

ChroZen GC (S.N number: SNGC-202106-02)

## How to update firmware of UPC inlet & detector board of ChroZen GC

Update date: June.18<sup>th</sup>, 2021

Our last GC APC system for YL6100 and YL6500 GC has one PCB (we call as APC board) to control the flow rate (pressure) of inlet and detector, and same firmware file of inlet and detector APC module is uploaded to APC board. However, ChroZen GC UPC system controls the flow rate (pressure) with respective UPC inlet and detector board, so firmware update procedure is necessary for inlet and detector board individually. UPC inlet board is installed on each inlet UPC module and the firmware update is necessary for each inlet board if there are more than 2 inlets installed on GC. UPC Detector board is connected with all detector UPC modules, so firmware update procedure is necessary once. The latest firmware version of inlet is 041 (named as *GC\_UPC\_Inlet\_Ver041.stp*) and detector is 115 (named as *GC\_UPC\_DET\_V115.stp*) dated on *June 18, 2021*. This service note describes how to update the firmware file to inlet and detector UPC board, and the latest firmware version will be subject to change and the firmware file will be sent via email or uploaded to our server as requested.



Figure 1. UPC Inlet Board for ChroZen GC (P/N 6701538110)



Figure 2. UPC Detector Board for ChroZen GC (P/N 6701538120)

## Service Note



## I. FlashPro Software Download

1. Download the installation file by clicking on the below 'DOWNLOAD' button.
2. Unzip a compressed file.
3. Then, two installation files appear.



*Program\_Debug\_v11.9\_win.exe*  
*Program\_Debug\_v11.9\_SP4\_Win.exe*

## II. FlashPro Software Installation

1. Run the 'Program\_Debug\_v11.9\_win.exe' first to start the installation.
2. Complete the installation in order as shown in Figure 3.

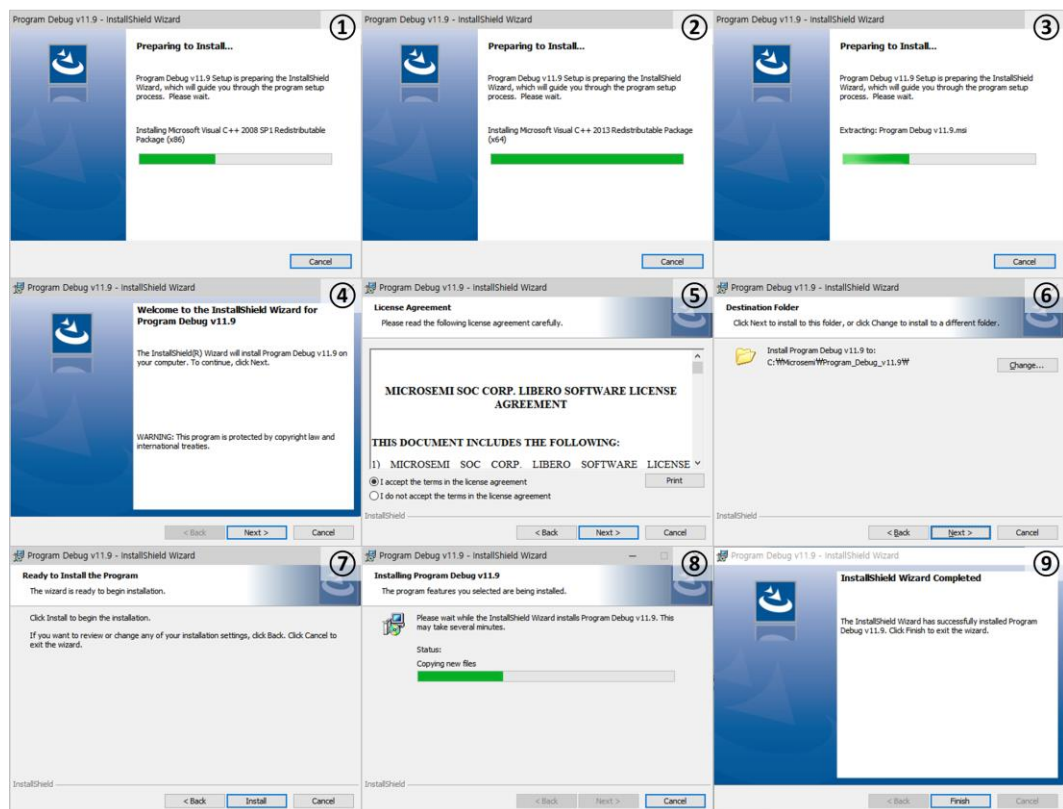


Figure 3. Installation procedure of 'Program\_Debug\_V11.9\_win.exe' file

3. After installation, you can see the two icons are created (see Figure 4).

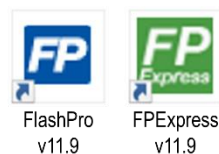


Figure 4. Installed Programs

4. Open the 'Program\_Debug\_v11.9\_SP4\_Win.exe'.
5. Complete the installation in order as shown in Figure 5.

## Service Note

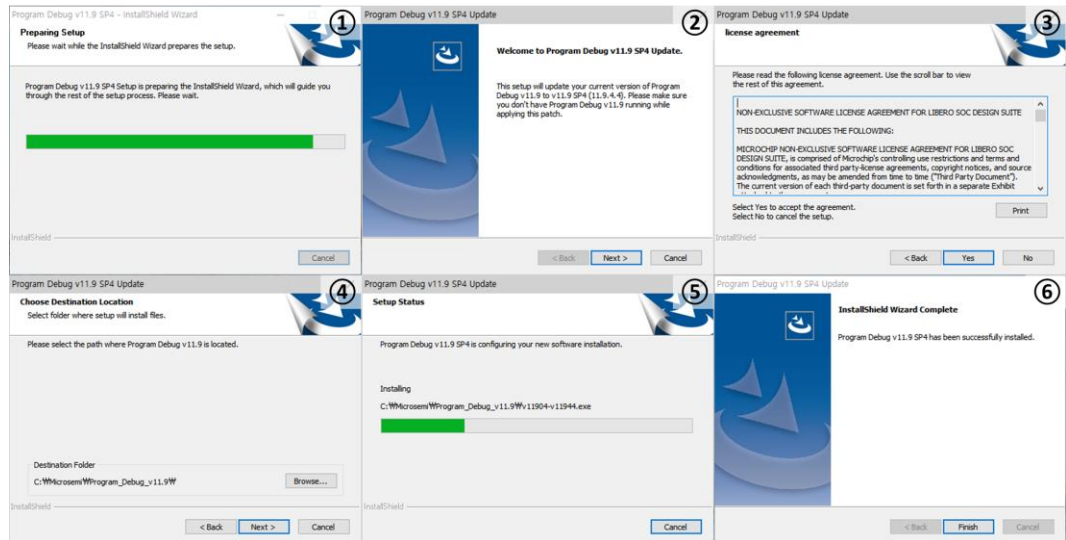


Figure 5. Installation procedure of 'Program\_Devug\_v11.9\_SP4\_Win.exe' file

### III. How to update UPC Inlet (or Detector) Board

1. Turn on the ChroZen GC and wait until the initialization is completed.
2. Open the 'FlashPro v11.9' on PC connected with ChroZen GC (see Figure 6).

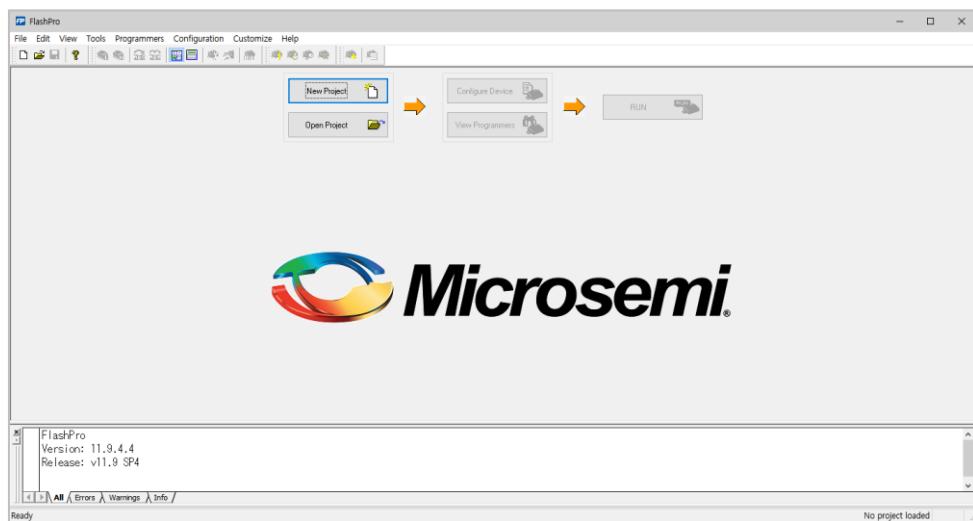


Figure 6. Open the FlashPro

3. Loosen the three screws on the top side of GC and two screw on the rear side of GC to access UPC inlet board as shown in Figure 7.



Figure 7. How to access UPC inlet board

\* When you update UPC detector board, refer to the Figure 8.

## Service Note

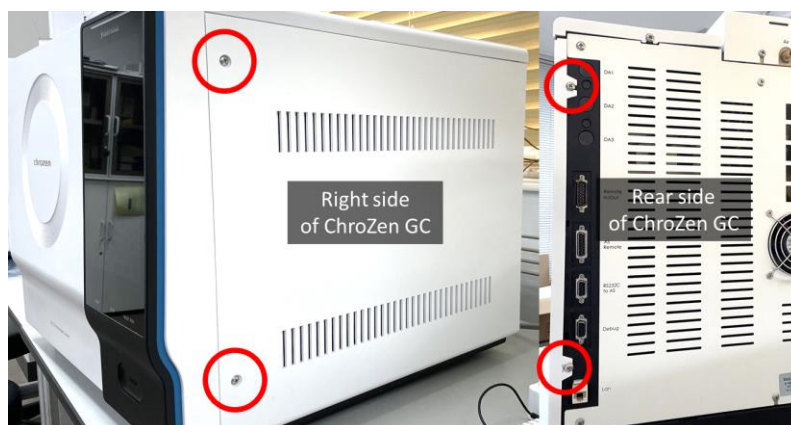


Figure 8. How to access UPC detector board

4. Open the top cover then you can find the inlet board (see Figure 9).

\* There is no difference between a green board (Figure 1) and a blue board (Figure 9).

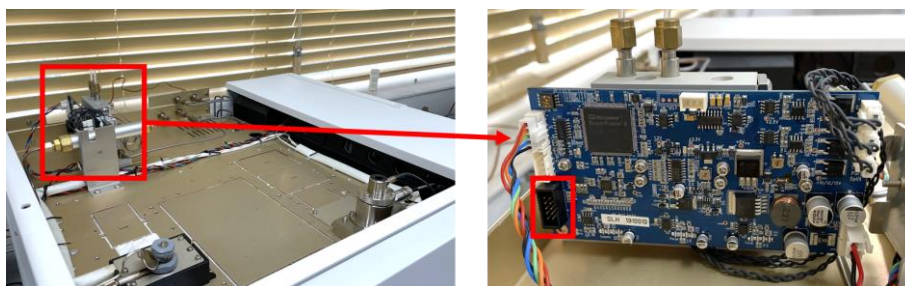


Figure 9. Where the FlashPro4 cable is connected to UPC inlet board

\* When you update UPC detector board, refer to the Figure 10.

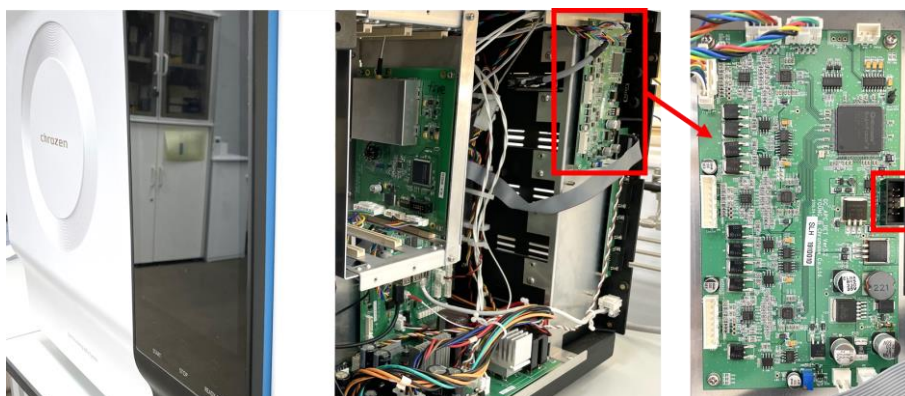


Figure 10. Where the FlashPro4 cable is connected to UPC detector board

5. Connect the 'FlashPro4' cable (see Figure 11) to UPC inlet (or detector) board indicated in Figure 9, 10.

\* We don't supply it at the moment, so purchase the 'FlashPro4' cable from your local.



Figure 11. FlashPro4 Cable



## Service Note



6. Go to '*FlashPro*' program and click on the [New Project] button indicated ① in Figure 12.
7. Then 'New Project' window appears.
8. Enter the ② project name and specify the pathway where the project will be saved by pressing the ③ [Browse] button.
9. Select the 'Programming mode' to ④ [Single device] and then press [Ok] button.

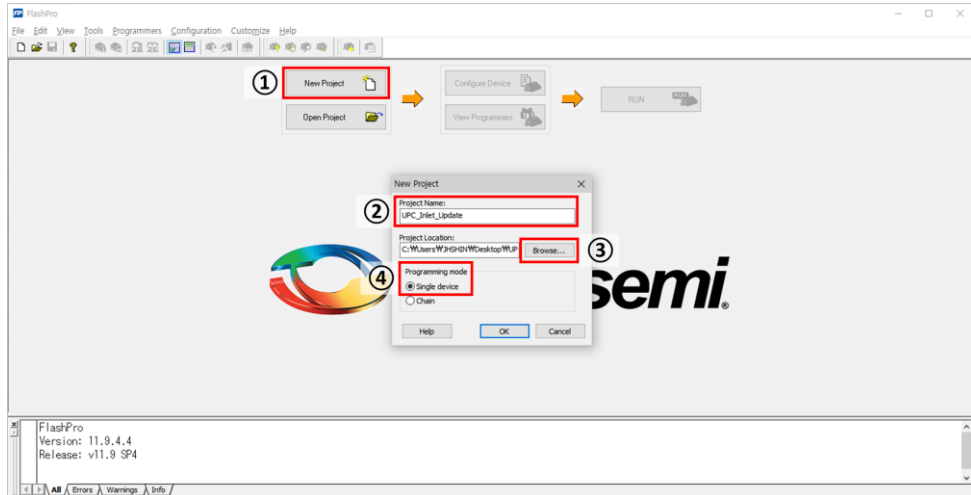


Figure 12. How to create a new project file

10. Click on the [Open Project] button indicated ① in Figure 13, and open the ② project file you created (*FlashPro* Project File: \*.pro).

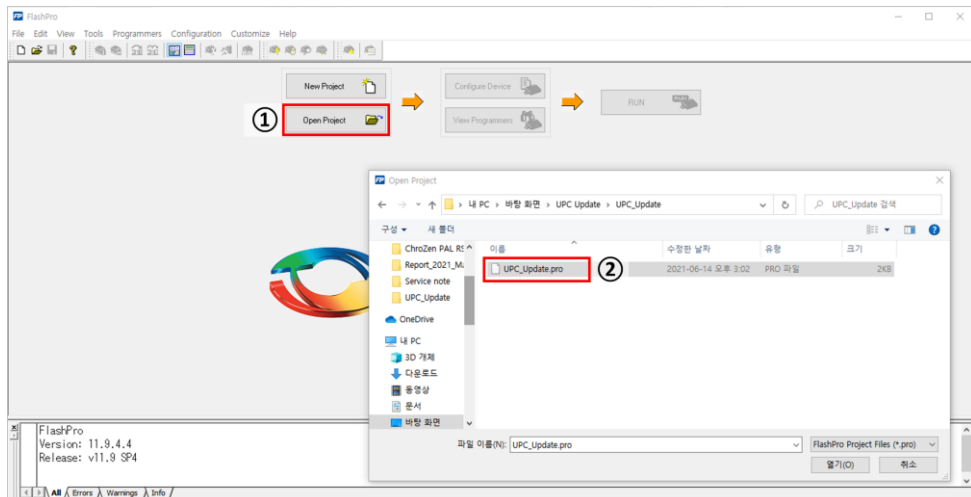


Figure 13. How to open the new project file

11. Press [Configure Device] button indicated ① in Figure 14, then, at the bottom of *FlashPro* window, a script is created to load the update file.
12. Click on the ② [Browse] button indicated in Figure 14, and ③ open the latest update file (update file: \*.stp).
13. Check the file name indicated ④ in Figure 14 to see if the correct update file has been uploaded.

\* Latest update file is linked in 'Supplement 1' on Page 7.

\*\* Make sure that the update file you are uploading is for the inlet or detector.

## Service Note

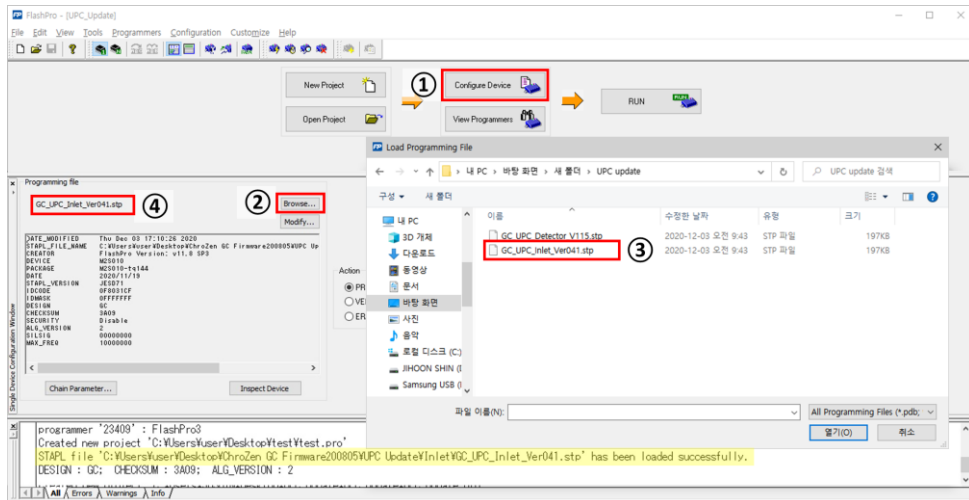


Figure 14. How to upload the latest update file

\* When the latest update file is uploaded, the [Run] button changes [Program]. And what update file has been uploaded appears in the below window (yellow indicated in Figure 14).

14. Press [Program] button indicated ① in Figure 15 to start the UPC inlet board update.
15. Then, you can see the update status on the 'Programmer Status' indicated ② in Figure 15.
16. When UPC inlet board update is successfully completed, 'RUN PASSED' message appears indicated ① in Figure 16, and the 'o - o - o - o - o - o' message appears at the bottom of the *FlashPro* window indicated ② in Figure 16.

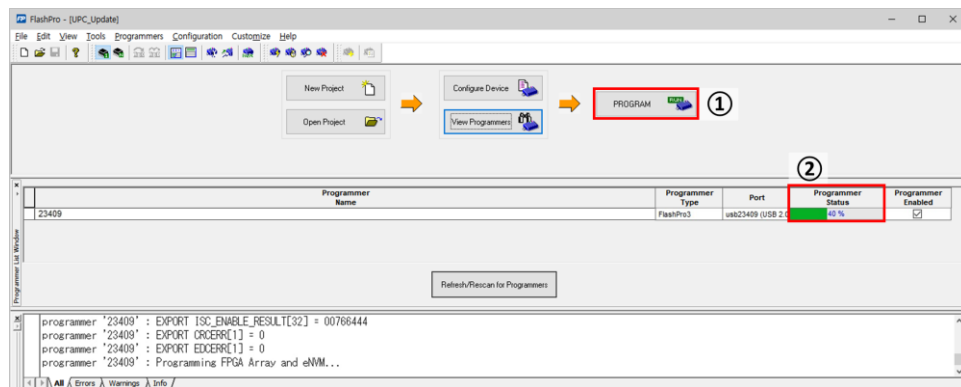


Figure 15. How to start UPC inlet/detector board update

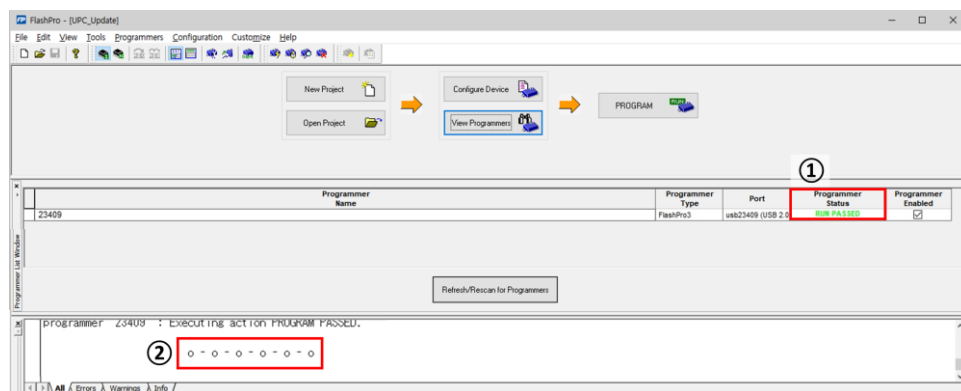


Figure 16. Update completed successfully

## Service Note



### Supplement 1.

#### Download the latest version of the update file.

Click the below DOWNLOAD button to download the latest version update file of UPC inlet and detector boards.

##### Latest update file for UPC inlet board

[File name: *GC\_UPC\_Inlet\_Ver041.stp*]



##### Latest update file for UPC detector board

[File name: *GC\_UPC\_DET\_V115.stp*]



## Service Note



## Supplement 2.

## How to download the 'FlashPro' software when the button is not available?

If you cannot download the 'FlashPro' via the DOWNLOAD button on page 2 of this service note, find the installation file on Google in the order below.

1. Search for 'Flash Pro' on Google.
2. Enter the 'Microsemi' website shown below.  
<https://www.microsemi.com/product-directory/1636-fpga-soc>
3. Sign up for the new account and then login.
4. Go to the 'Programming and Debug' menu on the left side of the web page.  
<https://www.microsemi.com/product-directory/dev-tools/5592-programming-and-debug#overview>
5. Press the 'Download' button in the center of the web page.  
<https://www.microsemi.com/product-directory/dev-tools/5592-programming-and-debug#downloads>
6. Download the two *FlashPro* installation files shown in the figure below.
  - 1) Programming and Debug v11.9 (Include *FlashPro* v11.9) for windows (08/17/18)  
[https://www.microsemi.com/document-portal/doc\\_download/1243566-download-programming-and-debug-v11-9-for-windows](https://www.microsemi.com/document-portal/doc_download/1243566-download-programming-and-debug-v11-9-for-windows)
  - 2) Programming and Debug v11.9 SP4 (Includes *FlashPro* v11.9) (06/11/19)  
[https://www.microsemi.com/document-portal/doc\\_download/1244231-download-programming-and-debug-v11-9-sp4-for-windows](https://www.microsemi.com/document-portal/doc_download/1244231-download-programming-and-debug-v11-9-sp4-for-windows)

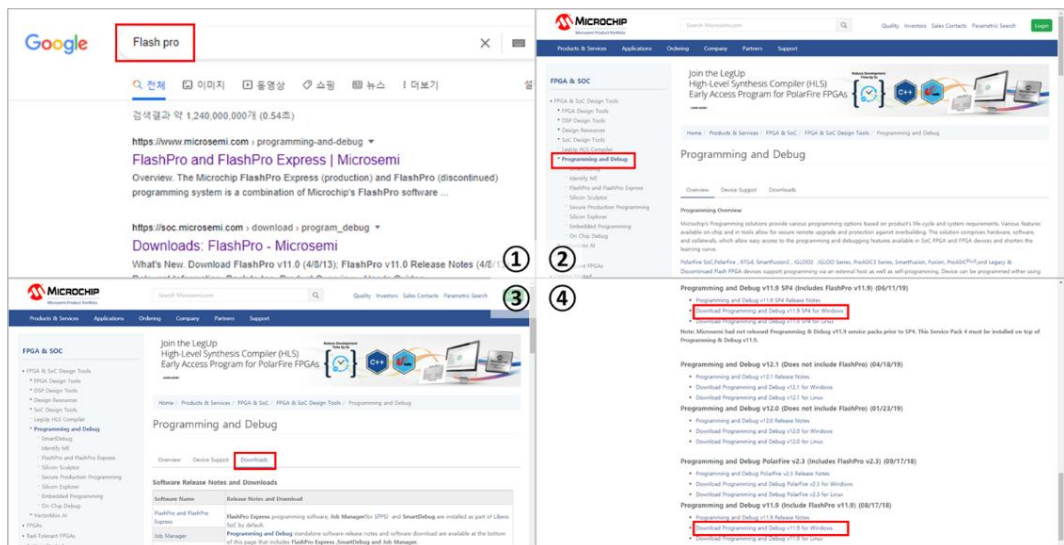


Figure 17. How to download 'Flash Pro' through Google Search