

User Manual



APM32 PROG

Version: V1.0.0.5

1 Overview

Apm32-prog is a development tool for APM32 series chips. It works with APM32 PROG PC software to complete the software programming of MCU chips.

2 Features

Support offline and online programming.

Support JTAG and SWD mode for PC programming.

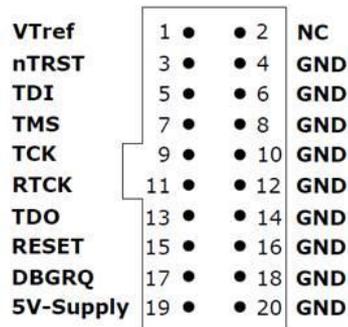
Support WIN7/8/10 free drive.

Input voltage 5v, input current >= 500Ma

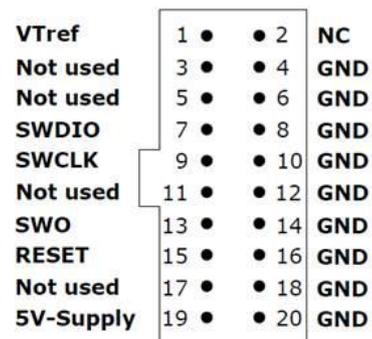
Power interface: USB

3 Interface

ARM JTAG Protocol



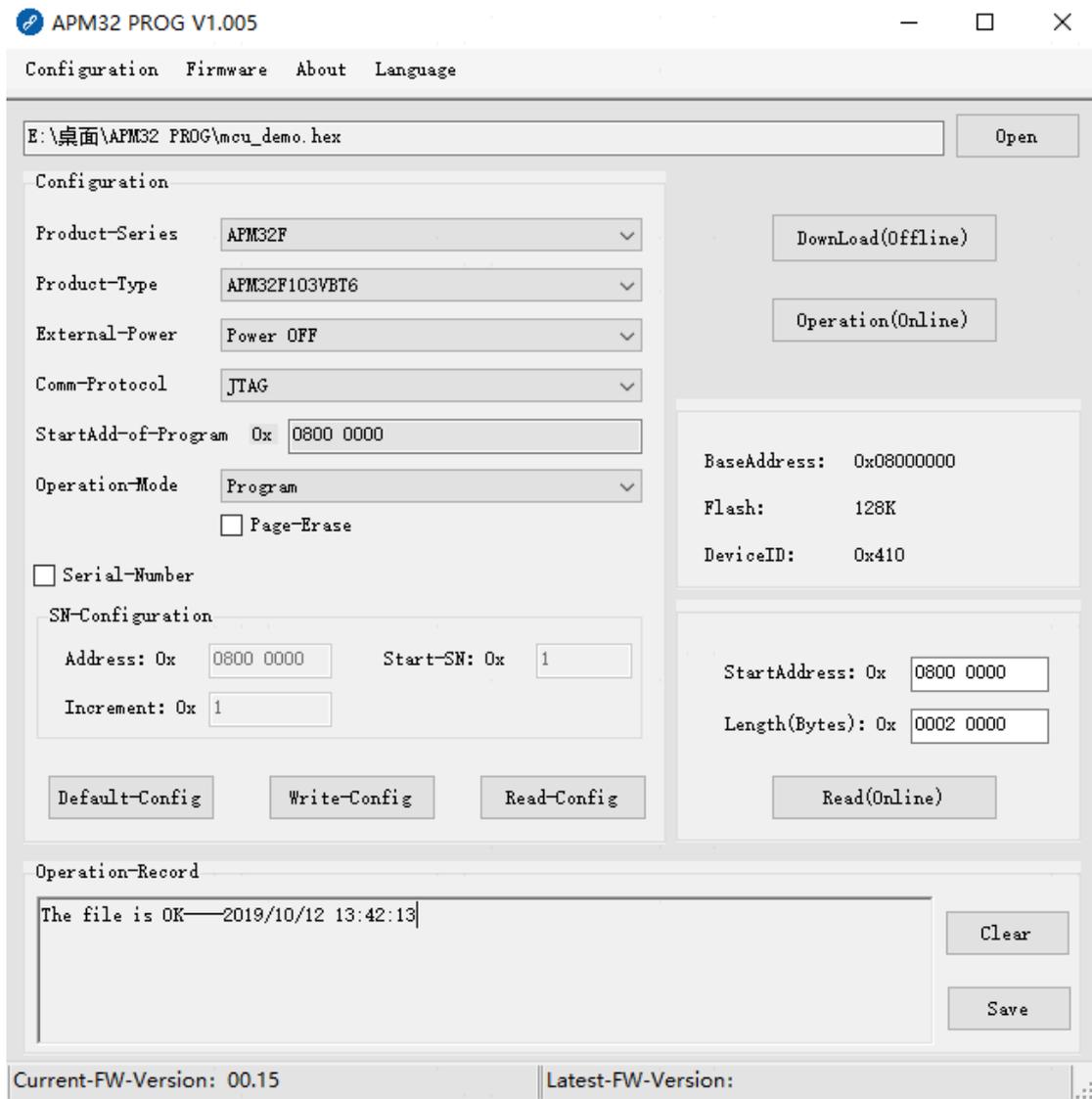
ARM SWD Protocol



4 Operations

4.1 PC Interface

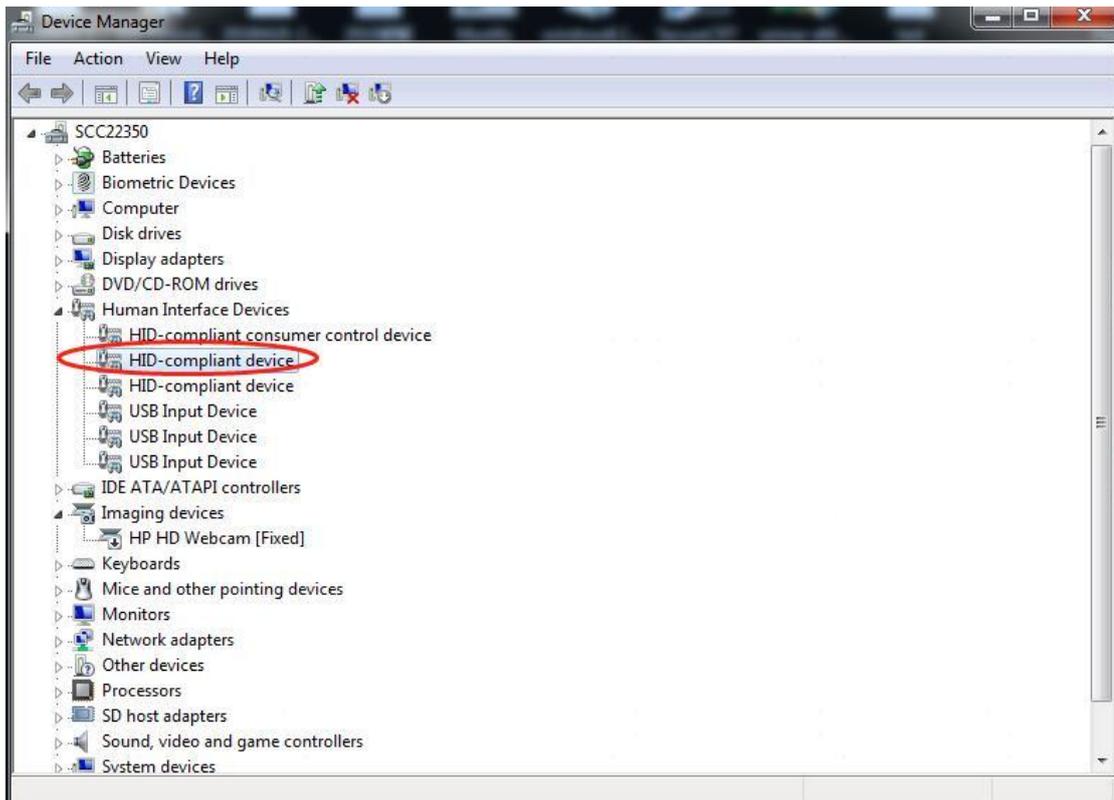
Picture 1 PC Interface



4.2 Programmer Connection

As the Programmer is connected to the computer via USB correctly (power supply: 5V/500mA), the device in red circle will display on "Device manager" in computer.

Picture 2 Programmer Connection

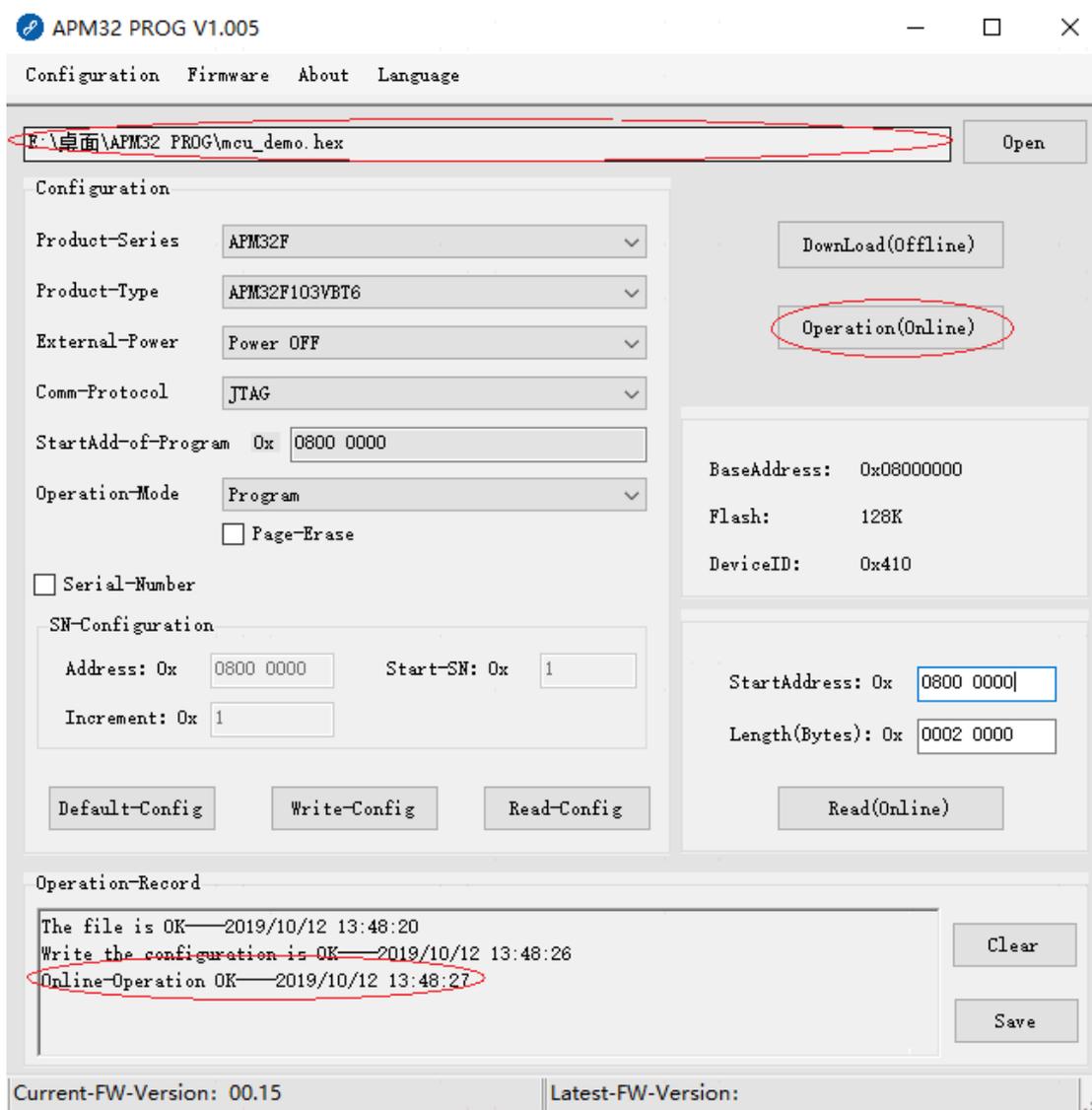


4.3 Download Data

4.3.1 Online Download

You can operate on MCU through the optional modes in "Parameter configuration", or clicking "Open file" to select documents with ".bin" or ".hex".

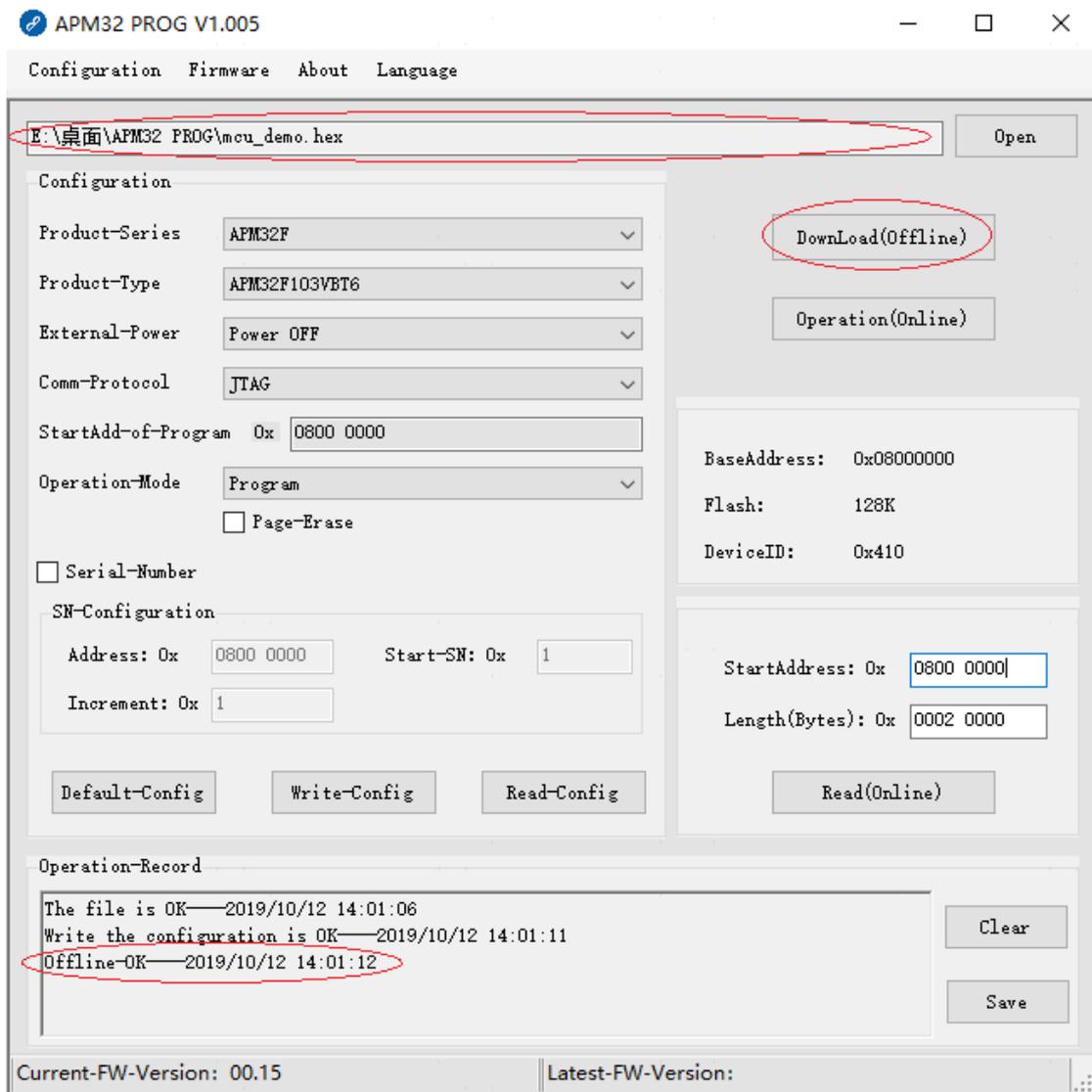
Picture 3 Online Operation on MCU



4.3.2 Offline Download

Click "Open File" to write the docs with suffix ".bin" or ".hex" into the Programmer.

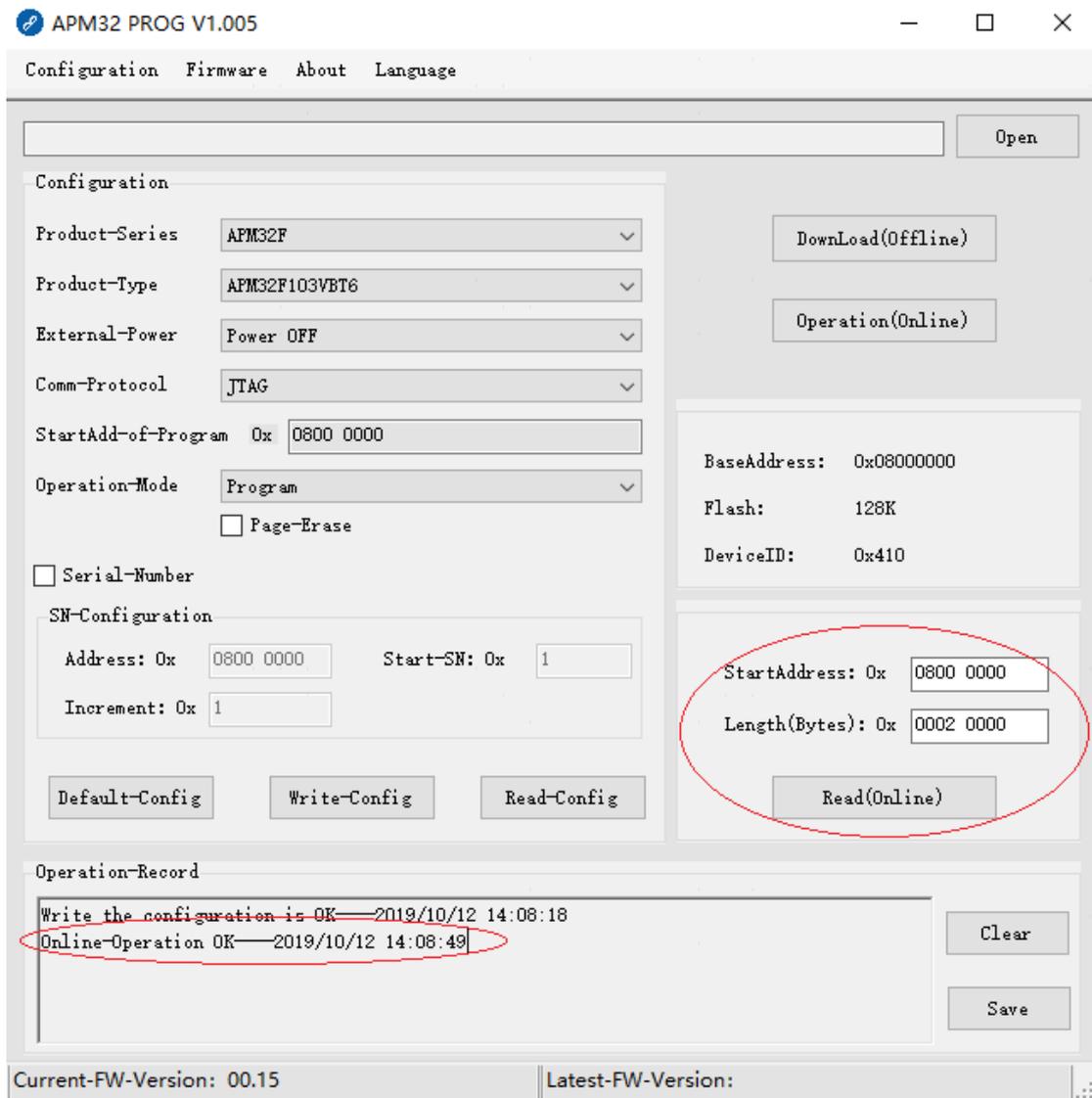
Picture 4 Offline Programming



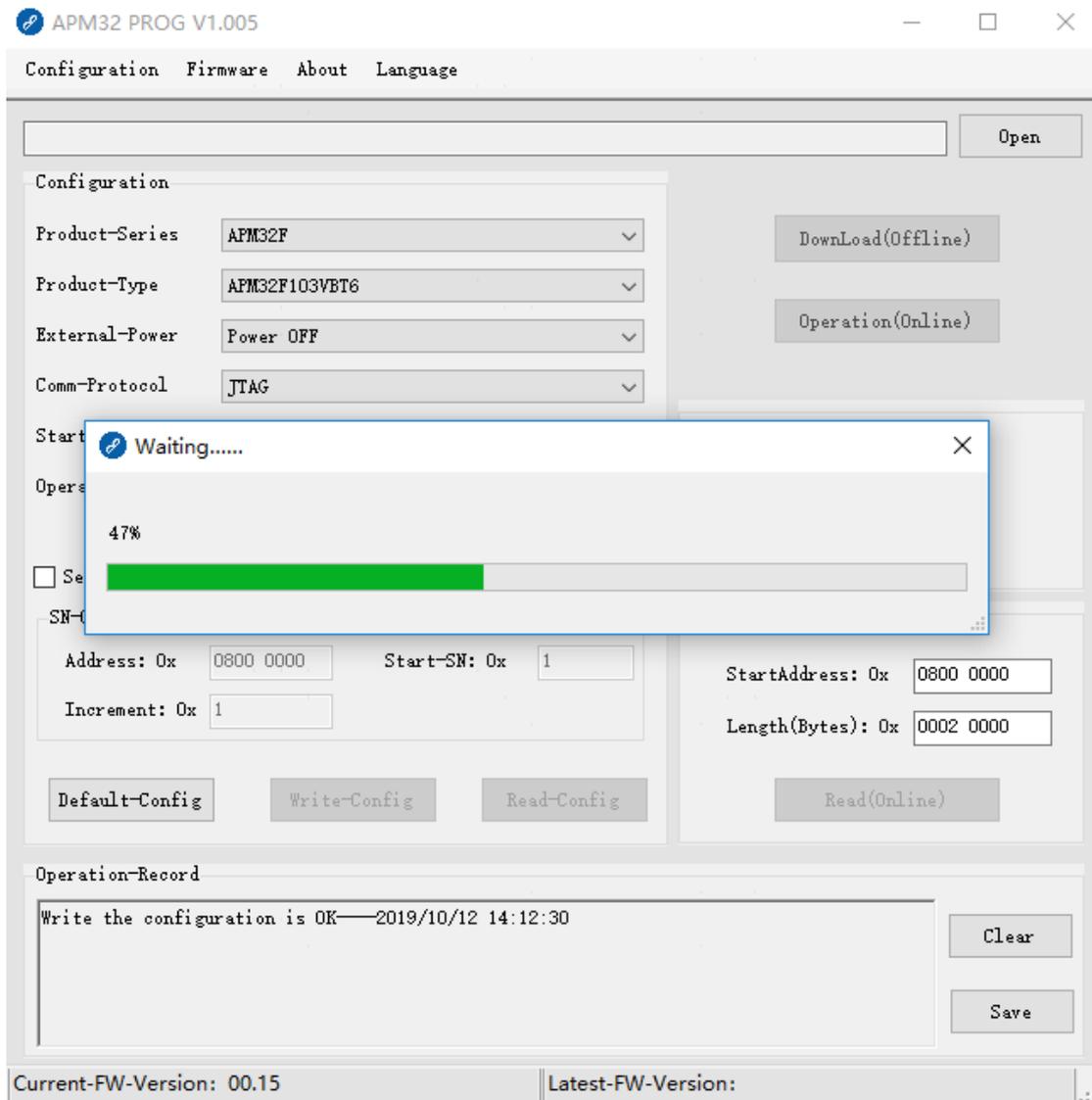
4.4 Read Target MCU Online

You can read the MCU data by setting the “Start address” and “Bytes”, which will be shown on the pop-up dialog.

Picture 5 Read Target MCU Online

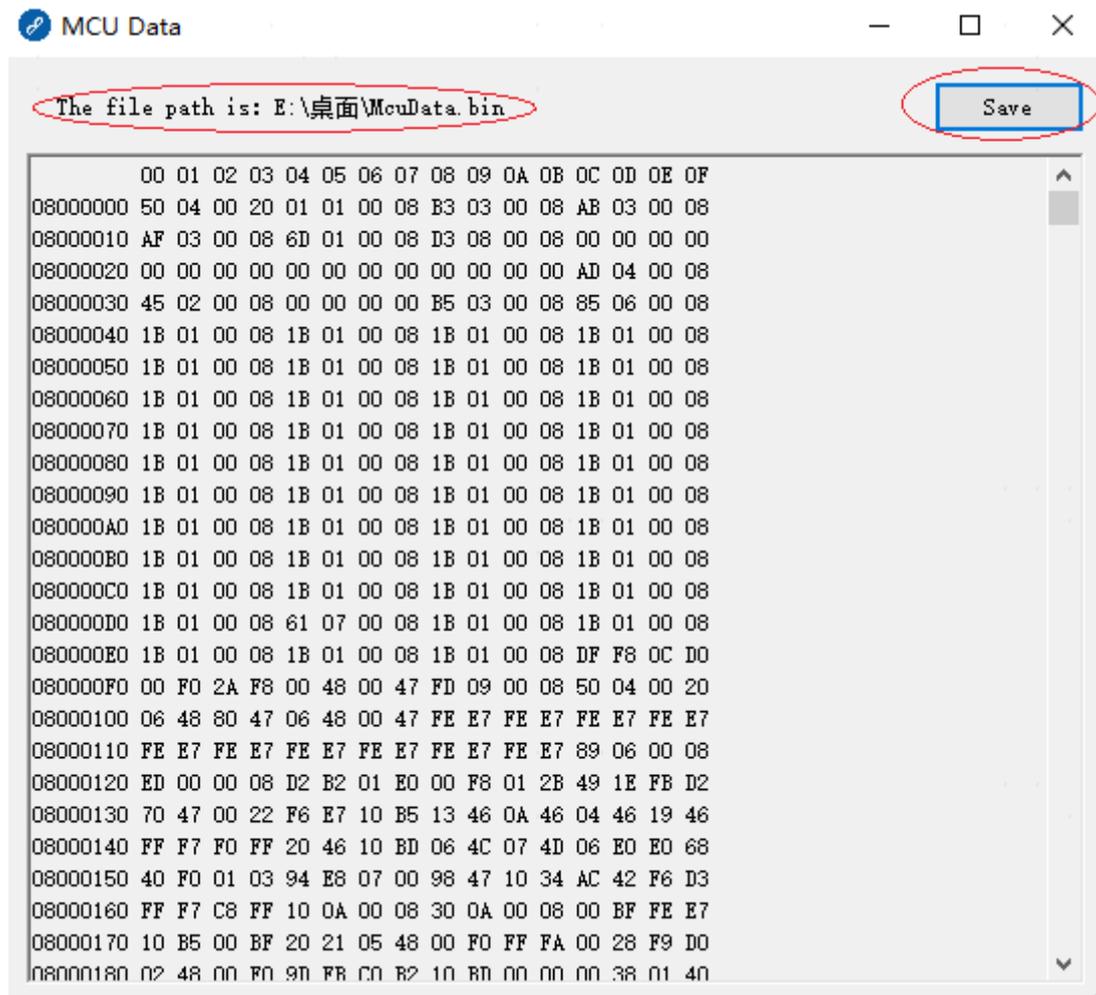


Picture 6 Reading Status



Click "Save" to save the read data.

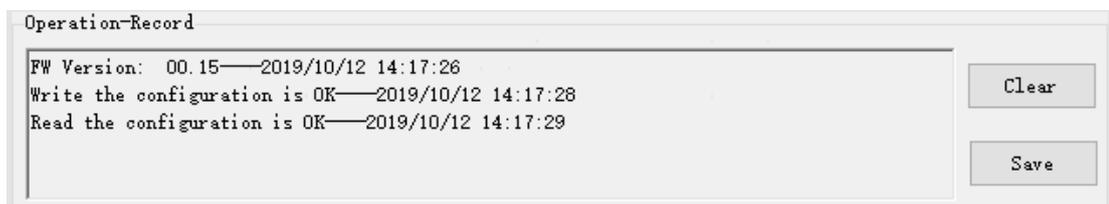
Picture 7 Save the Read Data



4.5 Operation Log

- The operation movements and its results will be shown in the text box of operation log.
- Click "Clear" to delete the content in text box.
- Click "Save" to store the content in text box.

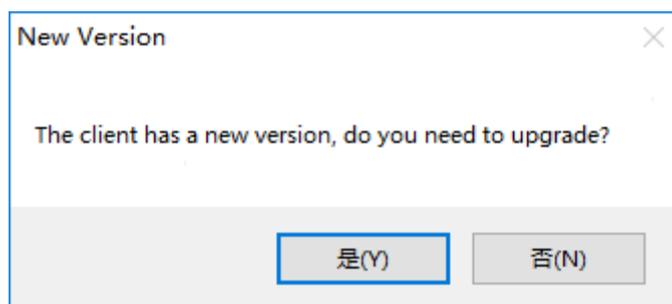
Picture 8 Operation Log



4.6 Client Update

Every time you start the client program, it will automatically detect the new version and display below notice if it is available:

Picture 9 Client Update Prompt

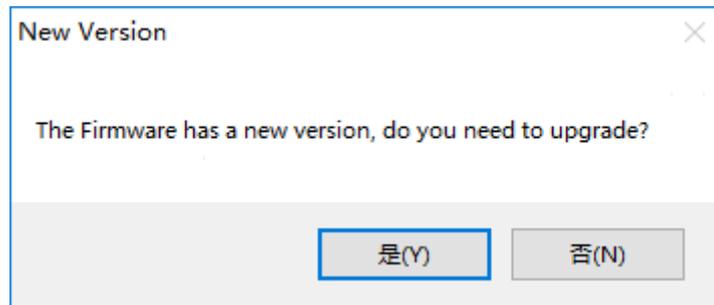


- Click "Yes" to automatically download the latest version in server and open the new client as finished.
- Click "No" to give up update and maintain in current version.
- Note: The computer should be connected to internet, which enables the automatic update in the client.

4.7 Firmware Update

As mentioned in 4.5 above, after the client update, each time you open the client program or plug/unplug the programmer, the client will determine whether a new version of firmware needs to be updated. If it is available, the client will be prompted as follows:

Picture 10 Firmware Update Prompt



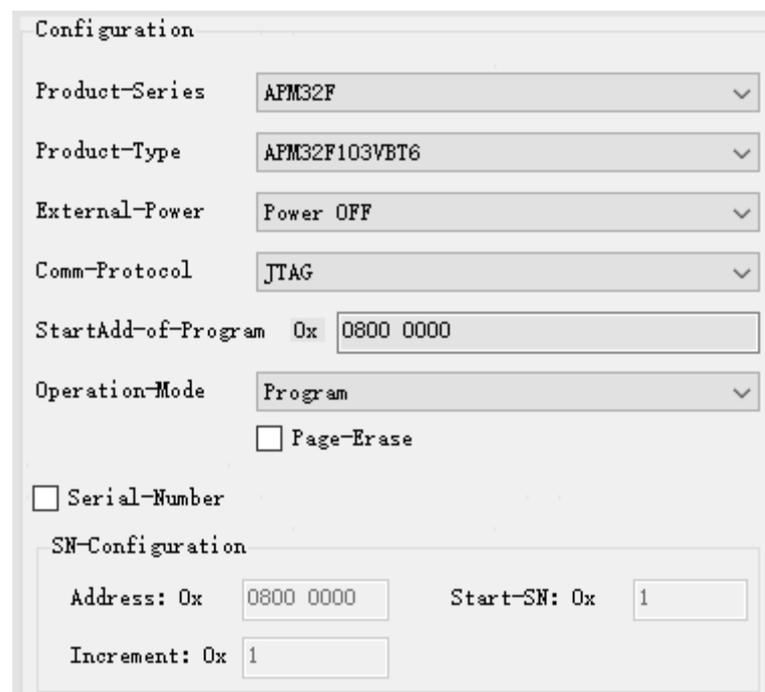
- Click "Yes" to update the programmer firmware to the latest version of the programmer stored in the current server.
- Click "No" to give up update and maintain in current version.

Note: The computer should be connected to internet, which enables the automatic update in firmware.

5 Configuration

5.1 Description

Picture 11 Configuration Information



Configuration	
Product-Series	APM32F
Product-Type	APM32F103VBT6
External-Power	Power OFF
Comm-Protocol	JTAG
StartAdd-of-Program	0x 0800 0000
Operation-Mode	Program
	<input type="checkbox"/> Page-Erase
	<input type="checkbox"/> Serial-Number
SN-Configuration	
Address: 0x	0800 0000
Start-SN: 0x	1
Increment: 0x	1

5.1.1 Configuration File (Menu)

Click "Configuration File" in menu, there will be four options shown in drop-down menu: "Load", "Save", "Save as...", and "Quit"

- "Load": Open the selection dialog box, you can load the saved configuration file with a suffix ".ini".
- "Save": Save the configuration file in default path.
- "Save as...": Save the configuration file in indicated name and path in the pop-up dialog.
- "Quit": Withdraw from the client interface and close its program.

Note: The configuration file can't be manually amended, but can only be set through the options in client interface. It can only save the configuration file through "Save" or "Save as...", otherwise it may cause error to return to default settings.

5.1.2 "Return to default settings" Button

The parameter configuration in client interface returns to default settings.

5.1.3 "Write configuration information" Button

As the Programmer is connected to the computer via USB cable, the parameter configuration can be selected and sent to the Programmer from client interface.

5.1.4 "Read configuration information" Button

As the Programmer is connected to the computer via USB cable correctly, its configuration information is gained and updated in client interface.

5.2 Firmware

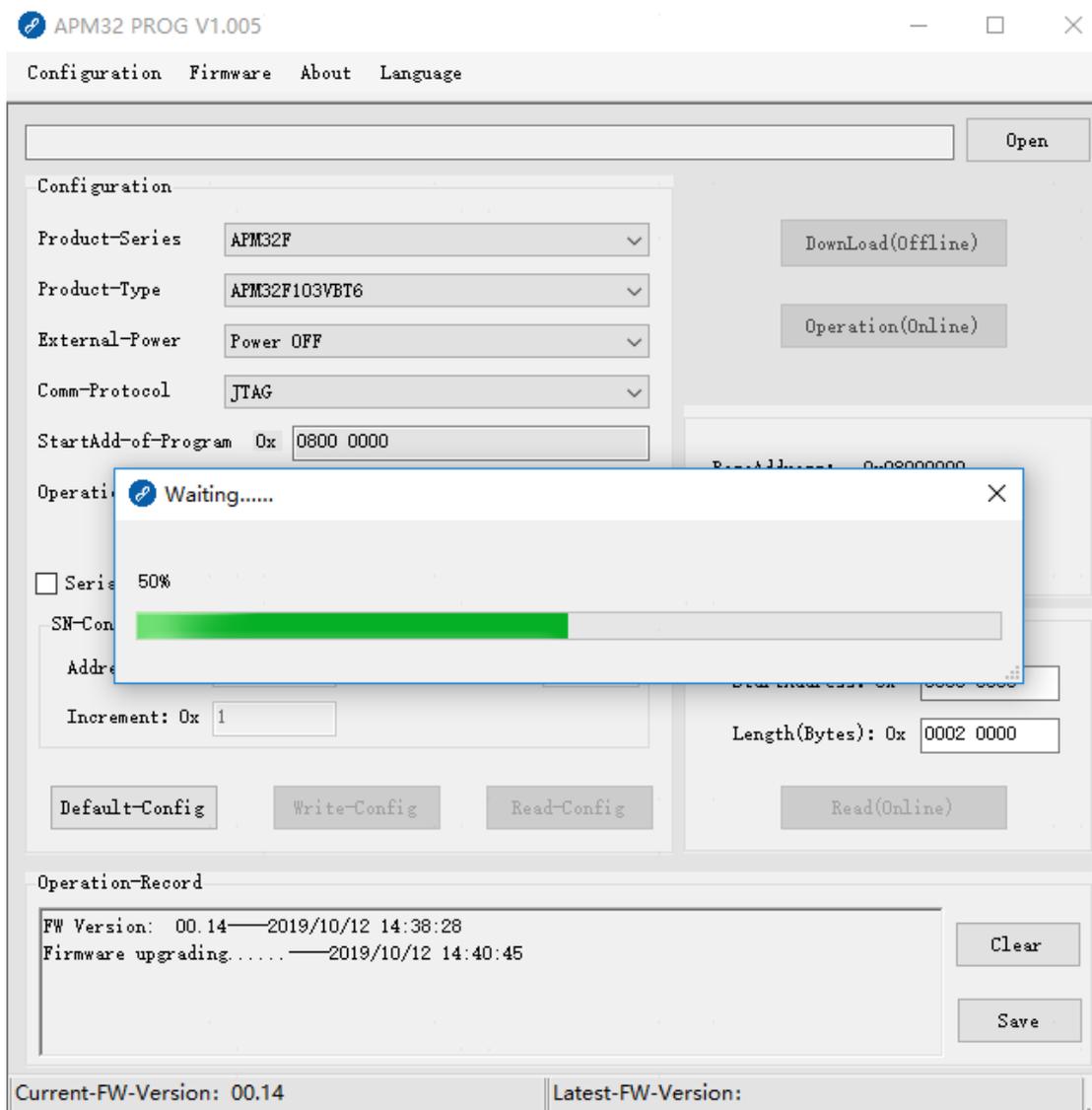
5.2.1 Firmware (Menu)

Click "Firmware" in menu, there will be two options: "Firmware version" and "Firmware update" in drop-down menu.

- "Firmware version": Firmware version no. of the Programmer is gained as connecting to the computer via USB correctly.

- "Firmware update": Update the firmware of the Programmer after being connected to the computer via USB correctly.

Picture 12 Firmware Updating



5.2.2 Firmware Version (Status)

Picture 13 Firmware Version Status Bar



- “Current firmware version” is that read from the connected Programmer.
- “Latest firmware version” is the latest version no. of Programmer saved in server.

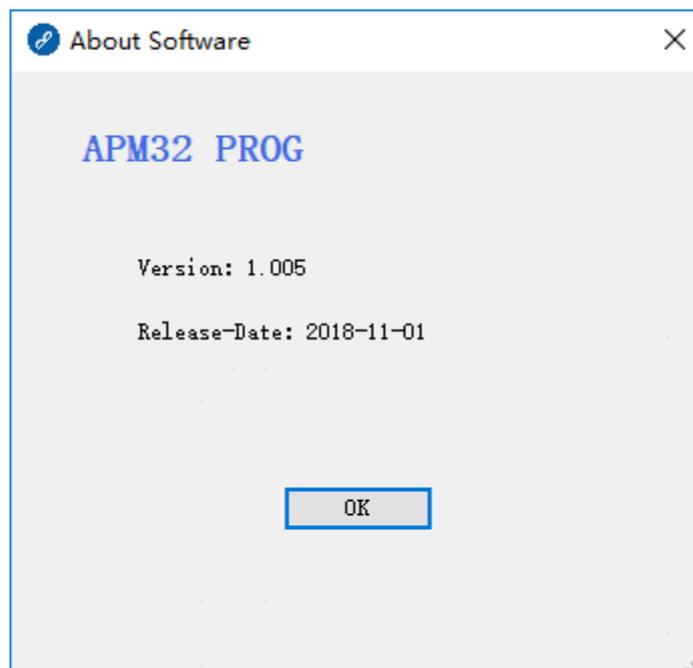
Note: “The current/latest firmware version” in above picture is only for example.

5.3 About (Menu)

Click “About” in menu, and there will be two options: “Software version” and “Help” in drop-down menu:

- “Software version”: Display information of client side

Picture 14 Software Version



- “Help”: Display APM32 PROG user manual.

6 Version History

Date	Version	Changes
2019.x.x	1.0.0.1	New
2019.x.x	1.0.0.2	
2019.x.x	1.0.0.3	
2019.x.x	1.0.0.4	
2019.9.30	1.0.0.5	Added interface description; Changed the typesetting sequence

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