.2 Packing Includes

1) GW-uni2 main body
2) USB Cable
3) Power adapter (19VDC)
4) PC Application program (CD)
5) User's manual (CD)
6) USB Driver file (CD)

GW-uni2 main body

PC Application program
USB Driver file
User's Manual

Power Adapter and Cable

USB Cable

2. Setup

2.1 Host system requirement

1) Over IBM Pentium PC.
2) Window 2000/NT/XP/7 32bit-OS
3) CD-ROM, USB port
4) Operating System with 20MB of free Hard disk space
5) Over RAM 64MB

2.2 To install PC application program

1) Insert the installation CD into CD-ROM drive on your PC or download software at SEMINIX web site. (www.seminix.com).
2) Execute the setup file in CD.
3) Install PC application program in order according to the instruction.
4) The program is installed at the folder "C:\Program Files\seminix\GW-uni2" when the installation is finished.

2.3 To install USB driver

1) After restarting a host PC, connect GW-uni2 to USB port of the host PC Then, the PC displays " Found New hardware Wizard" dialog.
2) Select ' C:\Program Files\seminix\GW-uni2\drives and finish the setup.

2.4 GW-uni2 Configuration

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① Socket connection port

② LCD panel

③ Touch Key

④ Power switch

⑤ Adapter connection port

⑥ USB connection port

Figure 2.4 GW-uni2 configuration (Front/Side)

3. PC Application Program

3.1 PC application program

1) Selection a device for program and send information of device to GW-uni2.
2) Download a data for program to GW-uni2 buffer memory.
3) Set Program Option.
4) Program count can be cleared.
5) Execute Erase, Write, Verify, Blank Check, Device Checksum, Buffer Checksum, Dump and Read Buffer
7) GW-uni2 software upgrade.

3.2 Hardware setup

1) Connect a power adapter to GW-uni2 and turn on the power
2) Connect GW-uni2 to PC by USB cable.
3) Put a adapter socket in GW-uni2.
4) Put a device chip in a socket adapter.

Figure 3.2 GW-uni2 Hardware setup

3.3 USB Connection

1) Execute the application program and click the USB connection icon.

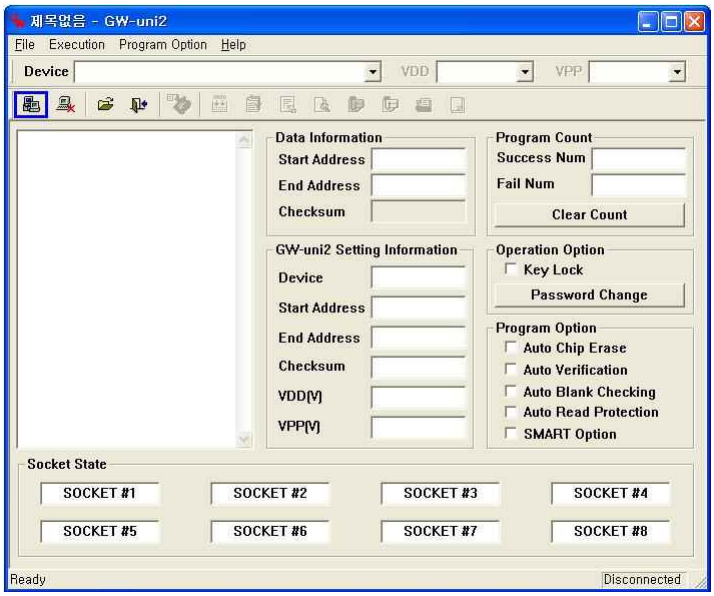


Figure 3.3.1 USB Connection

2) "** GW-uni2 is connected **" message and information of 'GW-uni2 setting', 'Program count' and 'Program Option setting' are displayed when GW-uni2 is connected by USB.

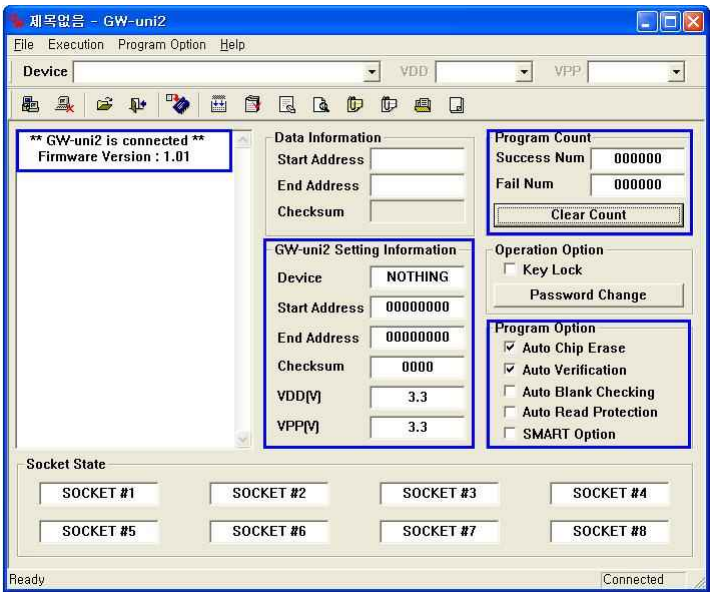


Figure 3.3.2 Finish USB connection

* Try from 1) again when USB connection is failed.

3.4 Device selection

1) Click the 'Device' icon.

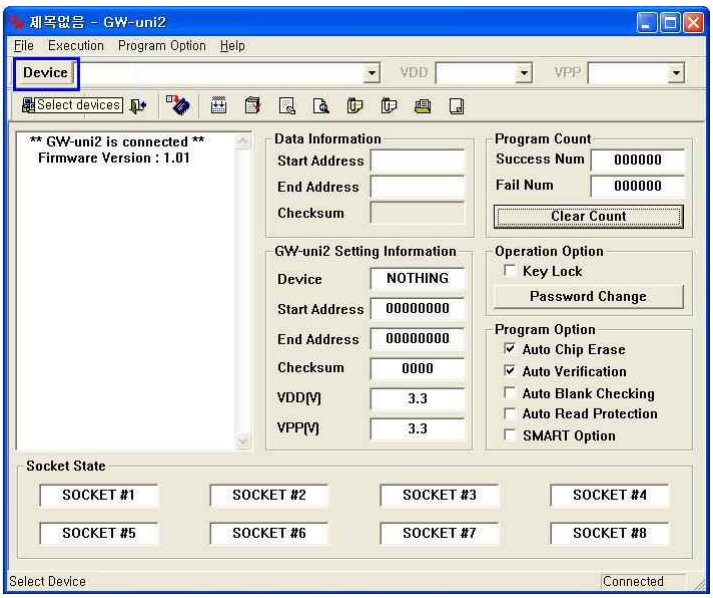


Figure 3.4.1 Device selection

2) 'Select Device' Window is displayed.

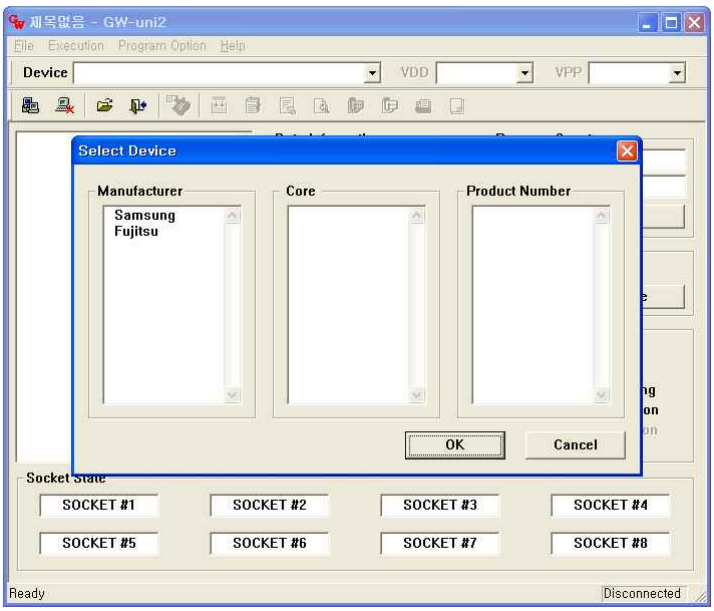


Figure 3.4.2 'Select Device' Window

3) Select a manufacturer, a Core and a product number.

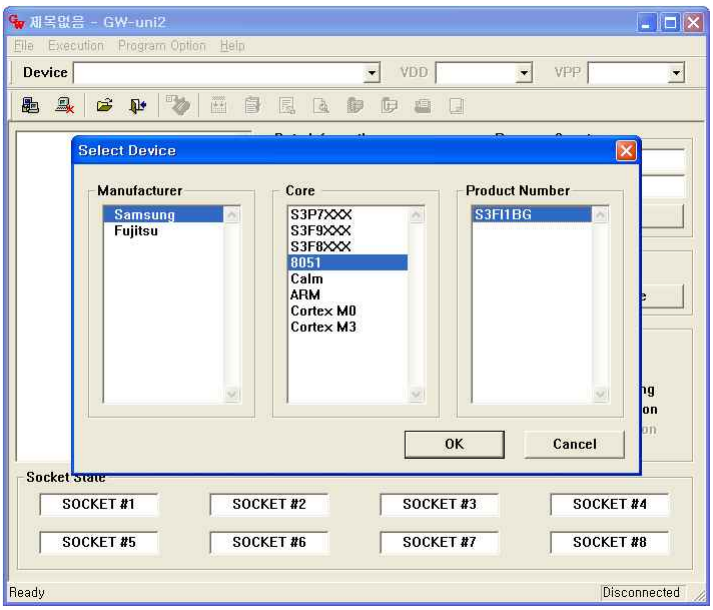


Figure 3.4.3 Device selection

4) A device information is showed when click the 'OK' icon.

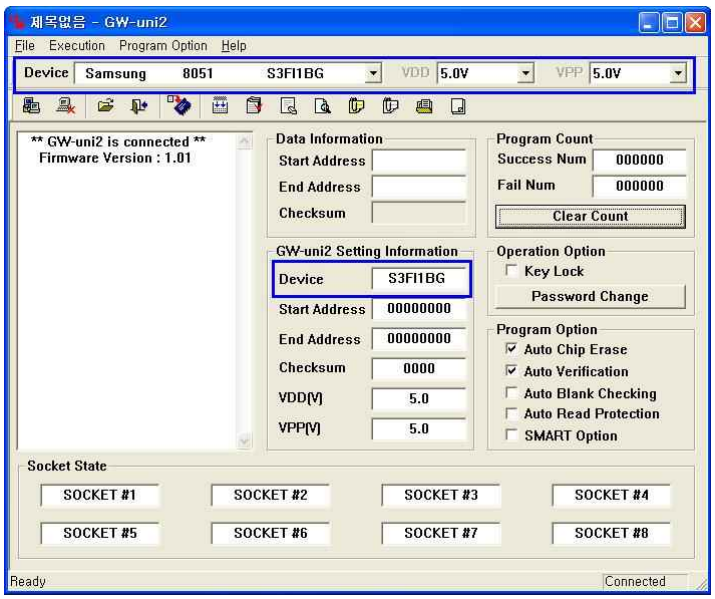


Figure 3.4.4 Display a device information

3.5. File open

1) Click the file open icon.

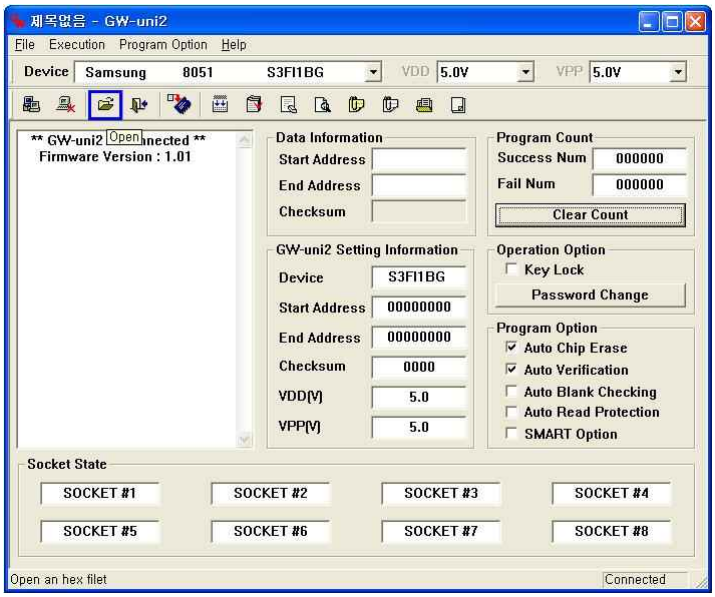


Figure 3.5.1 File open

2) Select a file(*.hex or *.bin).

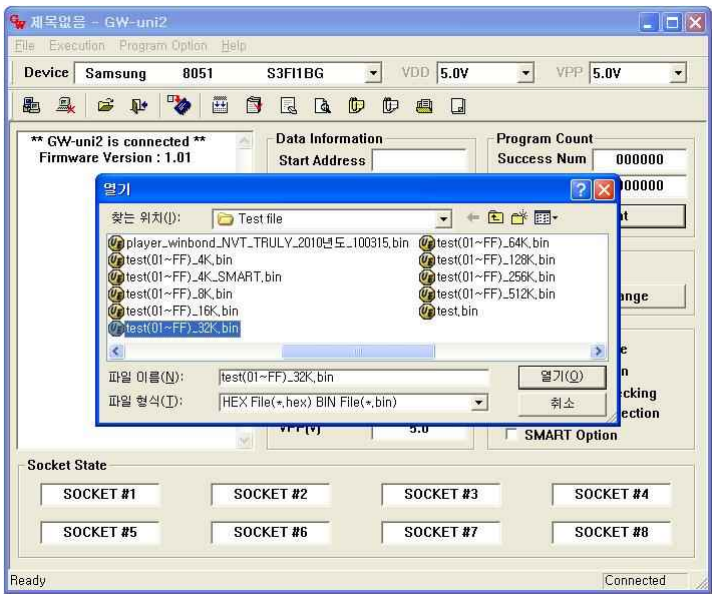


Figure 3.5.2 File selection.

3) Check the end address and checksum.

* It can take a little time for checksum depending on a file size.

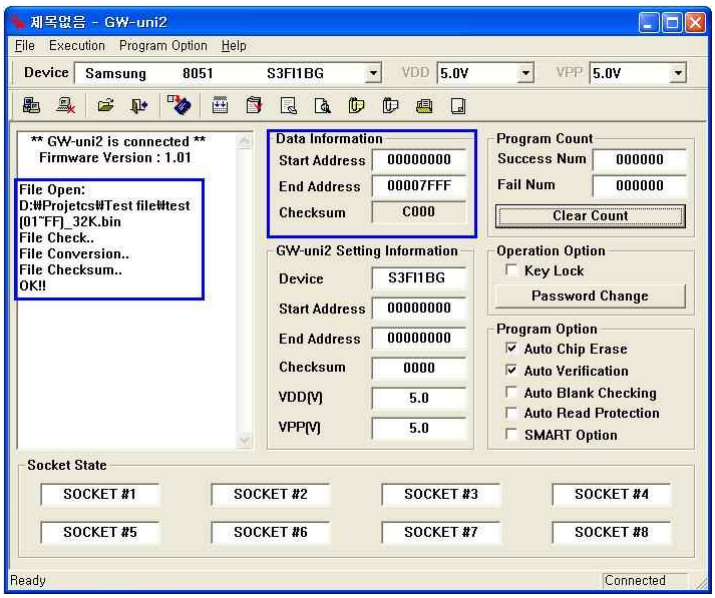


Figure 3.5.3 Finish the file selection

3.6 Program option

1) Select program option.

(1) Auto Chip Erase

(2) Auto Verification

(3) Auto Blank Checking : Check a device ROM data initialized(0xFF)

(4) Auto Read Protection : Device ROM data is read as '0'

(6) SMART Option

2) Process of program option.

(1) Chip Erase (Auto Chip Erase)

(2) Blank Check (Auto Blank Checking)

(3) Data Write

(4) SMART Option Write (SMART Option)

(5) Verify (Auto Verification)

(6) SMART Option Verify (SMART Option)

(7) Read Protection (Auto Read Protection)

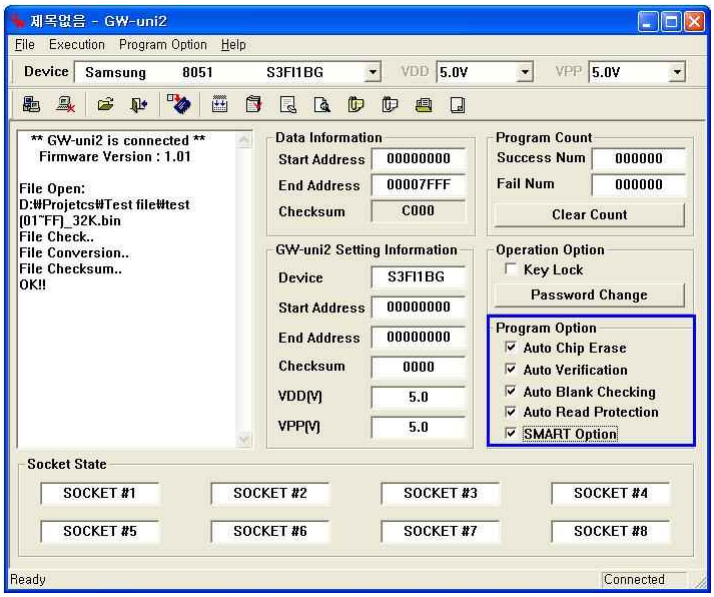


Figure 3.6.1 Program Option

3) There is an unavailable option depending on a selected device.

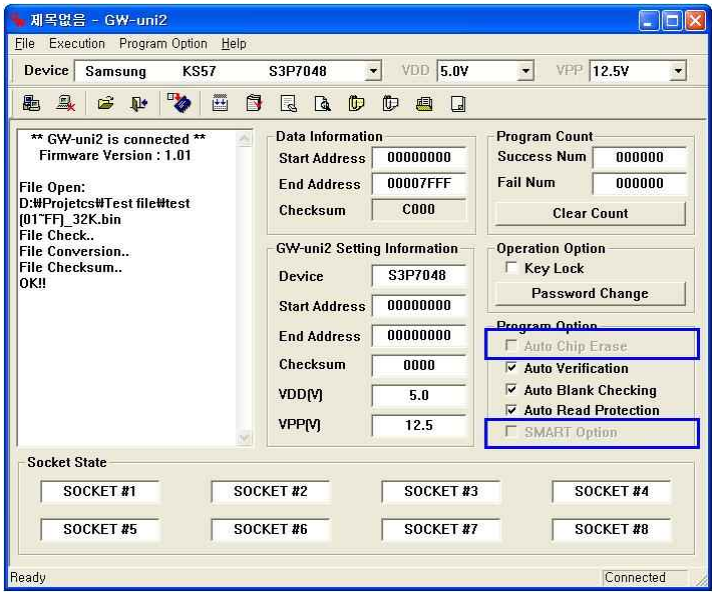


Figure 3.6.2 Program Option - unavailable Option

3.7 System Power(VDD), Program Power(VPP)

1) VDD : System power setting - User can set 3.3V or 5.0V.

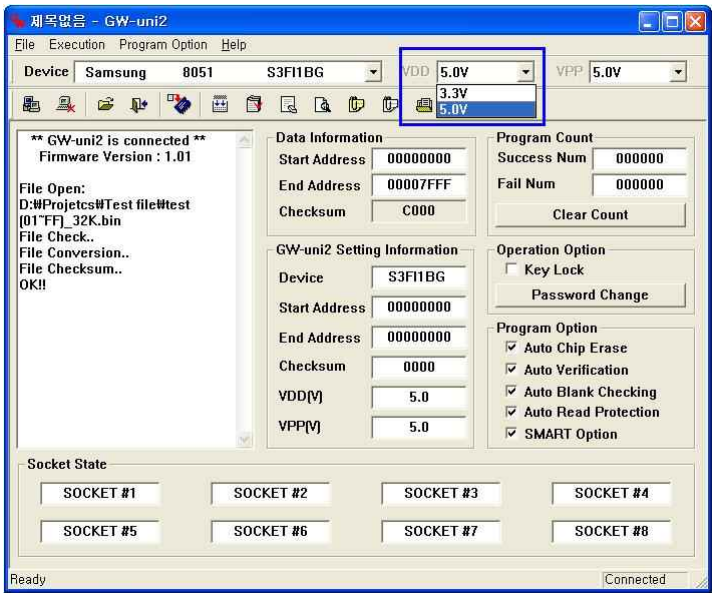


Figure 3.7.1 VDD setting

2) VPP : Program power setting - User can set VPP from 3.3V to 12.5V in the unit of 0.1V

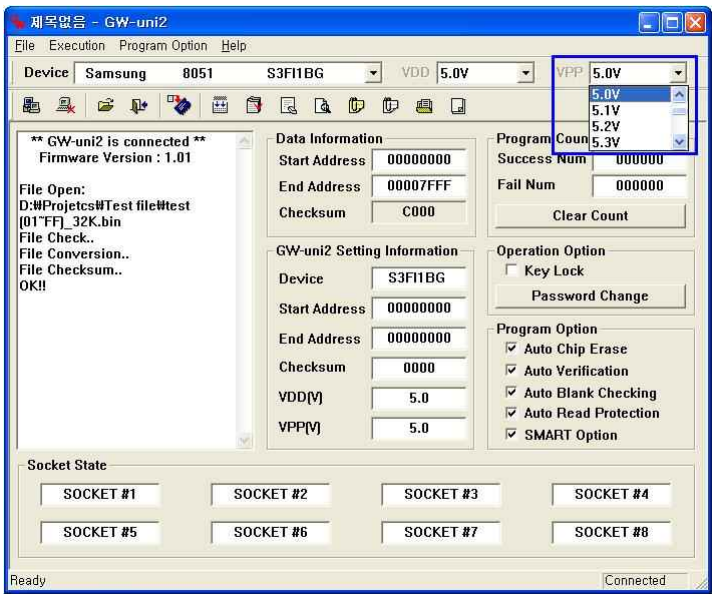


Figure 3.7.2 VPP setting

3.8 Program count

1) Success Num : Display the number of program success
2) Fail Num : Display the number of program fail

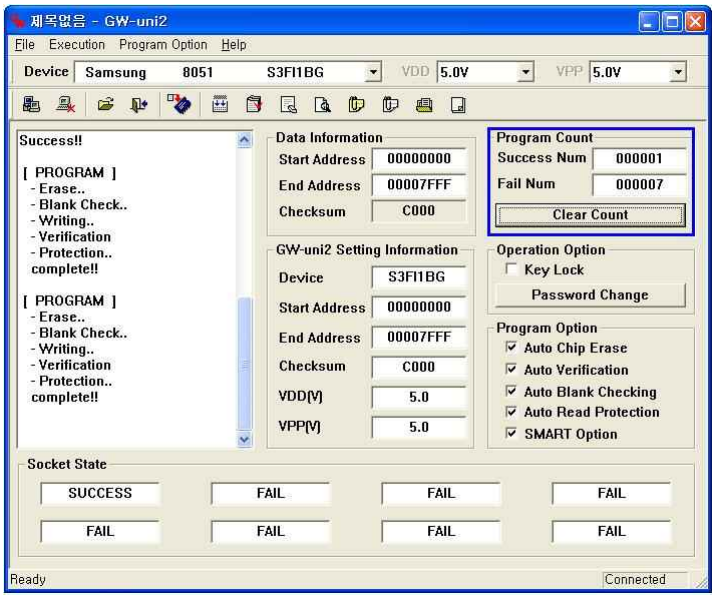


Figure 3.8.1 Program Count

3) The initialization window of 'Success Num' and 'Fail Num' is showed after click the 'Clear Count' button.
4) The count is initialized when user puts a password on 'Password' blank in 'Clear count' and clicks 'Clear Count' button.

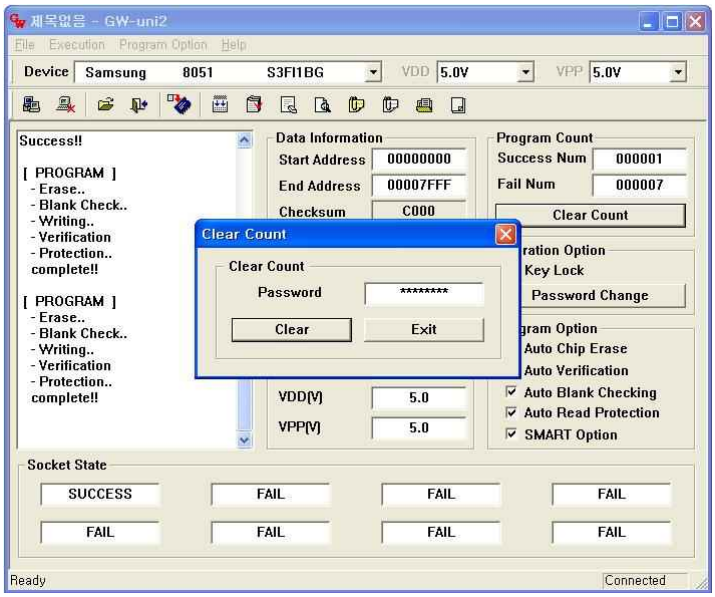


Figure 3.8.2 Clear Count

5) The 'Success: Count Cleared!' message window is showed when the initialization is normally finished.

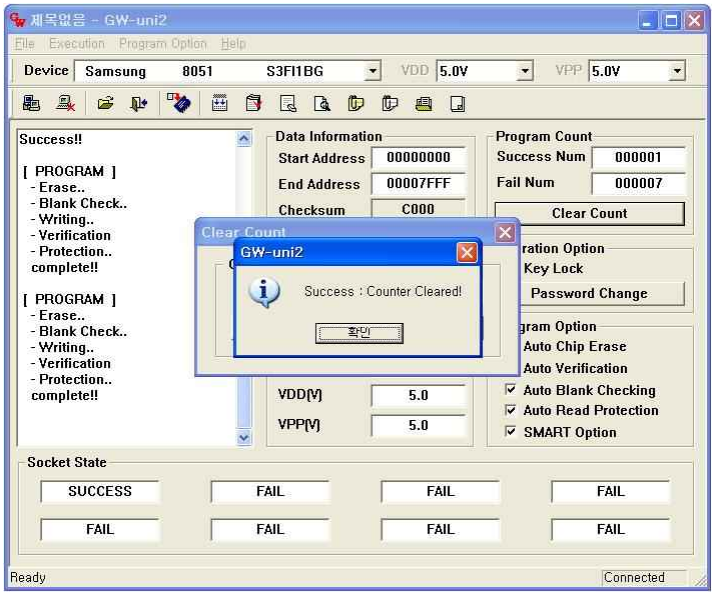


Figure 3.8.3 Success message

6) 'Success Num' and 'Fail Num' is initialized to ‘0’ after the 'Clear Count' process is normally finished.

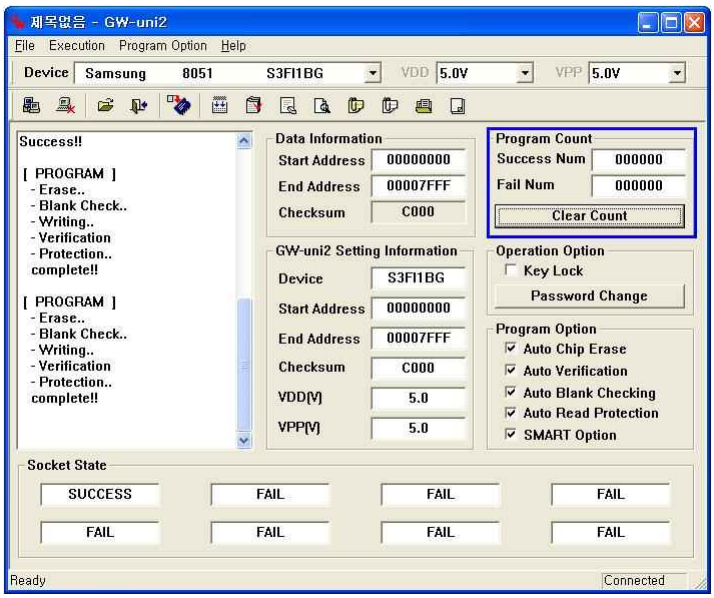


Figure 3.8.4 Clear Program Count

3.9 Data download

1) Save the selected file data, device information and program options etc. to GW-uni2 internal memory.

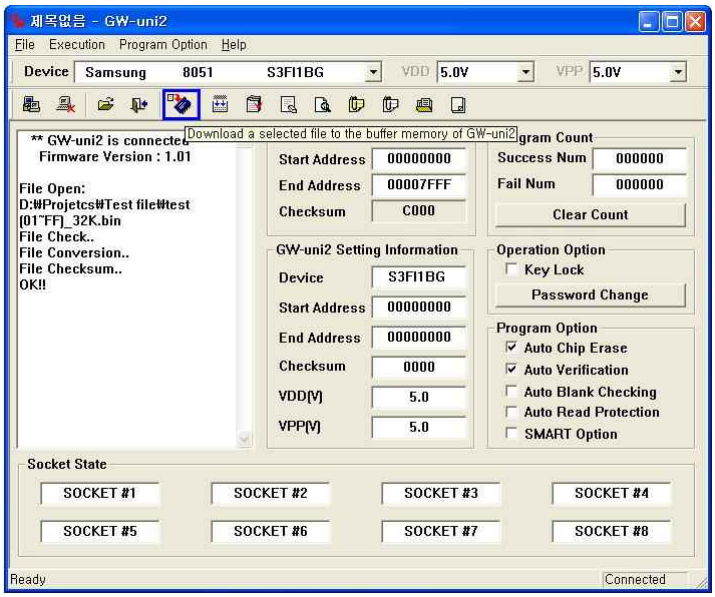


Figure 3.9.1 Download

2) Display the message "Download Success!" after download

3) Display information on 'GW-uni2 Setting Information' window after download.

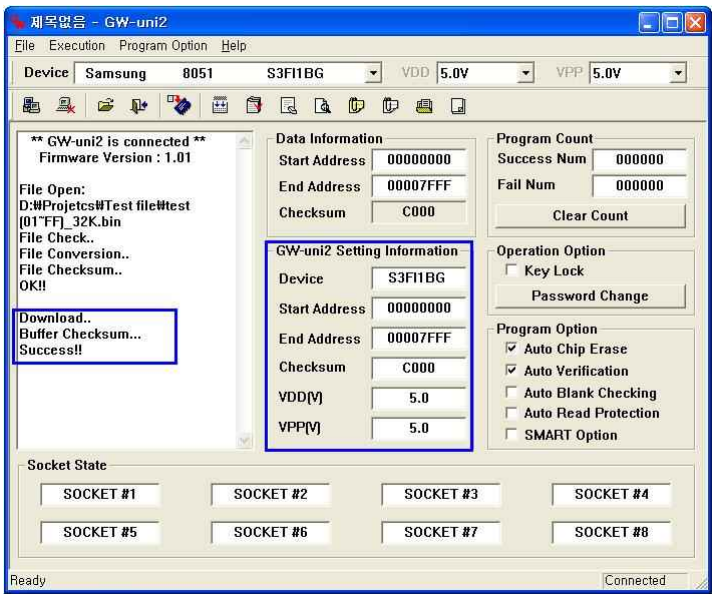


Figure 3.9.2 Download Success

3.10 Program

1) Write a data from GW-uni2 buffer memory to a device.
2) Execute selected program options in order.
3) Display the program result of each socket in 'Socket state' windows.
4) Program count is renewed.

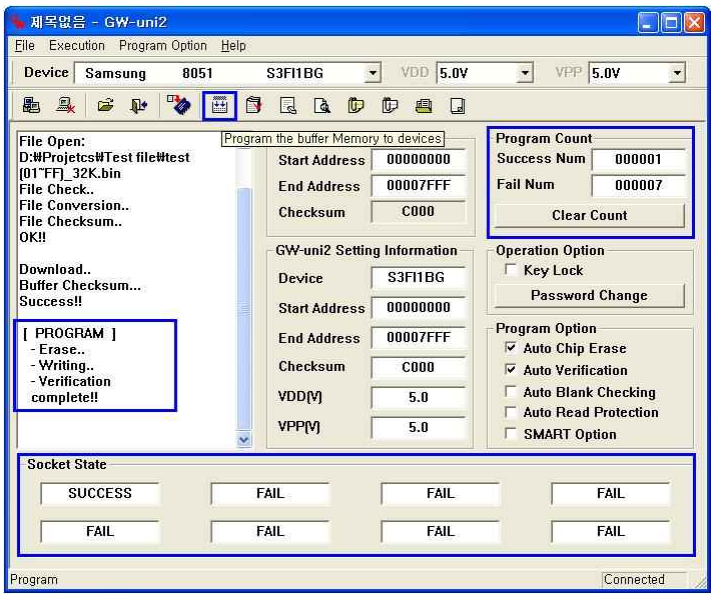


Figure 3.10 Program

3.11 Verify

: Display the result after comparing a written data of a device and a data of a GW-uni2 buffer memory.

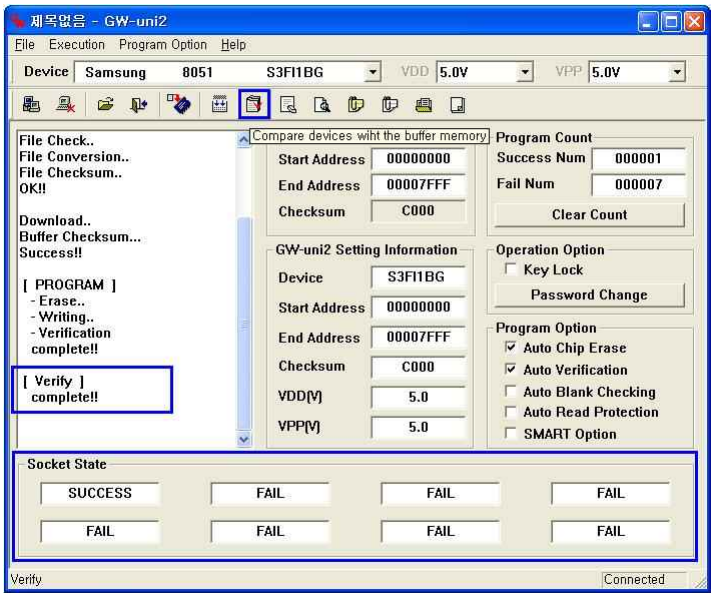


Figure 3.11 Verify

3.12 Chip erase

: Delete a device ROM data..

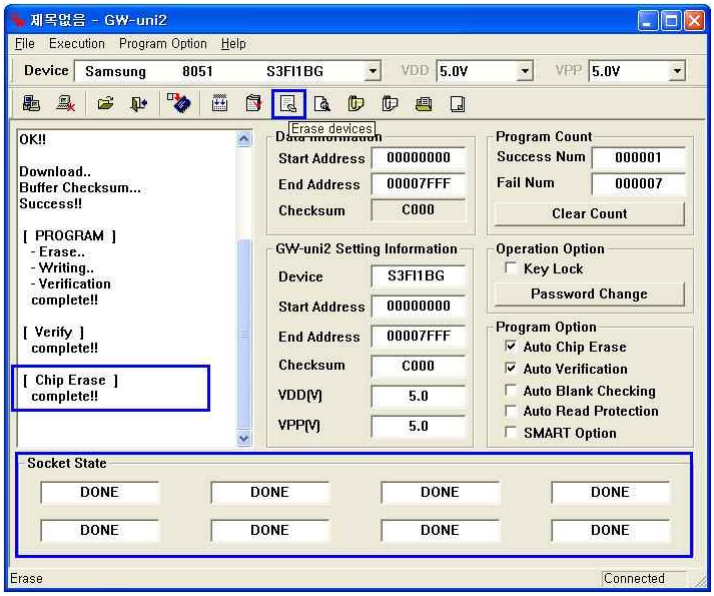


Figure 3.12 Erase

3.13 Blank check

: Check a device ROM data initialized(0xFF)

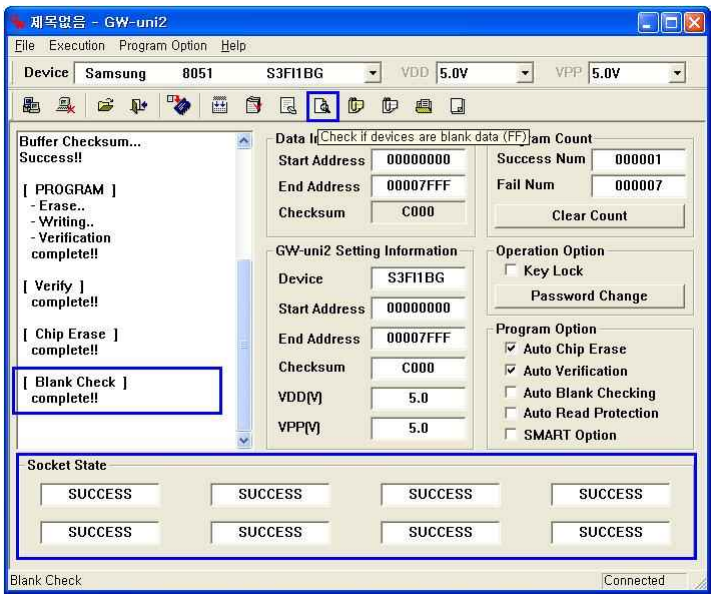


Figure 3.13 Blank Check

3.14 Device checksum

: Display a device checksum in the #1(Master) socket of 8 sockets.

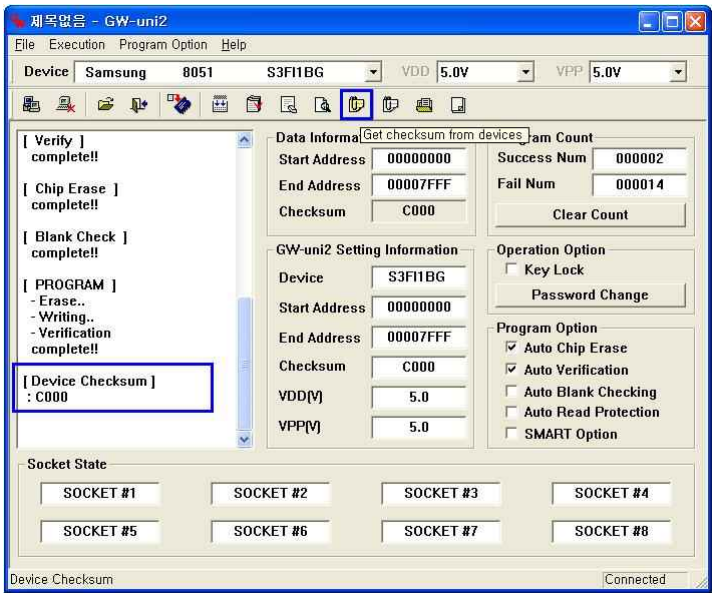


Figure 3.14 Device Checksum

3.15 Buffer checksum

: Display a checksum of GW-uni2 internal memory data.

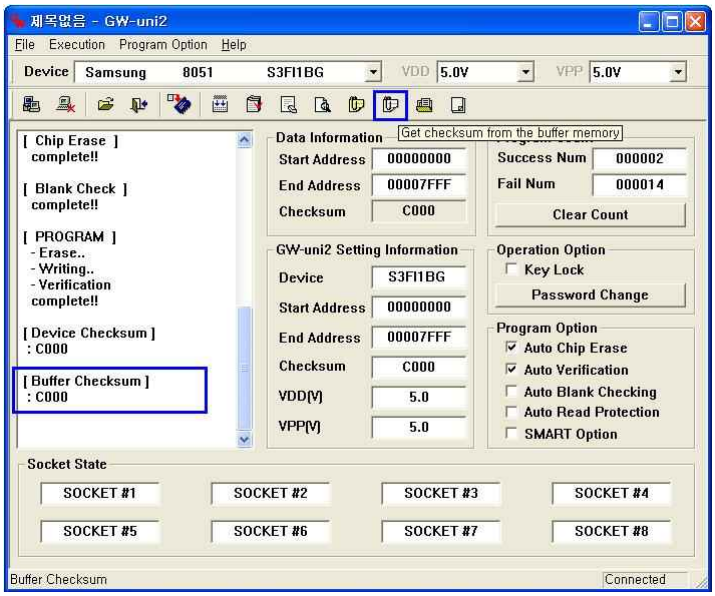


Figure 3.15 Buffer Checksum

3.16 Dump

: Display buffer memory or device ROM data.

1) Execute the Dump window after clicking the dump icon.

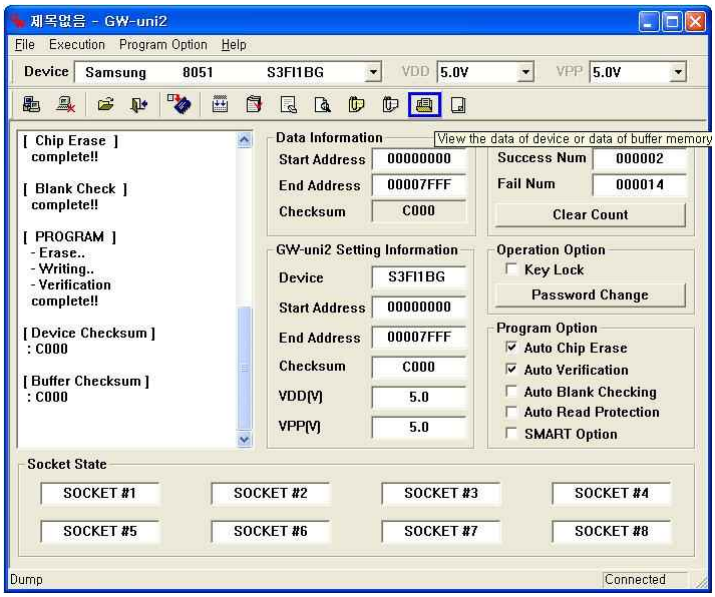


Figure 3.16.1 Dump execution

2) Address is changed by '<<' and '>>' button.

3) 'Buffer Memory' : Display buffer memory data.

4) 'Device<Socket#1>' : Display device ROM data in a socket #1.

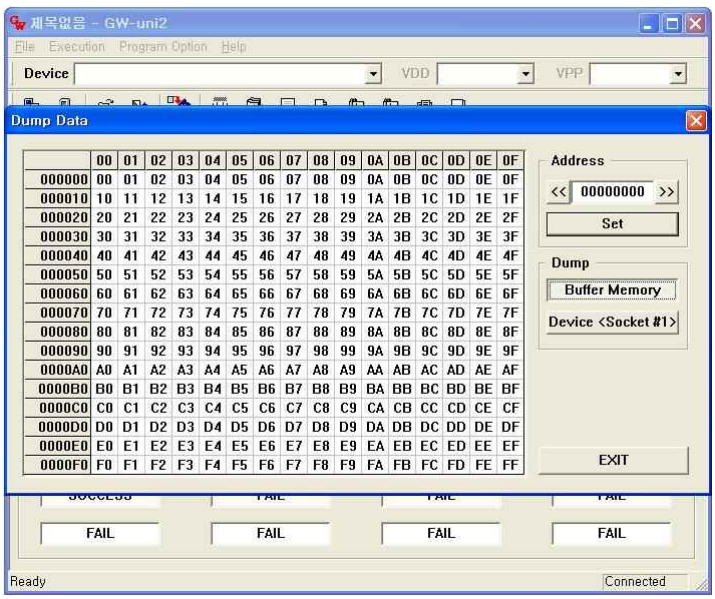


Figure 3.16.2 Dump window

3.17 Read Buffer

: Read data in buffer memory and save it as an intel hex file to PC

1) Click 'Read Buffer' button and the password window is displayed.

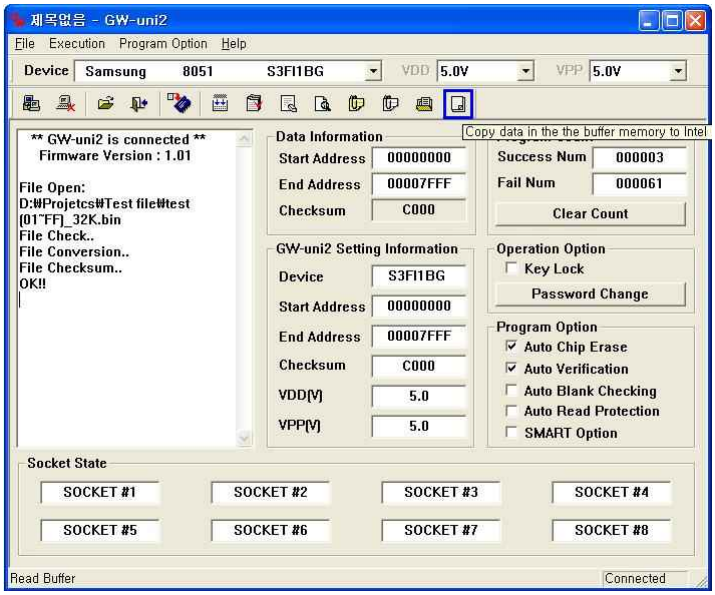


Figure 3.17.1 Read Buffer execution

2) Input password and click 'Check' button and start to execute Read Buffer.

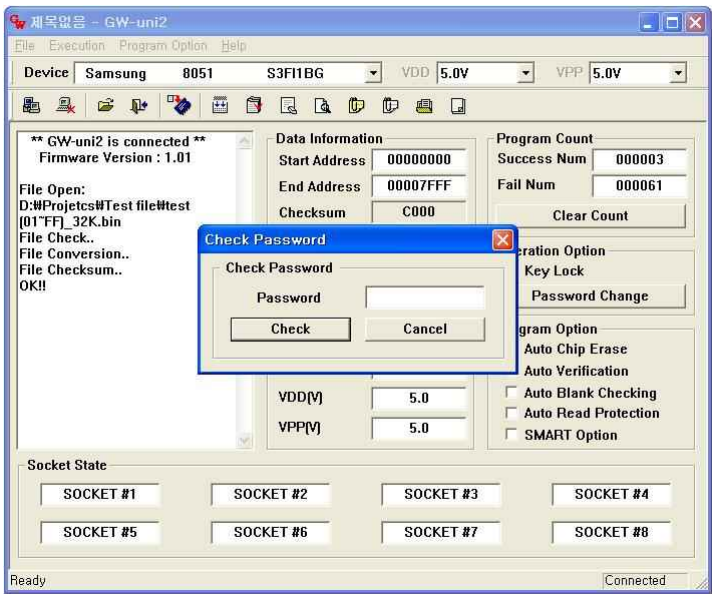


Figure 3.17.2 Input password

3) File address is displayed after 'Read Buffer' is completed

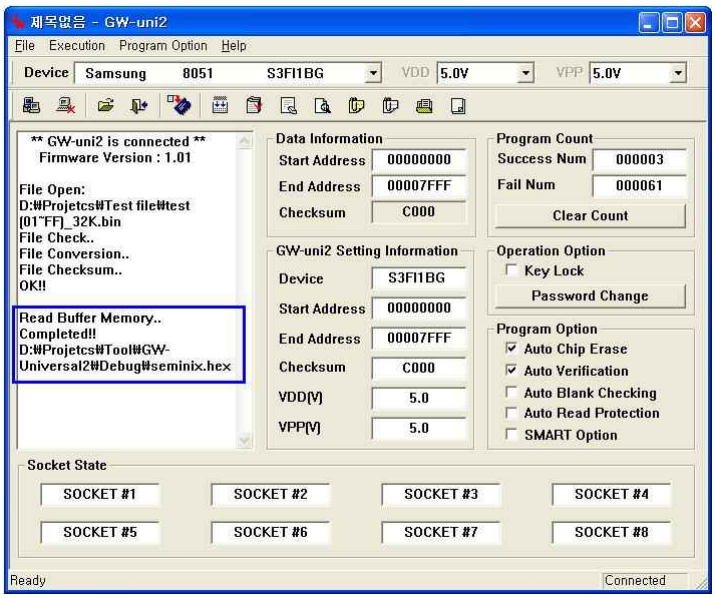


Figure 3.17.3 Complete 'Read Buffer'

3.18 Key Lock

: If the 'Key Lock Selected', the following function will be protected

- PC Application Program

  : 'Device Selection', 'Download', 'Program Option', 'Dump' function

- Stand-alone mode

  : 'Device Setting', 'Program Option' and 'Read Device' function

1) Click the 'Key Lock' check box and 'Key Lock' setting window is displayed.

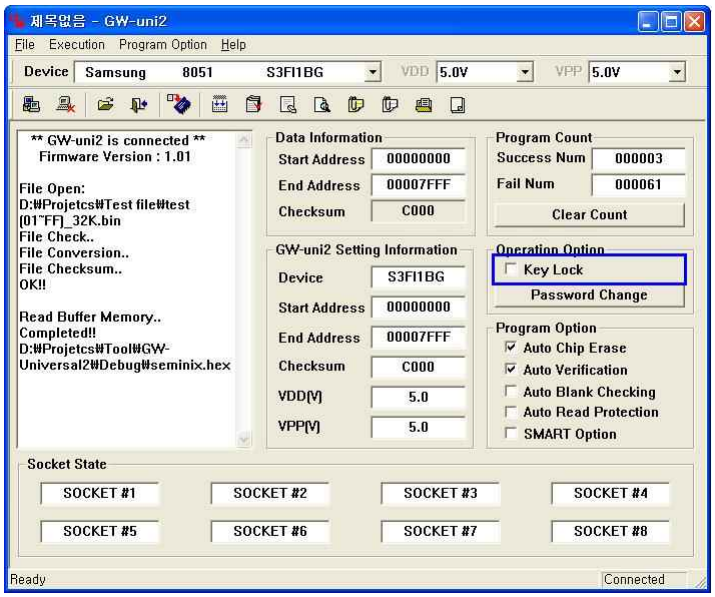


Figure 3.18.1 Key Lock execution

2) Input password and click 'Lock' or 'Unlock' button
3) 'Lock' : Set the key lock
4) 'Unlock': Set the key unlock
5) 'Exit'

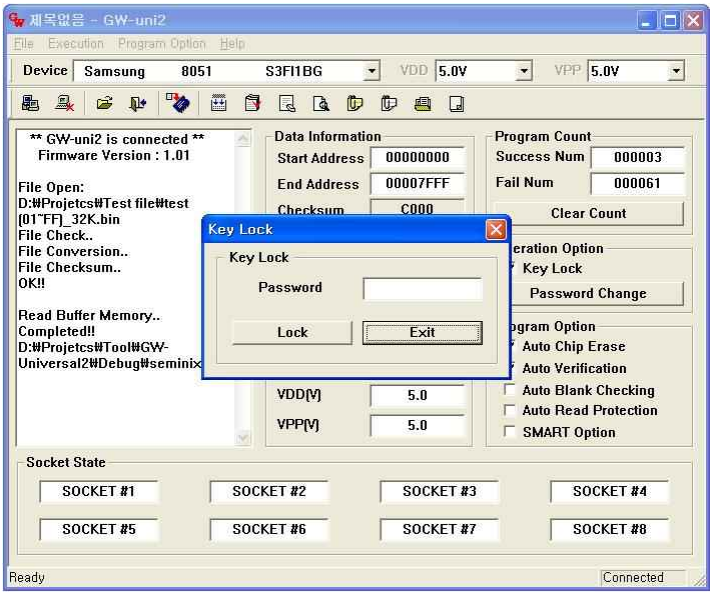


Figure 3.18.2 Key Lock

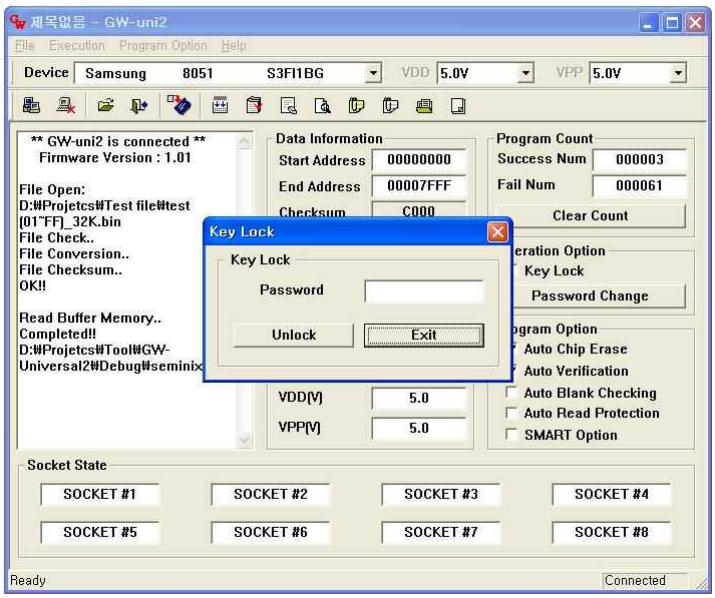


Figure 3.18.3 Key Unlock

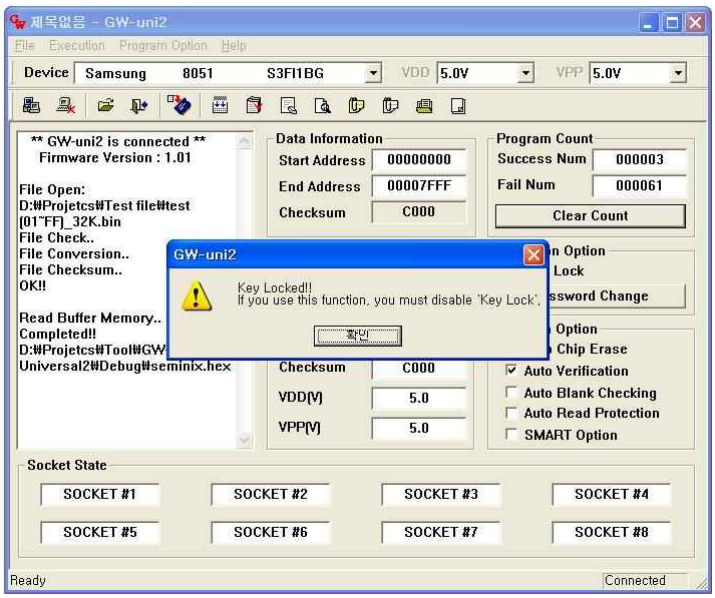


Figure 3.18.4 Key lock mode - Device Selection Error

* This function helps to avoid an operator's mistake in the mass production line.
* You must set Password before use this function.(refer to 3.19 Password Change)

3.19 Password Change

: Change password

1) Click the 'Password Change' button and the 'Password' setting window is displayed

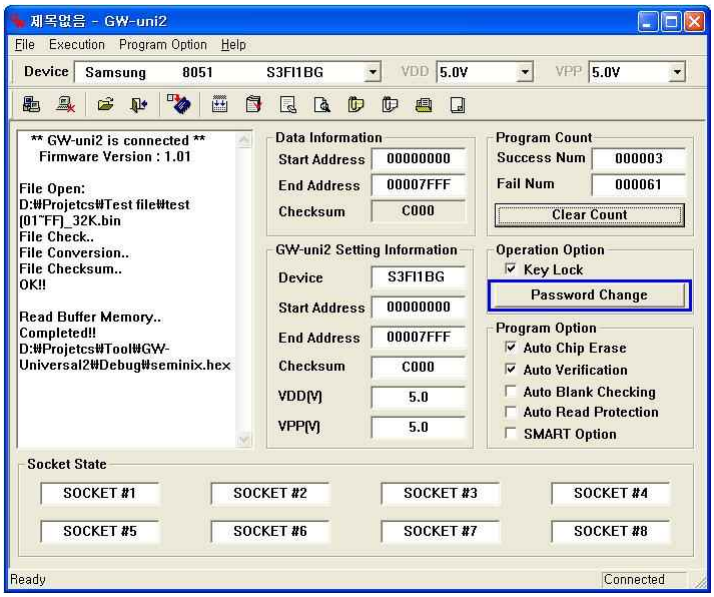


Figure 3.19.1 'Password Change' execution

2) Input a previous password in 'Password' blank box and input a new password in 'New Password' blank box and click 'Change' button to change the password

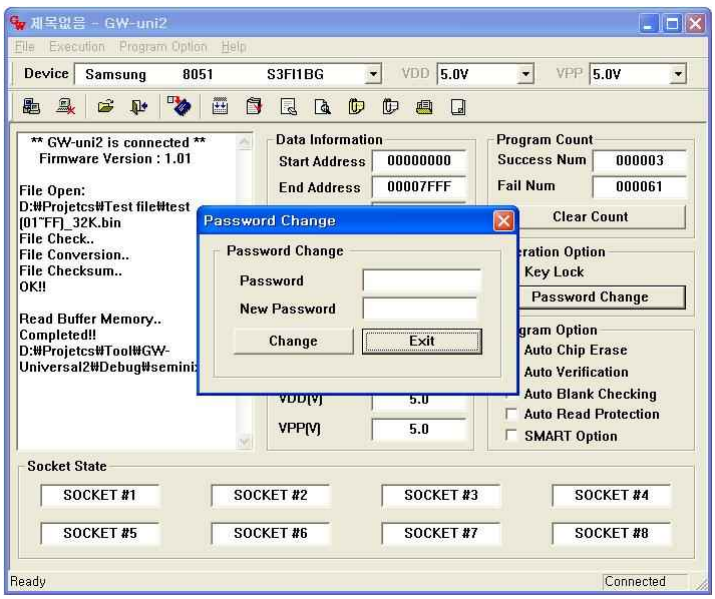


Figure 3.19.2 Password Change

3) A message window about a result is displayed after changing password.

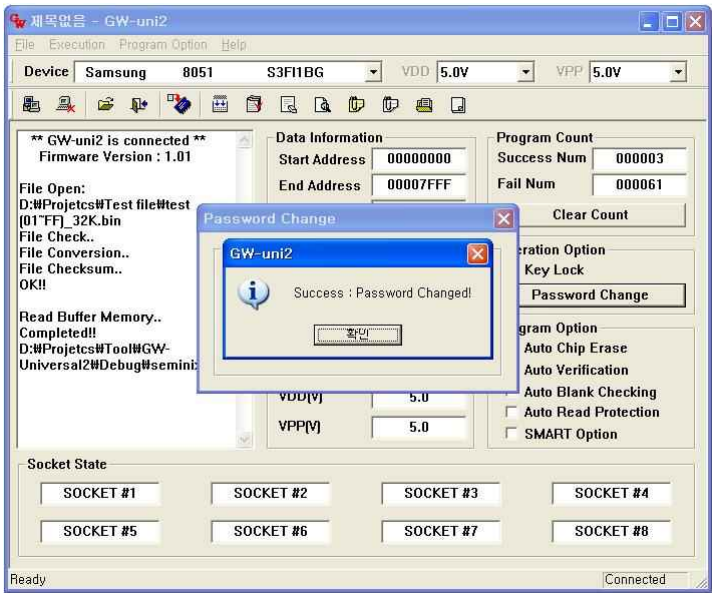


Figure 3.19.3 Finish Password Change

- *A password is not set at first*
- *Password can be set to maximum 8 words.*
- *Password is not set when 'New Password' blank box is not filled.*

3.20 Socket state

: Display an operating result on each socket.

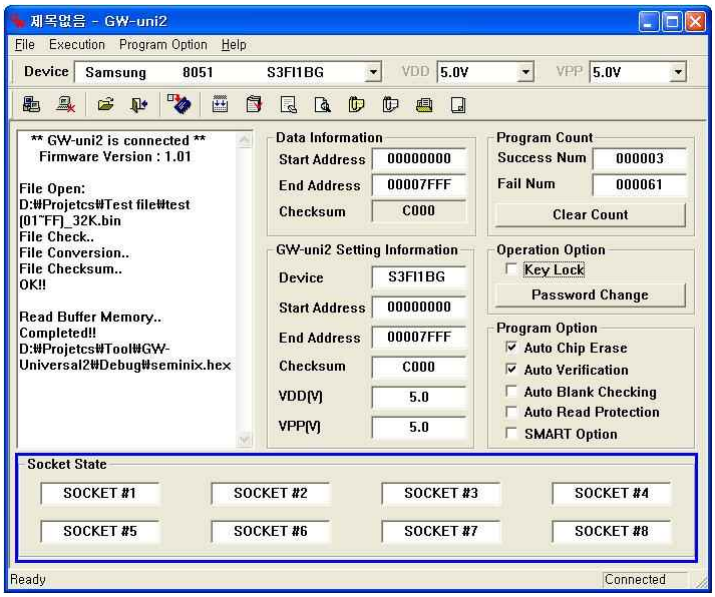


Figure 3.20 Display a socket state

3.21 State window

: Display an operating result on the 'Socket State' window.

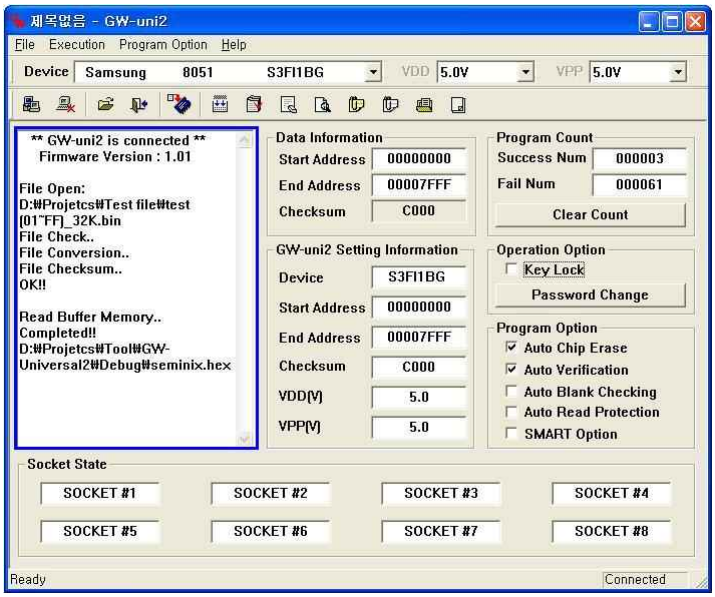


Figure 3.21 State Window

3.22 GW-uni2 Setting window

: Display GW-uni2 setting state.

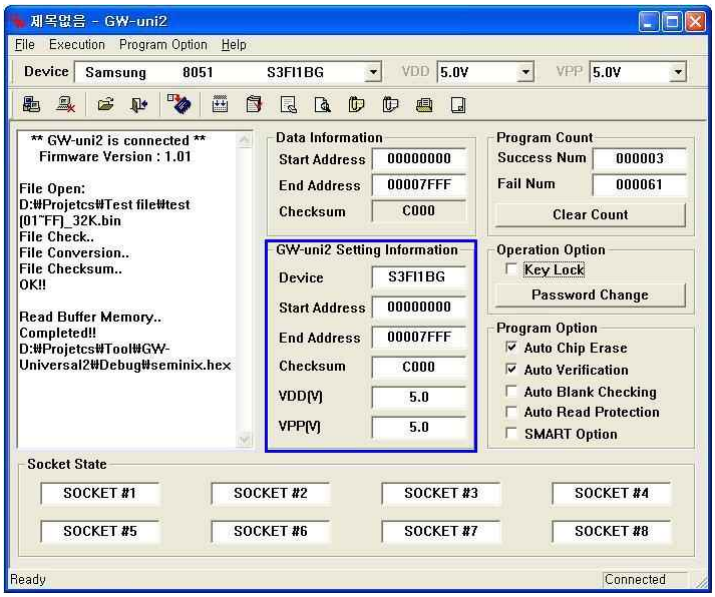


Figure 3.22 GW--uni2 setting window

1) Device : Display a device name.
2) Start Address : Display a program start address.
3) End Address : Dispaly a program end address.
4) Checksum : Display a data checksum which is downloaded.
5) VDD : Display a system voltage.
6) VPP : Display a program voltage.

GW-uni2 works based on GW-uni2 setting information so check whether GW-uni2 setting is changed after changing GW-uni2 setting information. (device information, Program option, Download etc.)

**** The setting value is displayed when GW-uni2 is connected to PC GW-uni2 normally.***

3.23 Upgrade

- Upgrade GW-uni2 software.
- Please check a new firmware file at SEMINIX homepage(www.seminix.com) periodically
- User can check the version information at 'Help -> About GW-uni2... ' menu

1) Upgrade process

(1) Write "UPGRD" to the 'Start Address' blank and then enter the 'Enter' key.

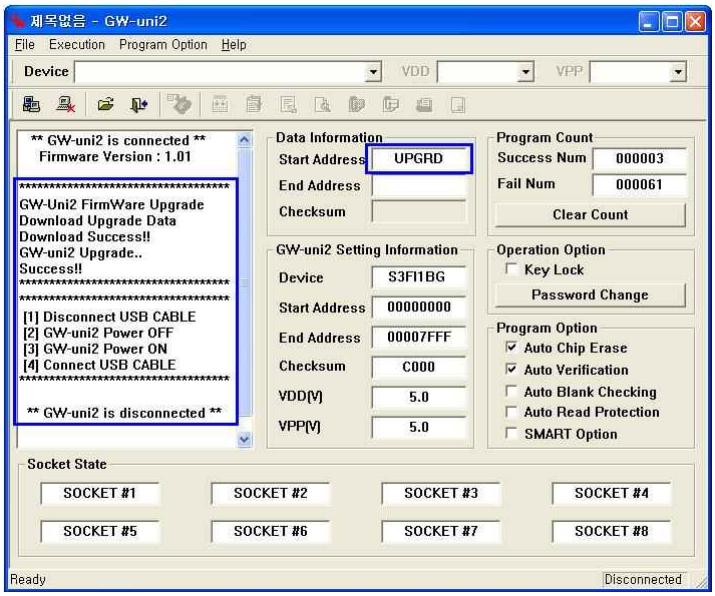


Figure 3.23 Upgrade Start

(2) The upgrade data is downloaded when user enters 'Enter key'

(3) GW-uni2 is upgraded after finish the download.

(4) Restart GW-uni2 about 20 min later (Power off -> Power On)

4. Stand-alone mode

4.1 System on and initialization

: **To use GW-uni2 with stand-alone mode, user should setup PC application program and download a data first**
Touch keys don't work if the USB cable is connected so please disconnect USB cable for the stand-alone mode.

1) Set a device with reference to '3.4 Device selection'
2) Set a program option with reference to '3.6 Program Option'
3) Download a data with reference to '3.5 File Open','3.9 Data Download'
4) Disconnect USB cable. (The key is not working when USB cable is connected)
5) The system information is kept until user set it again.

4.2 LCD display information

: There is a program standing mode when user turns on GW-uni2 power after initialization

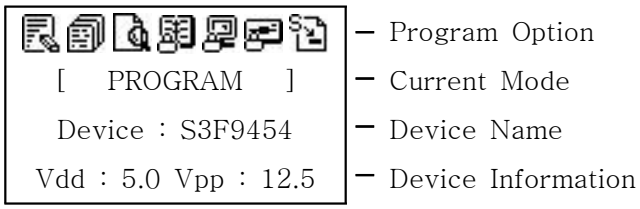


Figure 4.2 LCD display

1) Program Option : Display Program option
(1) : Auto Chip Erase
(2) : Auto Verification
(3) : Auto Blankcheck
(4) : Auto Read Protection
(5) : Auto LDC Protection
(6) : Auto Hard Lock
(7) : SMART Option

2) Current Mode : Display a current mode.
(1) PROGRAM, VERIFICATION, ERASE, BLANK CHECK, DVC CHECKSUM, and BUF CHECKSUM
(2) A mode is changed in order when touch 'LEFT' and 'RIGHT' keys.

3) Device Name
: Display a device name.(Display 'Nothing' when there is not any selected device)

4) Device Information : Display Device setting information..
(1) Vdd : System Power (Voltage)
(2) Vpp : Program Power (Voltage)
(3) E.A : End Address (Hex)
(4) Checksum : Buffer Checksum (Hex)

4.3 Program mode

: Program standing state

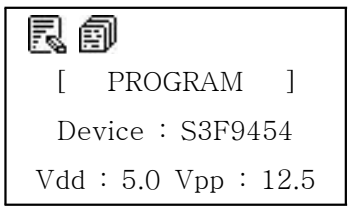


Figure 4.3.1 Program Mode

1) Touch 'PROGRAM' key and execute the program mode.

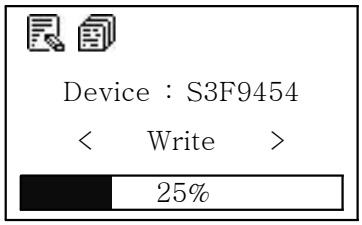


Figure 4.3.2 Program Mode - Write to a device

2) Execute a program option together
3) Touch the 'RIGHT' key for 'Verification mode'
4) Touch the 'LEFT' key for 'Buf Checksum mode'
5) Touch the 'MENU' key for 'Menu mode'.

4.4 Verification mode

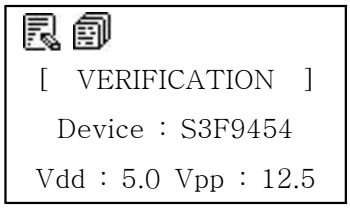


Figure 4.4.1 Verification Mode

1) Touch the 'PROGRAM' key for verify.

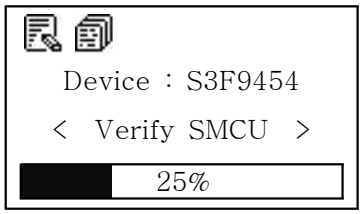


Figure 4.4.2 Verification mode - Verify

2) Touch the 'RIGHT' key for 'Erase mode'.
3) Touch the 'LEFT' key for 'Program mode'.
4) Touch the 'MENU' key for 'Menu mode'.

4.5 Erase mode

: Make a device ROM initialize (0xff)

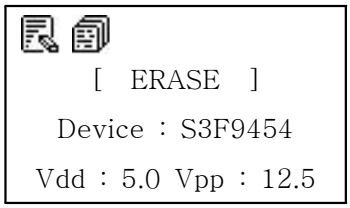


Figure 4.5.1 Erase Mode

1) Touch the 'PROGRAM' key for erase.

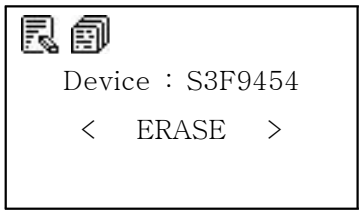


Figure 4.5.2 Erase Mode - Erase

2) Touch the 'RIGHT' key for 'Blank Check mode'.
3) Touch the 'LEFT' key for 'Verification mode'.
4) Touch the 'MENU' key for 'Menu mode'.

4.6 Blank Check mode

: Check a device ROM data initialized(0xff)

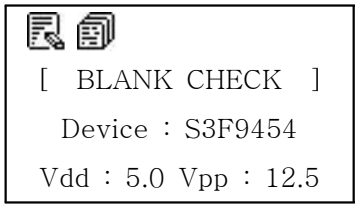


Figure 4.6.1 Blank check mode

1) Touch the 'PROGRAM' key for 'Blank Check'.

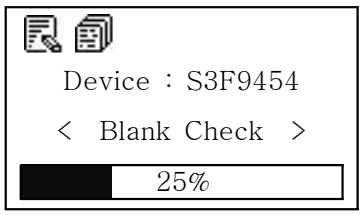


Figure 4.6.2 Blank check mode - Blank check

2) Touch the 'RIGHT' key for 'DVC Checksum mode'.
3) Touch the 'LEFT' key for 'Erase mode'.
4) Touch the 'MENU' key for 'Menu mode'.

4.7 Device Checksum mode

: Get a device checksum in the first socket(Master) of 8 sockets

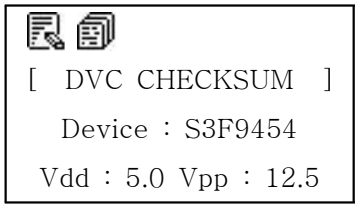


Figure 4.7.1 Device checksum mode

1) Touch the 'PROGRAM' key for device checksum.

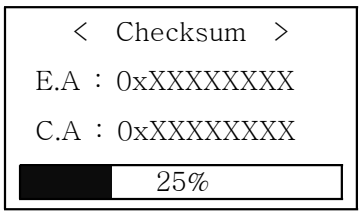


Figure 4.7.2 Device Checksum - Loading

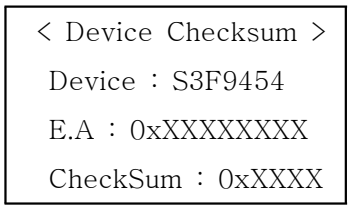


Figure 4.7.3 Device Checksum - Done

2) Touch the 'RIGHT' key for 'BUF Checksum mode'.
3) Touch the 'LEFT' key for 'Blank Check mode'.
4) Touch the 'MENU' key for 'Menu mode'.

** E.A : End Address*
** C.A : Current Address*
** Checksum : 2byte*

4.8 Buffer Checksum

: Display a checksum of GW-uni2 buffer memory.

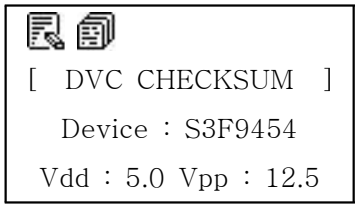


Figure 4.8.1 Device checksum mode

1) Touch the 'PROGRAM' key for 'Buffer Checksum'.

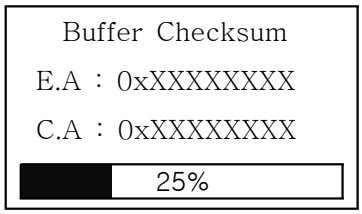


Figure 4.8.2 Buffer Checksum - Loading

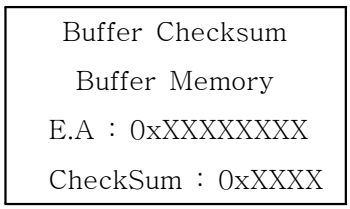


Figure 4.8.3 Buffer Checksum - Done

2) Touch the 'RIGHT' key for 'Program mode'..
3) Touch the 'LEFT' key for 'DVC Check mode'.
4) Touch the 'MENU' key for 'Menu mode'.

* *E.A : End Address*
* *C.A : Current Address*
* *Checksum : 2byte*

4.9 Menu mode

: Touch the key for Menu mode in 'Program Mode', 'Verification Mode' and 'Erase Mode'

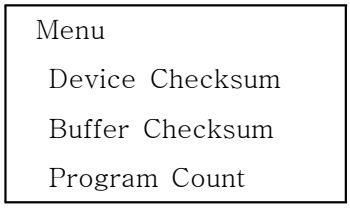


Figure 4.9.1 Menu Mode

1) Menu
   (1) Device Setting : Set a device value by part no.
   (2) Program Option : Select a program option.
   (3) Read Device : Read a device ROM data and save it to a buffer memory.
   (4) Program Count : Display the programed device number.
   (5) Beep Sound : On and off the beep sound.
   (6) Information : Display GW-uni2 information.
   (7) Return : Return to previous mode.

2) Display the chosen menu with an inverted color.
3) Menu can be changed by 'UP' and 'DOWN' key.
4) Touch the 'MENU' key to select a chosen menu.
5) Touch the 'PROGRAM' key for a previous mode.

4.10 Device Setting

: Change system setting value depending on a chosen device.

Figure 4.10 Device Setting

1) Display a chosen device with an inverted color
2) A device can be changed by 'UP' and 'DOWN' key.
3) Touch the 'MENU' key to select a chosen menu.
4) Touch the 'PROGRAM' key for a previous mode.

This device setting can't used if there is the 'Key lock' setting.

4.11 Program Option

: Change a program option.

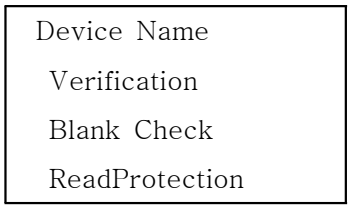


Figure 4.11 Program Option

1) Display an icon when an option is chosen.
2) An option can be changed by 'UP' and 'DOWN' key.
3) Touch the 'MENU' key to select a chosen option.
4) Touch the 'PROGRAM' key for a previous mode.
5) Back to a menu mode when 'Return' is selected.

This program option can't be used if there is the 'Key lock' setting.

4.12 Read Device

: Read a device ROM data in the socket #1 and save it to GW-uni2 buffer memory.

1) Display a device setting menu when 'Read Device' is selected.

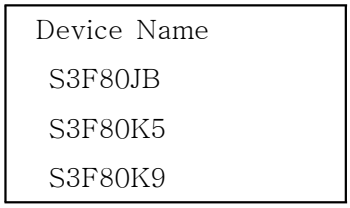


Figure 4.12.1 Device selection

2) Display a confirmation window when a device is selected.

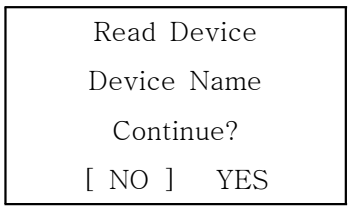


Figure 4.12.2 Read Device confirmation

3) Back to a menu mode when 'NO' is selected.
4) Execute 'Read Device' when 'YES' is selected.

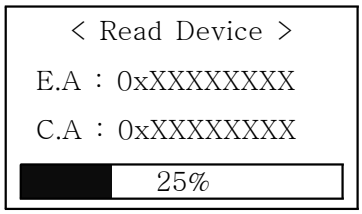


Figure 4.12.3 Read Device - Loading

5) Back to a previous mode when 'Read Device' is finished.

This Read Device can't be used if there is the 'Key lock' setting.

4.13 Program Count

(1) Success : The number of program success.
(2) Fail : The number of program fail.

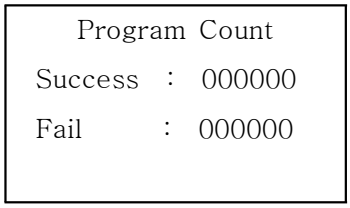


Figure 4.13 Program Count

4.14 Beep Sound

: On and off beef sound.

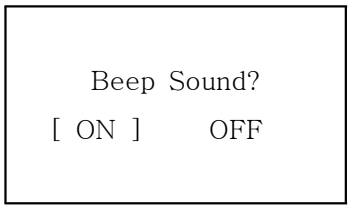


Figure 4.14 Beep Sound

4.15 Information

(1) Display a hardware version.
(2) Display a software version.
(3) Display a buffer memory size.

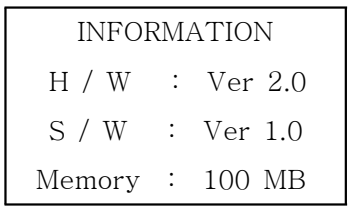


Figure 4.15 Information

4.16 Return

: Back to the previous mode (Program Mode, Verification Mode, Erase Mode)

4.17 Result

1) Display an operating result of each socket.
2) Display "G" with programming success.
   Display "F" with programming fail.
   Display "I" with Socket Mismatch fail. (Device setting - Socket)
   Display "E" with End of Socket-Life-Time.

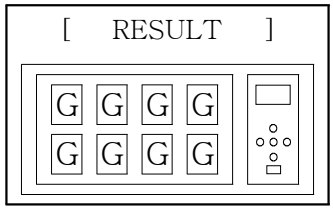


Figure 4.17 Display LCD Result

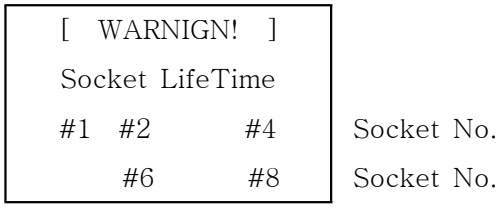
4.18 Socket LED

State		LED RED	LED GREEN
Stand By		OFF	ON
Execute Function		X	X
Result	Success	OFF	OFF
	Fail	ON	OFF

Table 4.18 Socket LED Description

4.19 Socket Life Time

The socket adapter consists of several mechanical parts so that it is consumption goods, whose life time is limited. GW-uni2 will display the warning message on the LCD of GW-uni2 when the programming counts of the socket adapter reaches the life time (counts) of its socket adapter.



4.19 Socket Life Time

After the warning message is displayed, GW-uni2 will program the devices continuously until 10% over counts than the life time count of socket adapter. So GW-uni2 will not program the devices when the programming count is over than 10% of the life time (count) of the socket adapters because the programming reliability could not be guaranteed.

Please change the used socket adapters into new ones in case of that, and then program the devices continuously.

5. Operation Sequence

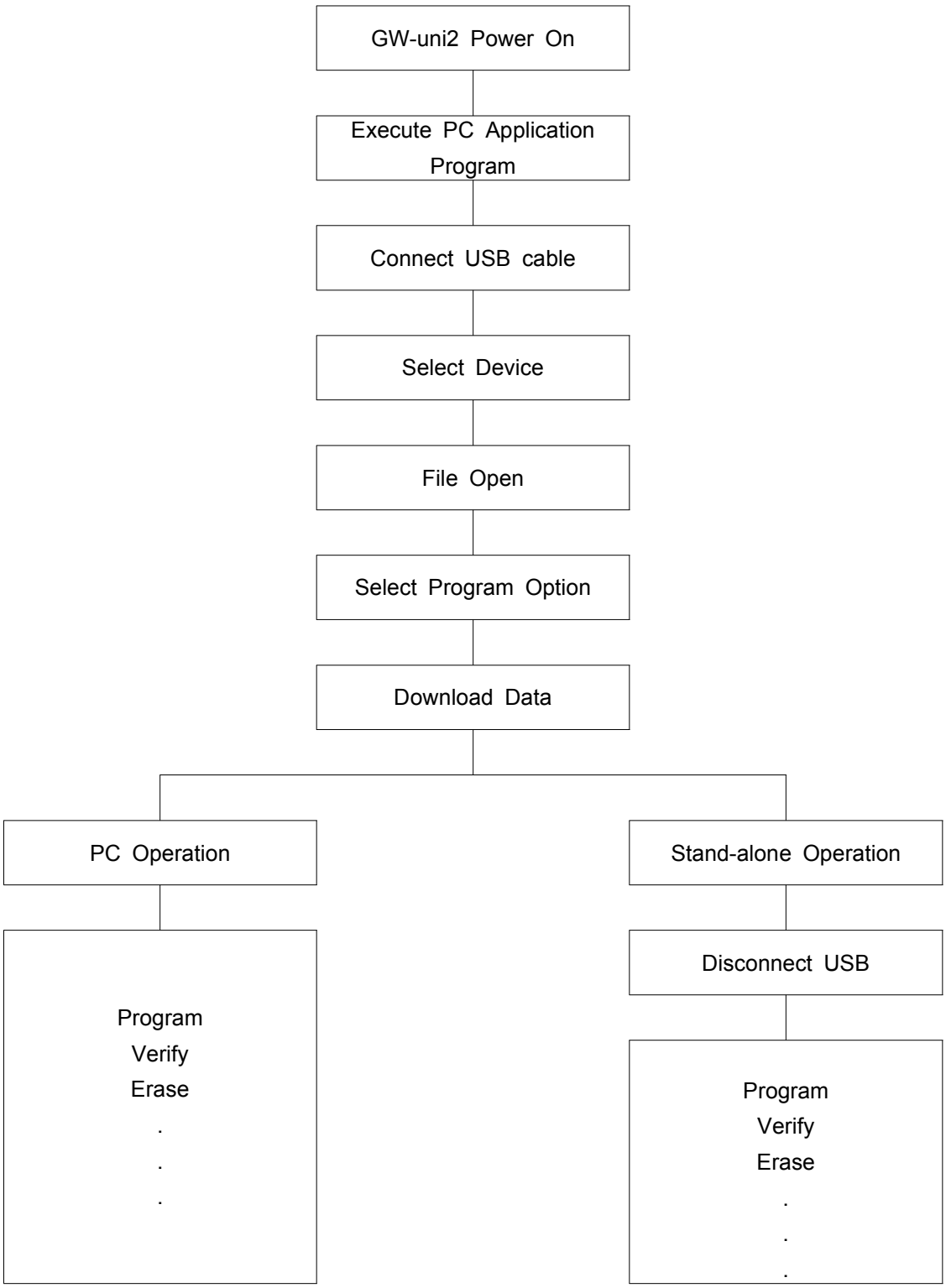


Figure 5.1 Operation Sequence

6. Key Function map

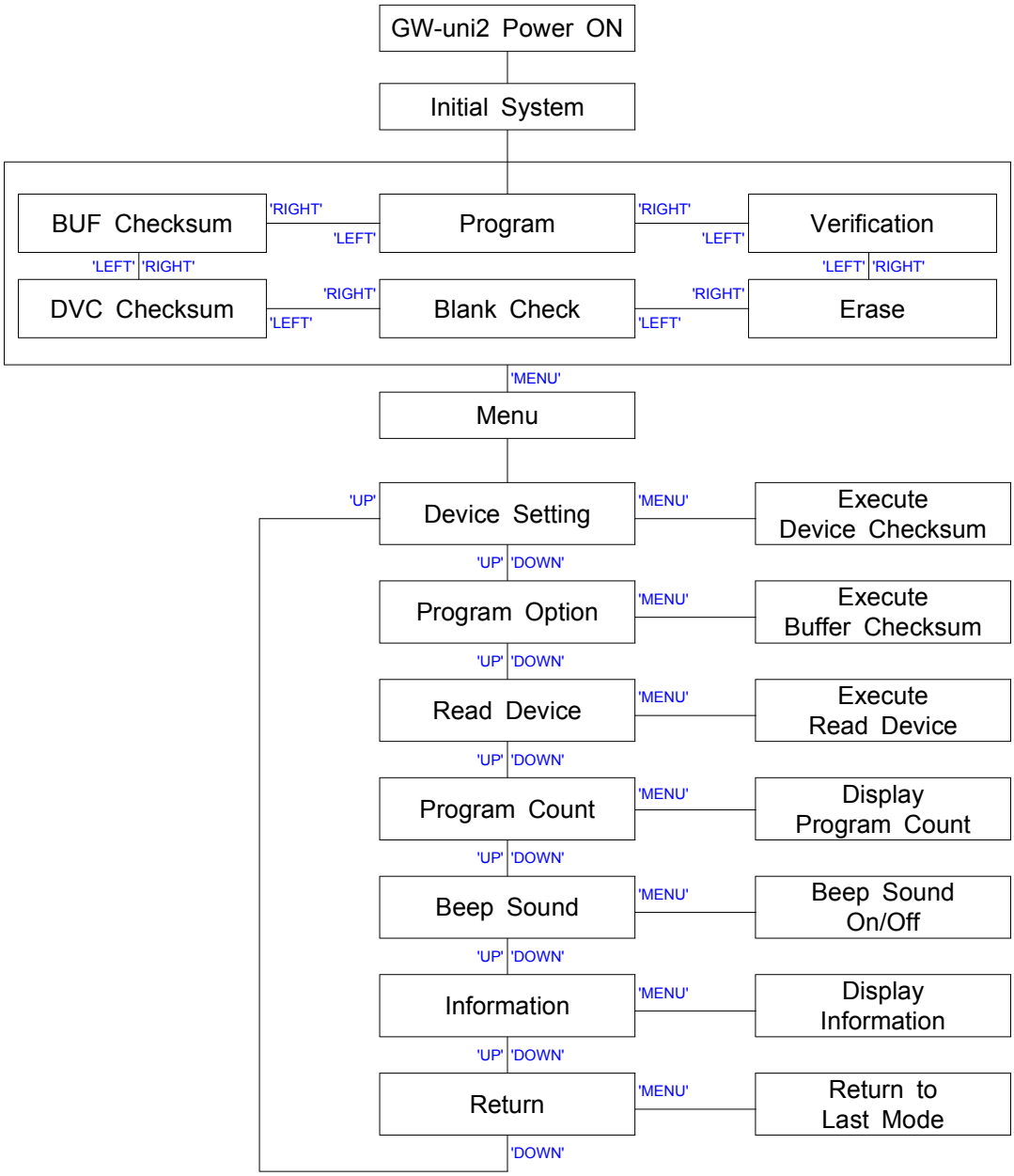


Figure 6.1 Key Function Map

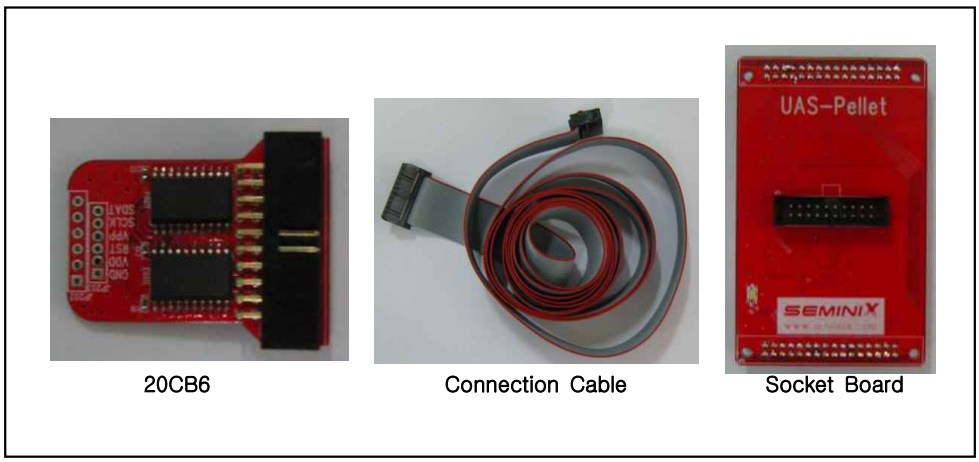
* Please make sure that USB cable should not be connected when user want to use the stand-alone mode because 'Key' is not working when USB cable is connected.

7. In-System Program

7.1 UAS-Pellet2 Adapter Cable

: You must use a UAS-Pellet2 Adapter Cable when you use GW-uni2 to program MCU(or COB) on the PCB.

Connect GW-uni2 to User board via UAS-Pellet2 Adapter Cable



20CB6 Connection Cable Socket Board

Figure 7.1 Component of UAS-pellet2 Adapter Cable

7.2 Connection

(1) 20CB6-Adapter Board 'GND' - Target-MCU 'GND(Vss)'
(2) 20CB6-Adapter Board 'VDD' - Target-MCU 'Vdd(Vcc)'
(3) 20CB6-Adapter Board 'RST' - Target-MCU 'Reset'
(4) 20CB6-Adapter Board 'VPP' - Target-MCU 'Vpp(Test)'
*** if 'Reset pin' and 'Vpp(Test) pin' are same, you have only to connect 'Vpp(Test) pin'.**
(5) 20CB6-Adapter Board 'SCLK' - Target-MCU 'SCLK'
(6) 20CB6-Adapter Board 'SDAT' - Target-MCU 'SDATA'

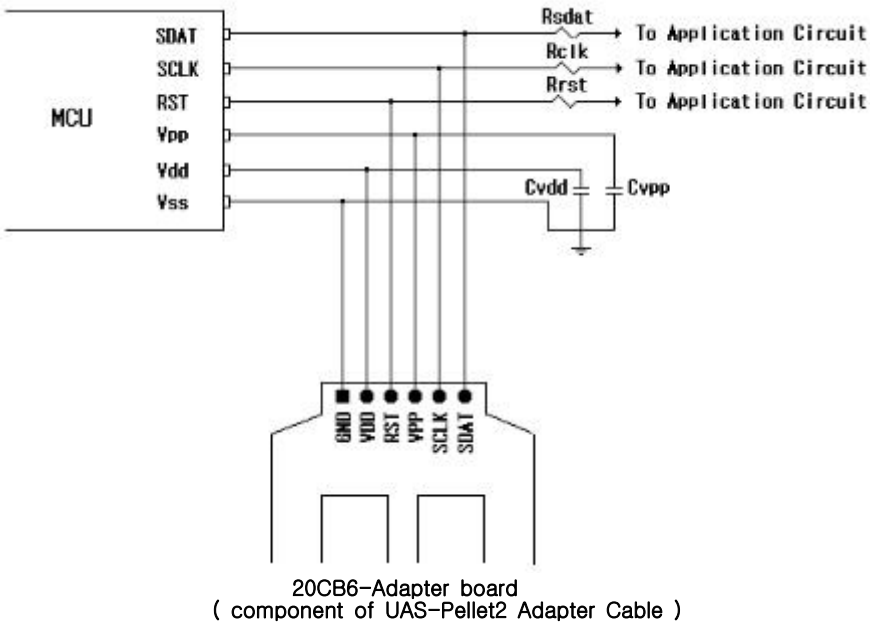
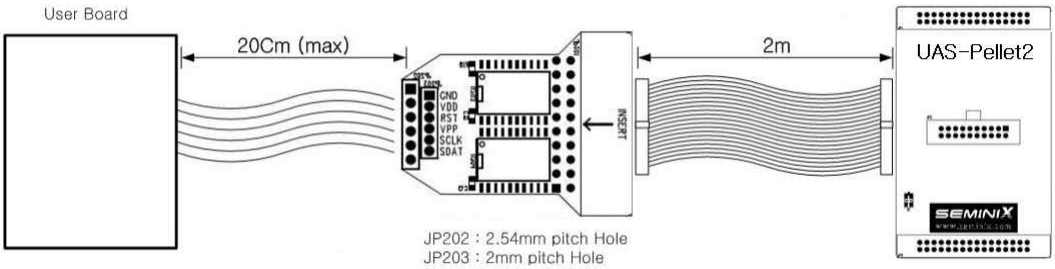


Figure 7.2 Connect UAS-Pellet2 Adapter Cable to MCU

Rsdat : 4.7K ohm
Rclk : 4.7K ohm
Rrst : 1K~4.7K ohm
Cvpp : 10nF
Cvdd : 10nF

2) Connect UAS-Pellet2 Adapter to 20CB6 Adapter-Board via connect cable.



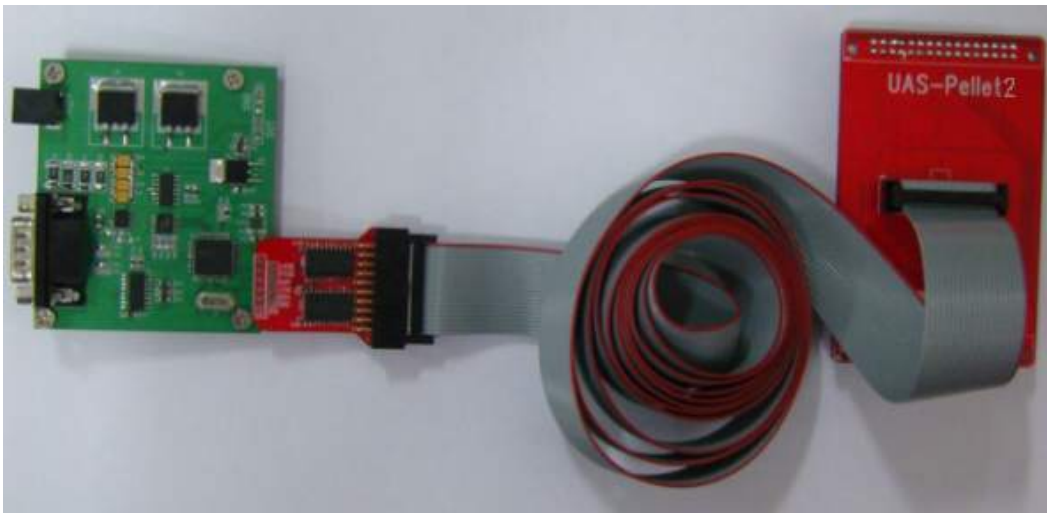


Figure 7.3 Connect UAS-Pellet2 Adapter cable to the User Board

3) Put a UAS-Pellet2 adapter cable in GW-uni2.

7.3 Caution

1) 2m of cable is the maximum length from UAS-Pellet2 socket to 20CB6-Adapter Board
2) 20cm of cable is the maximum length from Adapter-Board to Target-MCU.
3) if you program to MCU on board, you must use the UAS-Pellet2 Adapter Cable.
4) Please check components - Rsdat, Rclk, Rrst, Cvpp, Cvdd.

8. Electrical Characteristics

Parameter	Conditions		Min	Typ	Max	Unit
Current Consumption	Stand By		-	-130	-150	mA
	Operating		-	-	-300	
VDD	VPP 3.3 ~ 12.5		3.3		5.0	V
VPP	VDD 3.3 or 5.0		3.3		12.5	V
Idd	VDD = 3.3V	VPP=3.3V	-	-	500	mA
		VPP=12.5V	-	-	500	mA
	VDD = 5.0V	VPP=5.0V	-	-	500	mA
		VPP=12.5V	-	-	500	mA
Ipp	VDD = 3.3V	VPP=3.3V	-	-	25	mA
		VPP=12.5V	-	-	25	mA
	VDD = 5.0V	VPP=5.0V	-	-	25	mA
		VPP=12.5V	-	-	25	mA

9. Special Notice

1) Please make sure to check device information, End address, Vdd, Vpp, buffer check sum before programming.
2) Please check device checksum regularly for normal programming
3) Please check Vdd and Vpp regularly
4) Please contact SEMINIX when there is a problem of device programming
5) GW-uni2 is the socket programmer only so SEMINIX can't take the responsibility for all accidents after user's artificial manipulation without SEMINIX socket
6) SEMINIX doesn't take the responsibility of GW-uni2 from user's careless mistake.

10. Socket Adapter Selection Guide

SAMSUNG S3F9xxx series adapter socket table

Device Name	Package type	Adapter socket
S3F94C4 S3F94C8	16SOP 16TSOP 20DIP 20SOP 20SSOP	UAS-94C4/8-16SOP UAS-94C4/8-16TSOP UAS-94C4/8-20DIP UAS-94C4/8-20SOP UAS-94C4/8-20SSOP

SAMSUNG S3F8xxx series adapter socket table

Device Name	Package type	Adapter socket
S3F80Q5	24ELP	UAS-80Q5-24ELP
S3F80QB	44ELP	UAS-80QB-44ELP
S3F80P5	24SOP 24SDIP	UAS-80P5-24SOP UAS-80P5-24SDIP
S3F80P9	28SOP 32SOP 44QFP	UAS-80P9-28SOP UAS-80P9/B-32SOP UAS-80P9/B-44QFP
S3F80PB		
S3F8285 S3F8289 S3F828B	80QFP 80TQFP	UAS-8285/9/B-80QFP UAS-8285/9/B-80TQFP
S3F84B8	20DIP 20SOP	UAS-84B8-20DIP UAS-84B8-20SOP
S3F84I9	42SDIP 44QFP	UAS-84I9-42DIP UAS-84I9-44QFP

SAMSUNG S3F8XXX series adapter socket table

Device Name	Package type	Adapter socket
S3F8S15 S3F8S19	48QFP 48TQFP 48ELP	UAS-8S15/9-48QFP UAS-8S15/9-48TQFP UAS-8S15/9-48ELP
S3F8S24 S3F8S28	24SOP 24TSSOP 20DIP 20SOP 20SSOP	UAS-8S24/8-24SOP UAS-8S24/8-24TSOP UAS-8S24/8-20DIP UAS-8S24/8-20SOP UAS-8S24/8-20SSOP

SAMSUNG S3F8XXX series adapter socket table

Device Name	Package type	Adapter socket
S3F8S34 S3F8S35 S3F8S38 S3F8S39	32SOP 32SDIP 32ELP	UAS-8S34/5/8/9-32SOP UAS-8S34/5/8/9-32SDIP UAS-8S34/5/8/9-32ELP
S3F8S45	44QFP	UAS-8S45-44QFP
S3F8S5A	44QFP	UAS-8S5A-44QFP
S3F8S6B	64QFP 64SDIP	UAS-8S6B-64QFP UAS-8S6B-64SDIP
S3F8S7B	80QFP 80TQFP	UAS-8S7B-80QFP UAS-8S7B-80TQFP
S3F8S8B	100QFP 100TQFP	UAS-8S8B-100QFP UAS-8S8B-100TQFP

SAMSUNG On-board Chip/COB type adapter cable

Device Name	Package type	Adapter socket
In-System Programing	Samsung Standard	UAS-Pellet2
COB (Chip On Board)	Pellet(Die form)	UAS-Pellet2

SAMSUNG CalmRISC16 (S3FCXXX) series adapter socket table

Device Name	Package type	Adapter socket
S3FC40D	100QFP 100TQFP 128QFP	UAS-C40D-100QFP UAS-C40D-100TQFP UAS-C40D-128QFP

SAMSUNG ARM7 series adapter socket table

Device Name	Package type	Adapter socket
S3F4A0K	144LQFP	UAS-4A0K-144LQFP
S3F4A1H	100TQFP	UAS-FA1H-100TQFP
S3F4A2F	80TQFP	UAS-4A2F-80TQFP
S3F401F	100QFP	UAS-401F-100QFP