

UPS for RPi 4B firmware update tutorial

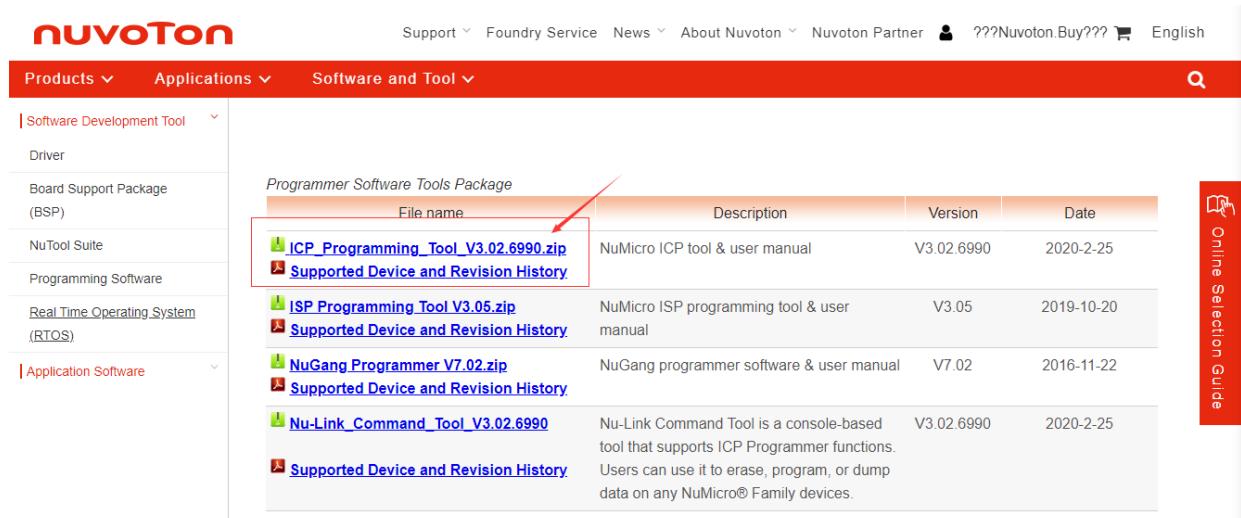
Version : V1.0

Editor: Jacky.Li

Date:2020.03.27

Environment Preparation:

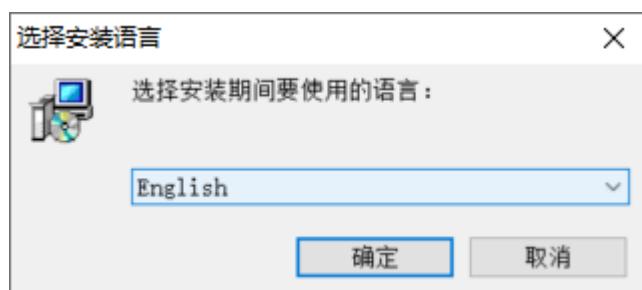
1. Download Nuvoton NuMicro ICP Programming Tool from official website:
<http://www.nuvoton.com.cn/tool-and-software/software-development-tool/programmer/?index=0>
ICP_Programming_TOOL_V3.02.6990.zip



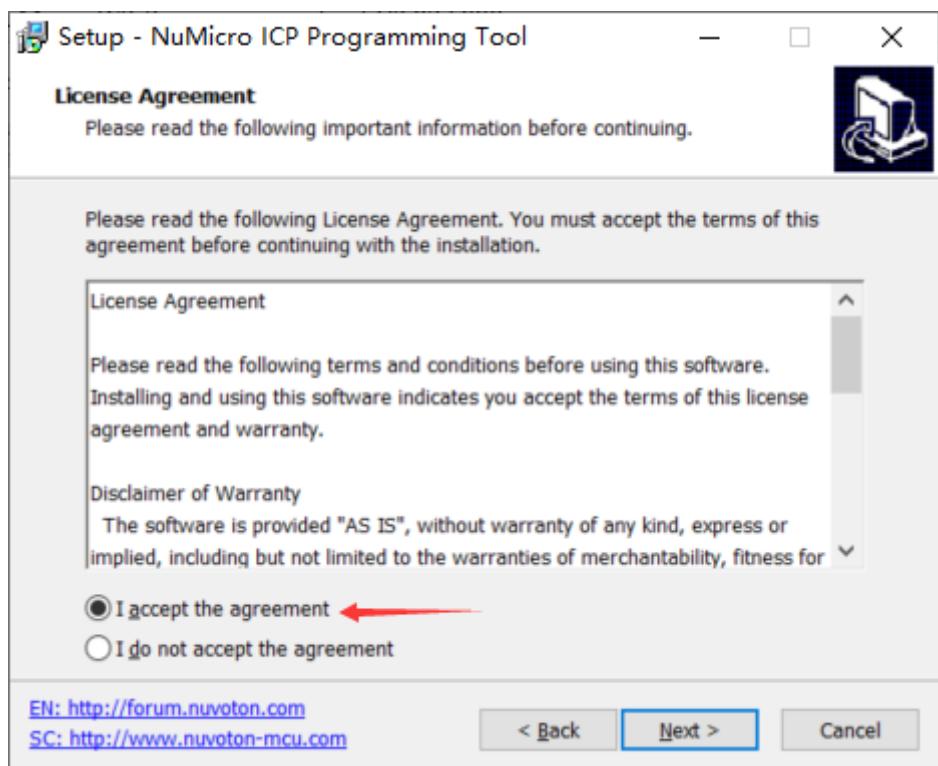
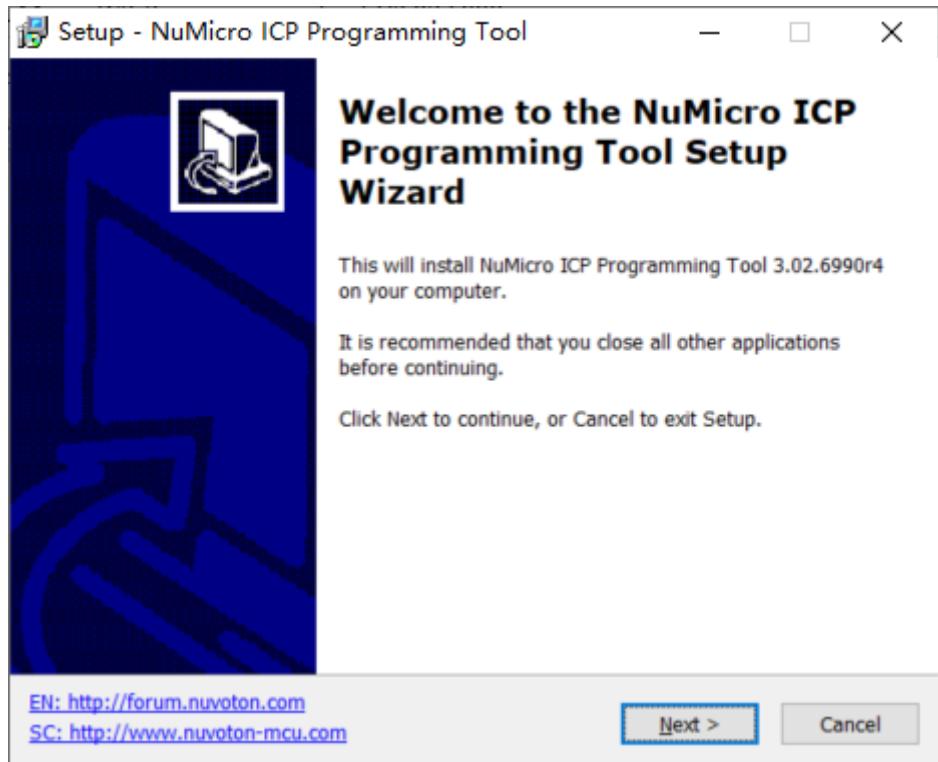
The screenshot shows the Nuvoton website's software download section. On the left, there's a sidebar with categories like Software Development Tool (Driver, Board Support Package (BSP), NuTool Suite, Programming Software, Real Time Operating System (RTOS)) and Application Software. The main content area is titled 'Programmer Software Tools Package' and lists several tools. The first item, 'ICP_Programming_Tool_V3.02.6990.zip', is highlighted with a red box and a red arrow pointing to it. Below the file name, there are two blue links: 'Supported Device and Revision History'. To the right of the table, there's a vertical red bar with the text 'Online Selection Guide'.

File name	Description	Version	Date
ICP_Programming_Tool_V3.02.6990.zip	NuMicro ICP tool & user manual	V3.02.6990	2020-2-25
ISP Programming Tool V3.05.zip	NuMicro ISP programming tool & user manual	V3.05	2019-10-20
NuGang Programmer V7.02.zip	NuGang programmer software & user manual	V7.02	2016-11-22
Nu-Link_Command_Tool_V3.02.6990	Nu-Link Command Tool is a console-based tool that supports ICP Programmer functions. Users can use it to erase, program, or dump data on any NuMicro® Family devices.	V3.02.6990	2020-2-25

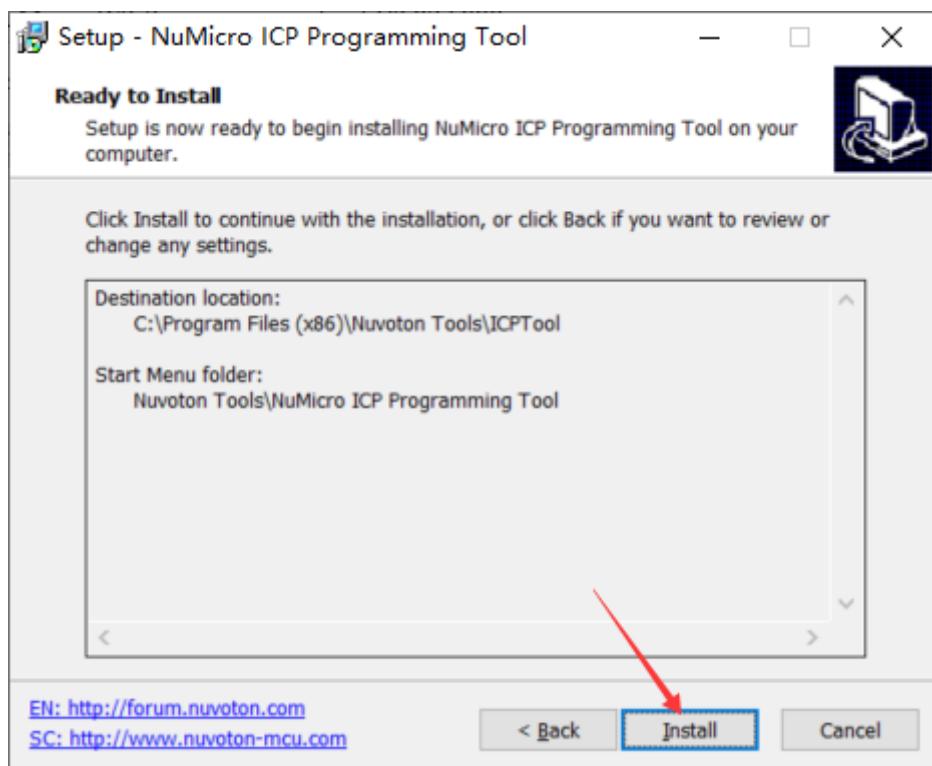
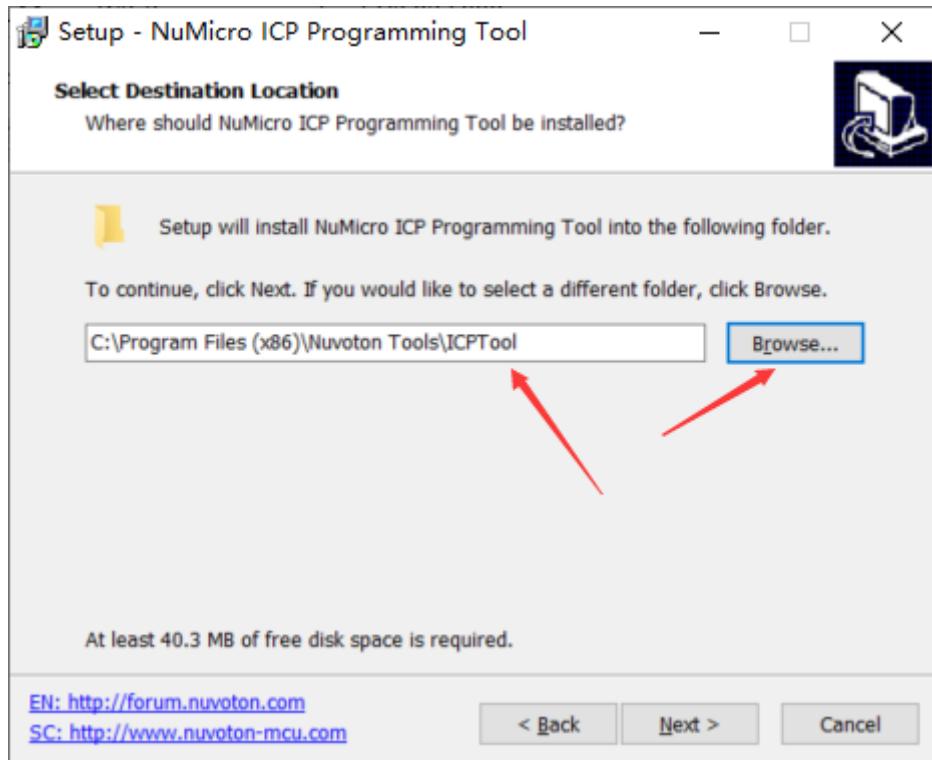
2. Unzip the file and Double click it to install it.



select language: English



select installation location:

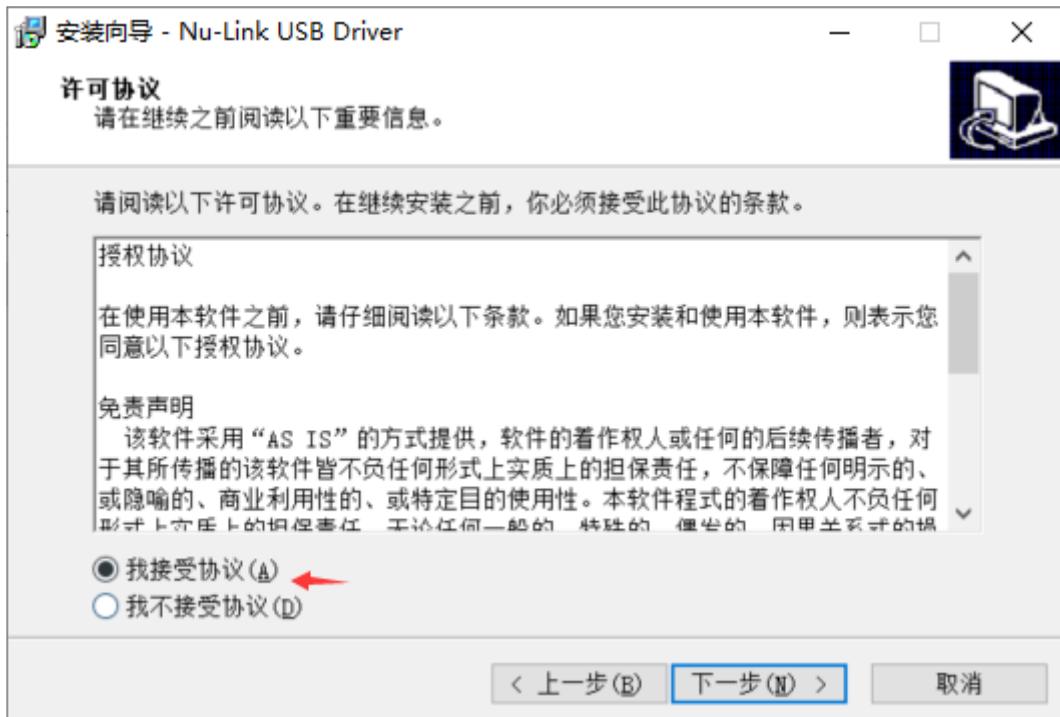


Install Nu-link USB Driver 1.6

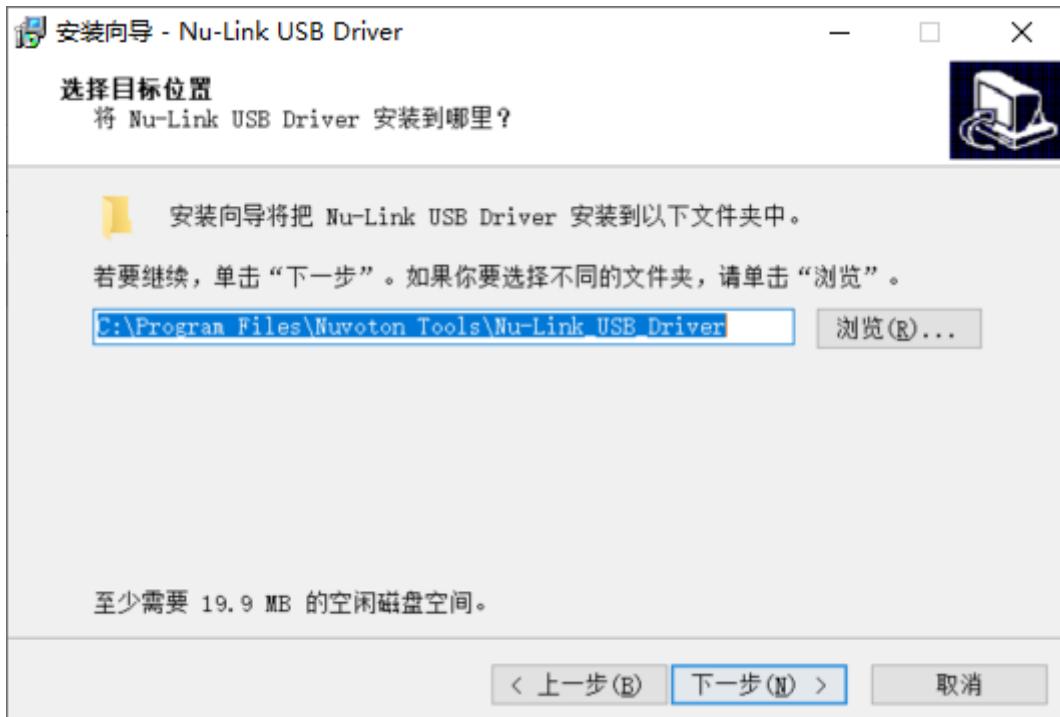


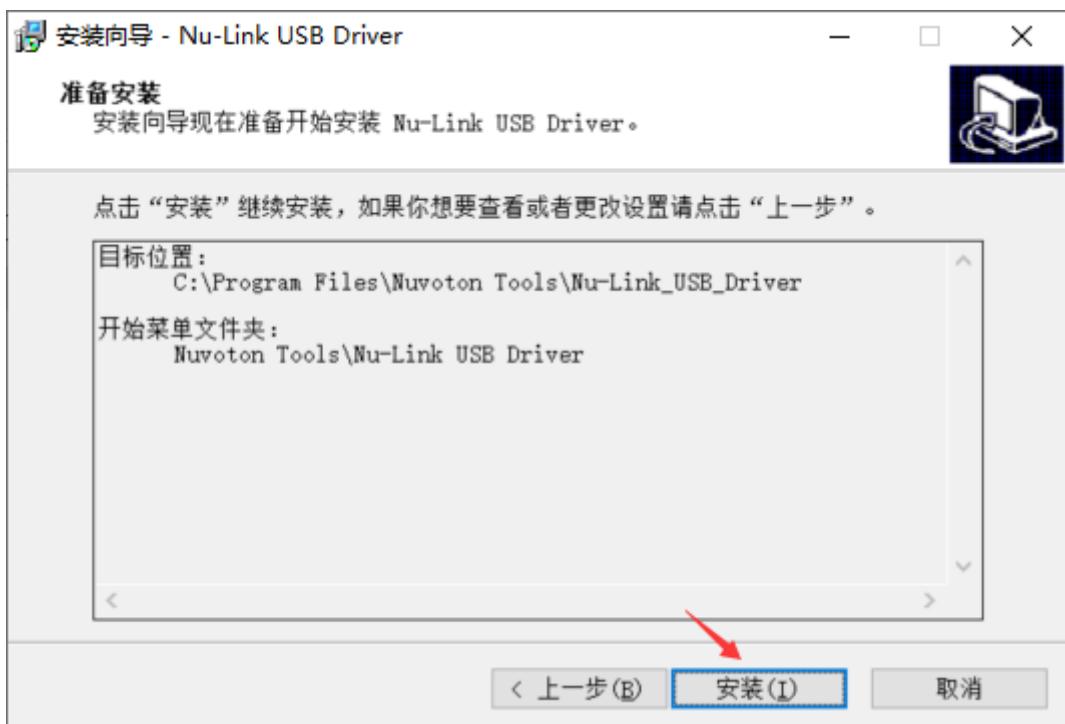
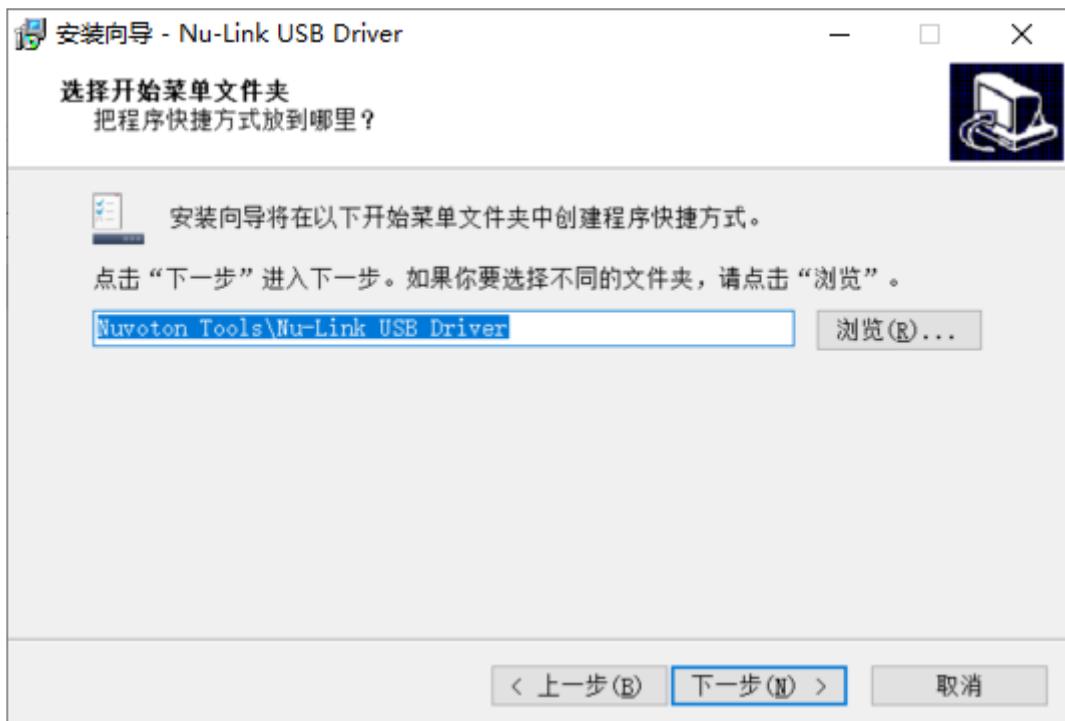
select language: English, here I select Chinese, it does not matter.

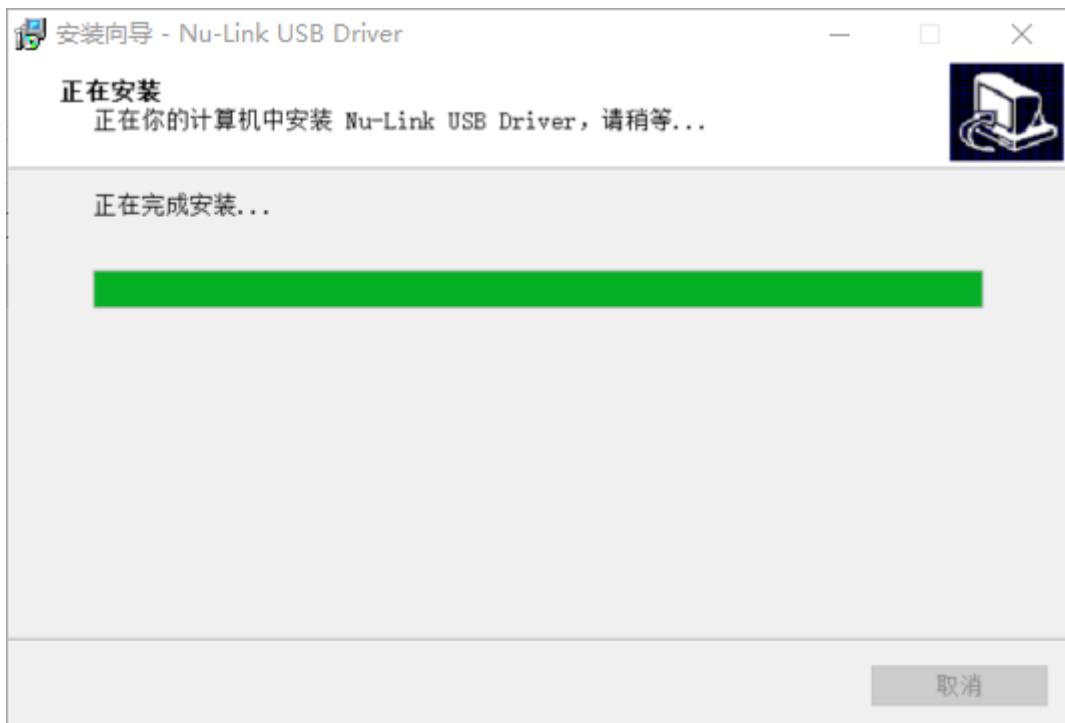




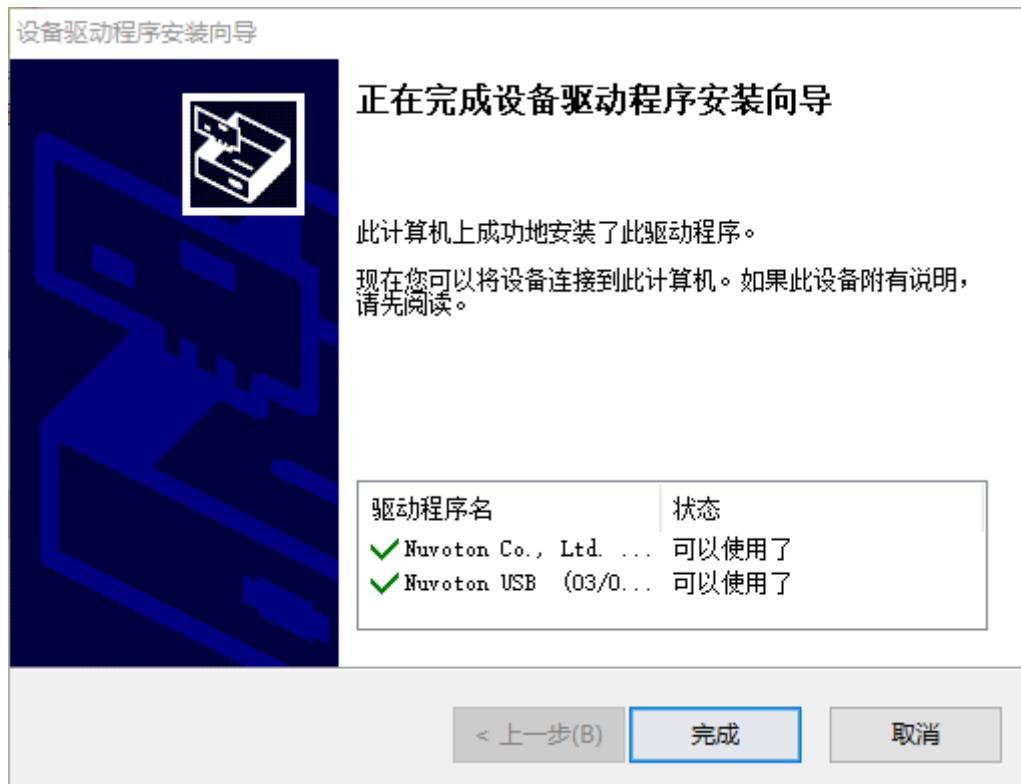
select installation folder:







follow the steps to install the driver.



Download the firmware attached here.



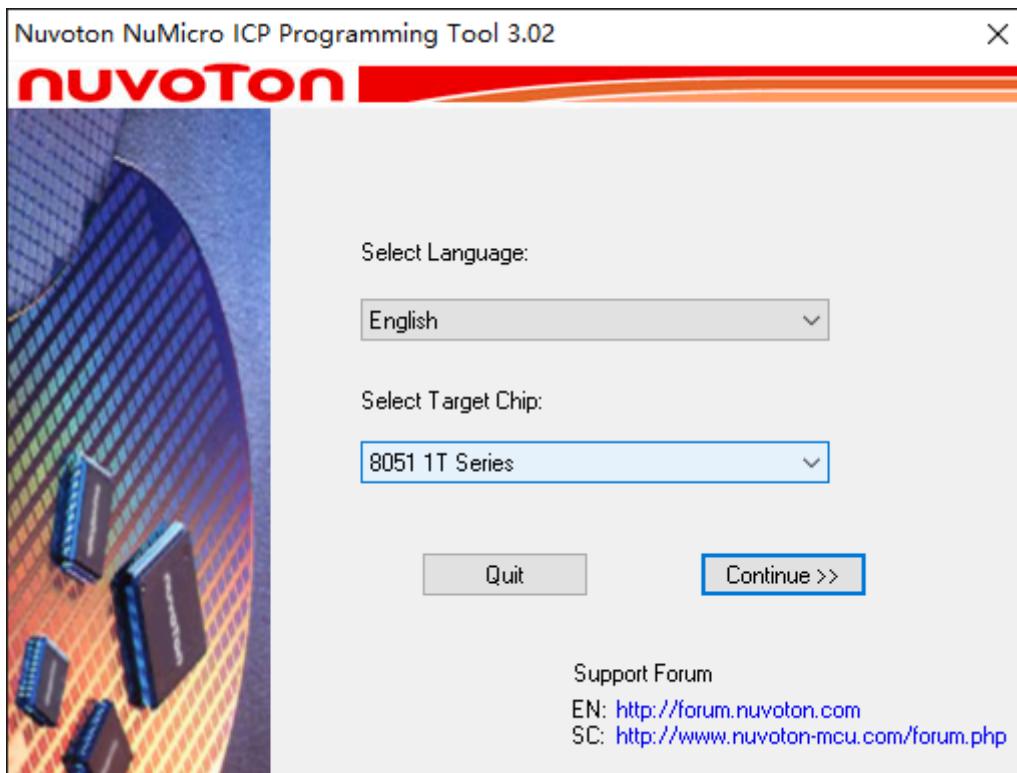
[IP5306_no_datarom.hex](#)

6 KB

Open Nuvoton NuMicro ICP Programming Tool 3.02

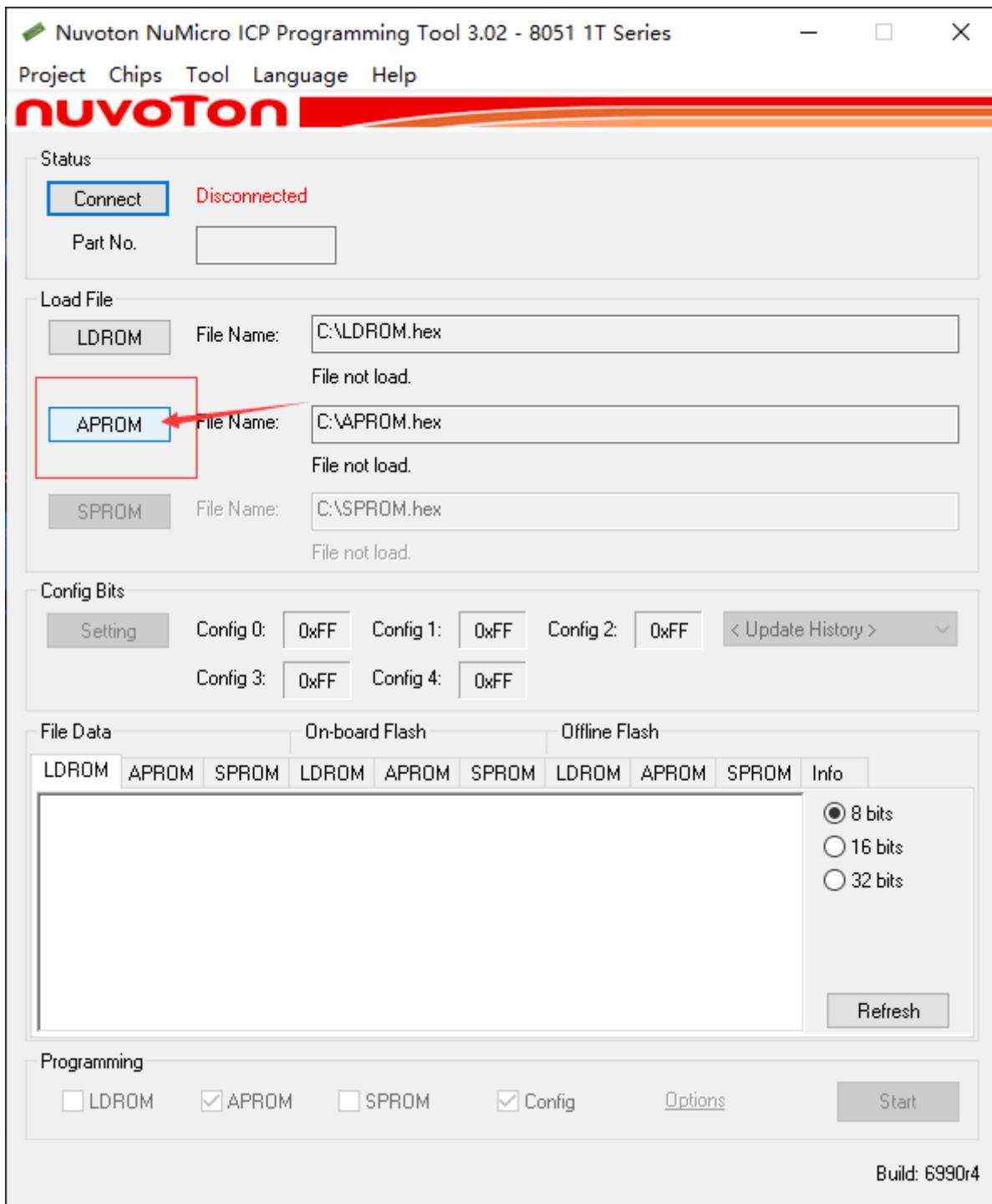
Select Language : English

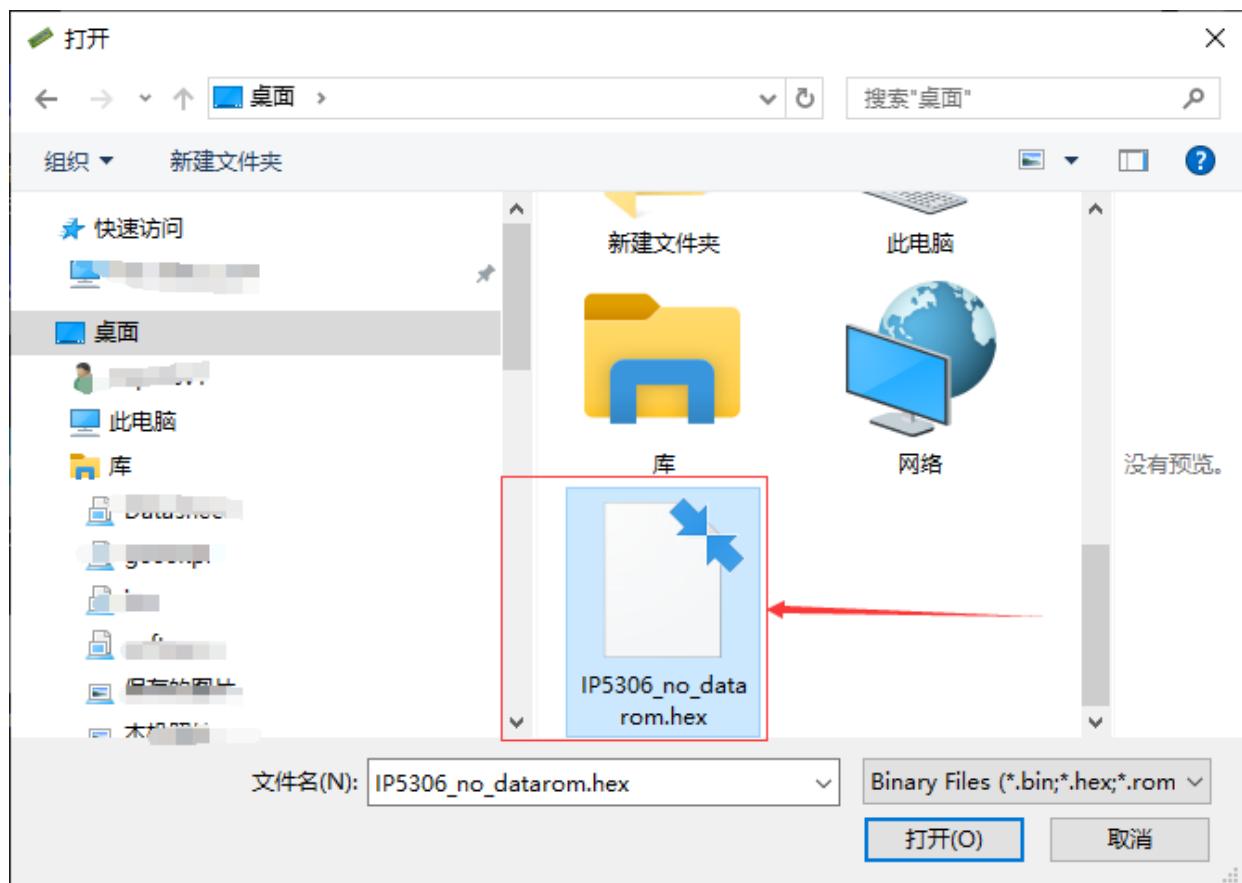
Select Target Chip: 8051 1T Series



and the click Continue>>

and then click APROM to select the firmware hex file.





Nuvoton NuMicro ICP Programming Tool 3.02 - 8051 1T Series

Project Chips Tool Language Help

nuvoTon

Status

Disconnected

Part No.

Load File

File Name: C:\LDROM.hex
File not load.

File Name: C:\Users\52pidev1\Desktop\IP5306_no_datarom.hex
size: 2121 Bytes, checksum: 3428

File Name: C:\SPROM.hex
File not load.

Config Bits

<input type="button" value="Setting"/>	<input type="button" value="Config 0: 0xFF"/>	<input type="button" value="Config 1: 0xFF"/>	<input type="button" value="Config 2: 0xFF"/>	<input type="button" value="Config 3: 0xFF"/>	<input type="button" value="Config 4: 0xFF"/>	<input type="button" value="< Update History >"/>
--	---	---	---	---	---	---

File Data

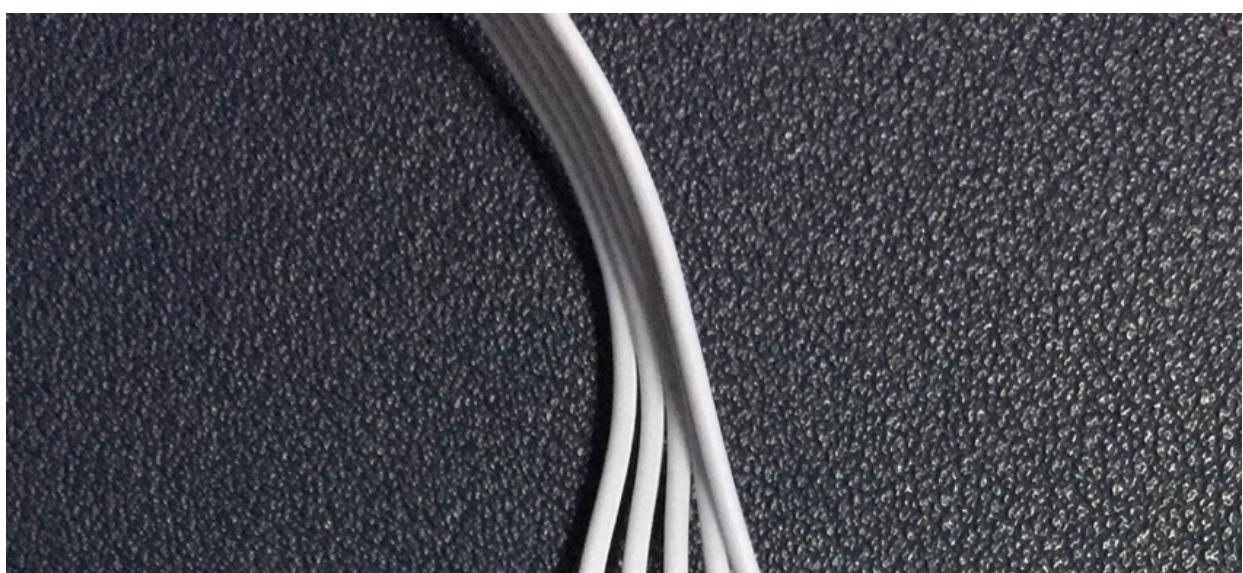
	On-board Flash				Offline Flash											
	LDROM	APROM	SPROM	LDROM	APROM	SPROM	LDROM	APROM	SPROM	Info						
00000000:	02	06	12	02	03	4B	E8	64	80	F8	E9	33	E8	33	60	11
00000010:	04	60	F0	ED	33	EC	33	70	09	E8	FC	E9	FD	EA	FE	EB
00000020:	FF	22	04	60	DE	D3	EB	9F	EA	9E	E9	9D	E8	C2	E7	8C
00000030:	F0	C2	F7	95	F0	40	OC	E8	CC	F8	E9	CD	F9	EA	CE	FA
00000040:	EB	CF	FB	12	03	16	85	D0	F0	58	04	70	03	20	D5	B3
00000050:	E8	04	70	07	50	02	B2	D5	02	03	55	92	D5	EC	04	60
00000060:	F7	E4	CC	C0	E0	C3	98	F8	60	3B	94	18	60	08	40	0D
00000070:	D0	E0	FB	02	03	2D	E4	FB	FA	C9	FC	80	28	E8	30	E4
00000080:	06	E4	C9	FB	E4	CA	FC	E8	30	E3	05	E4	C9	CA	CB	FC
00000090:	E8	54	07	60	10	F8	C3	E9	13	F9	EA	13	FA	EB	13	FB
000000A0:	EC	13	FC	D8	F1	30	F5	2F	C3	E4	9C	FC	EF	9B	FF	EE
000000B0:	9A	FE	ED	99	FD	D0	E0	FB	EF	4E	4D	4C	70	12	22	DB
000000C0:	03	02	03	52	FC	2C	FC	FF	33	FF	FF	33	FF	FD	33	FD

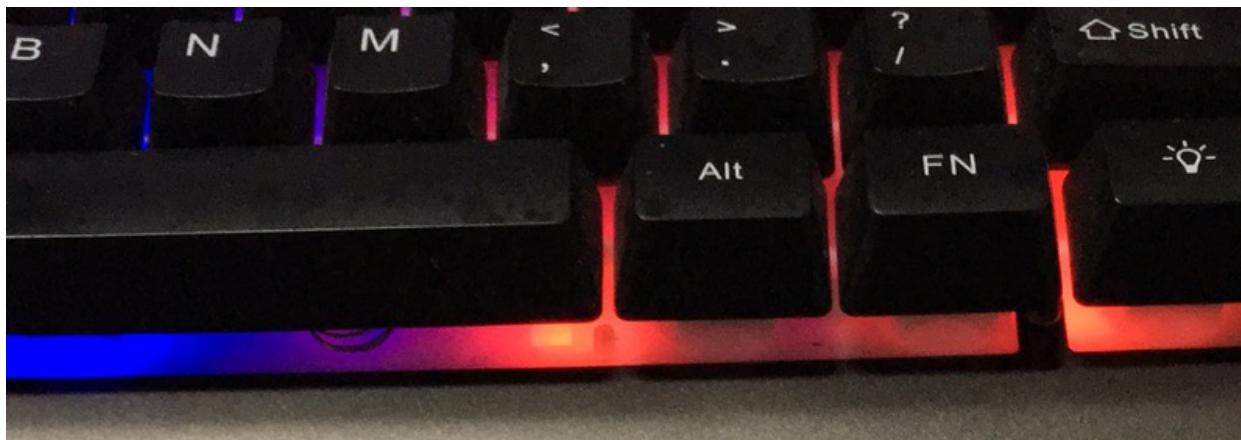
Programming

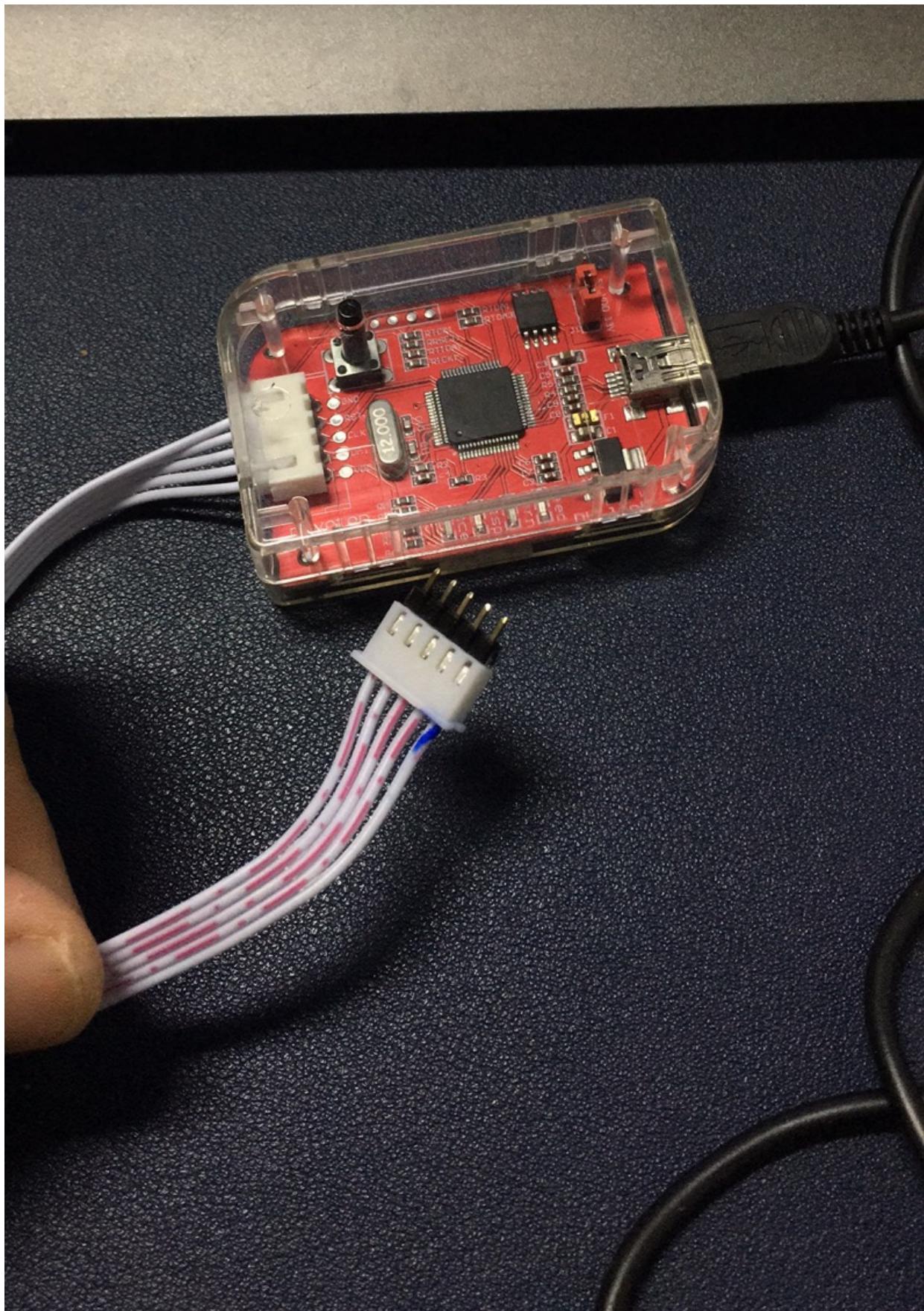
LDROM APROM SPROM Config [Options](#)

Build: 6990r4

and then, Use your Nu-link programmer to upload the firmware to UPS board



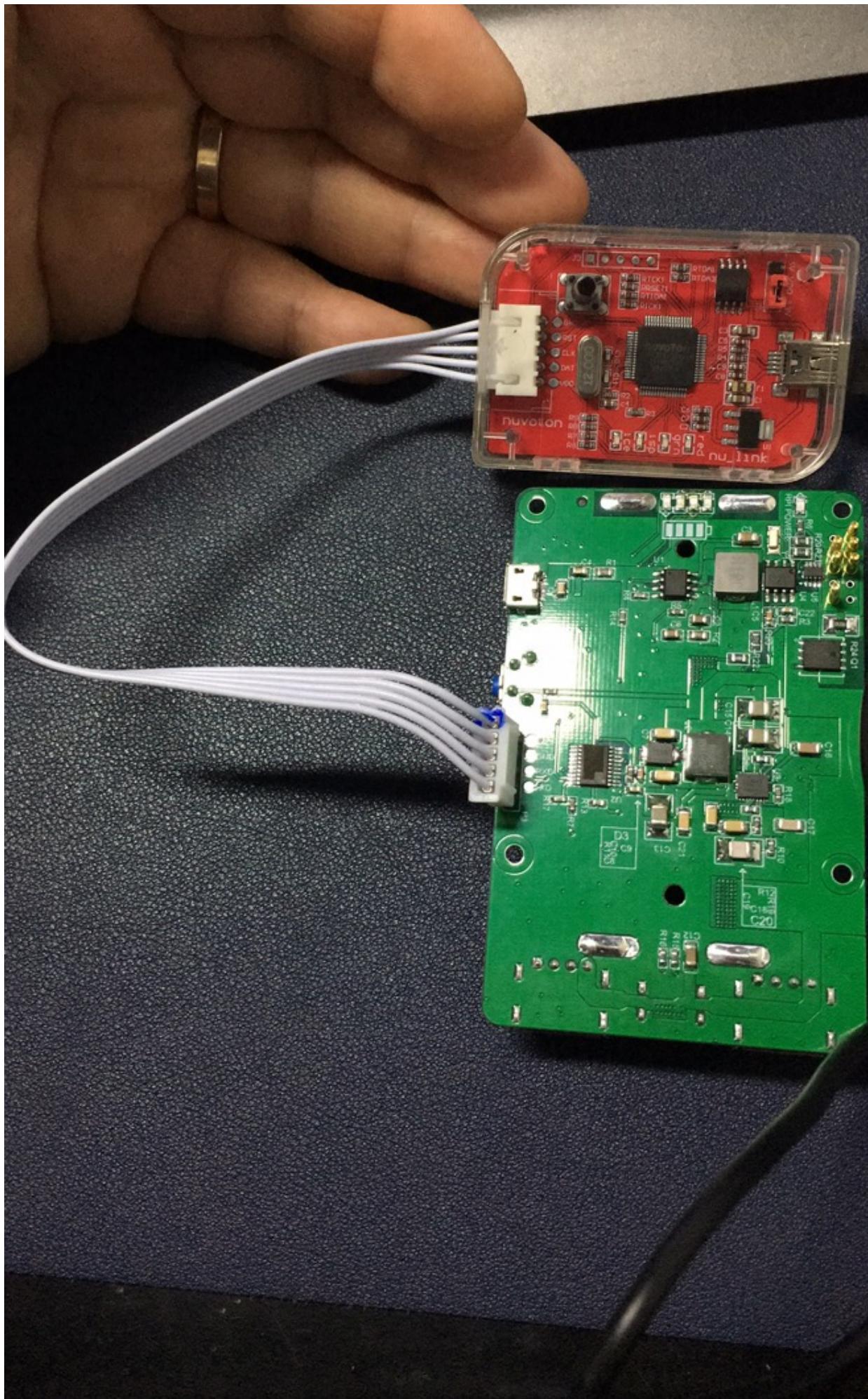


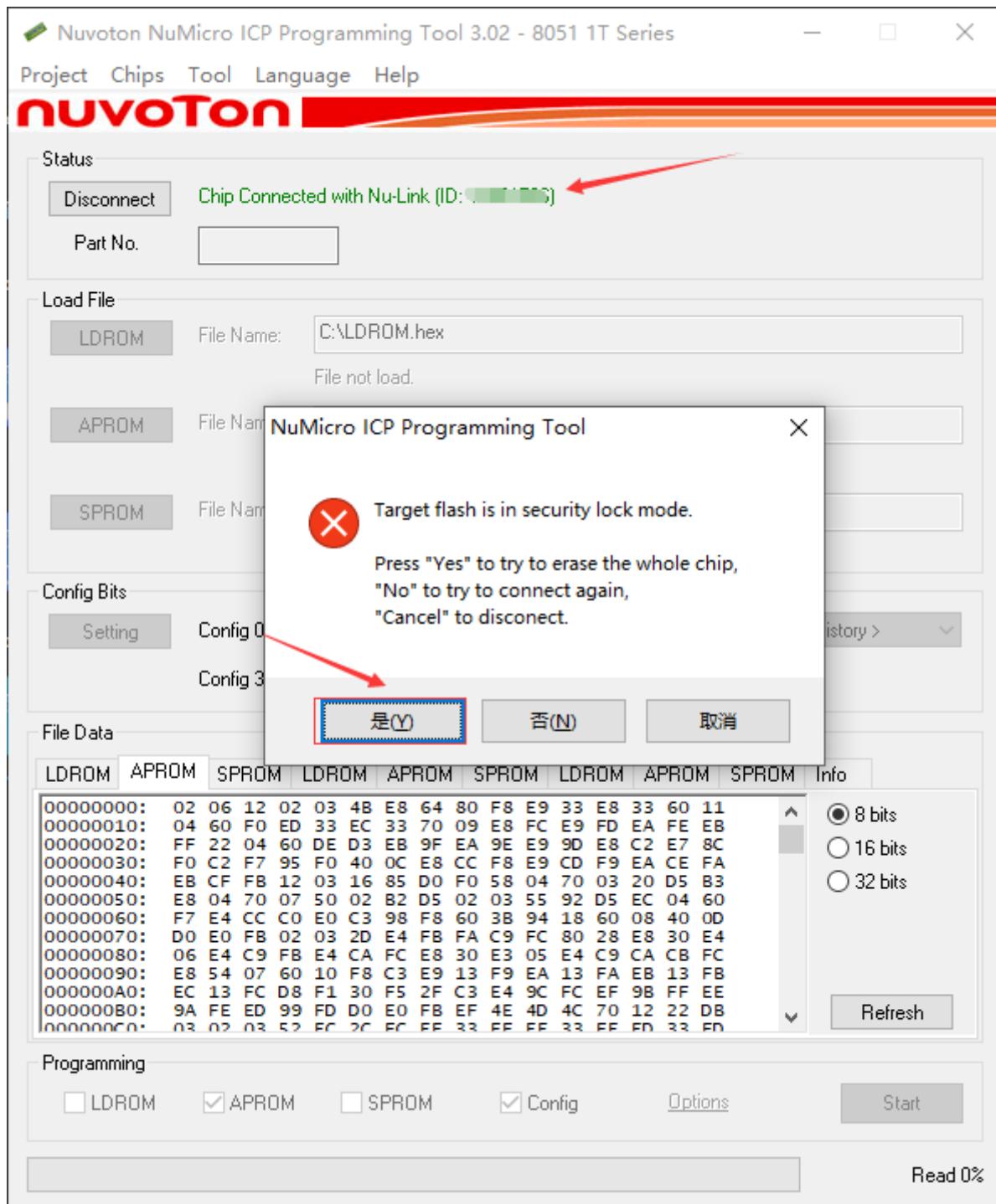


Connect to UPS like this:

Please remove the batteries before download the firmware!!!!







Nuvoton NuMicro ICP Programming Tool 3.02 - 8051 1T Series

Project Chips Tool Language Help

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Status

Disconnect Chip Connected with Nu-Link (ID: 18001526)

Part No.

Load File

LDRON NuMicro ICP Programming Tool

APROM SPROM

Config Bits Setting

File Data

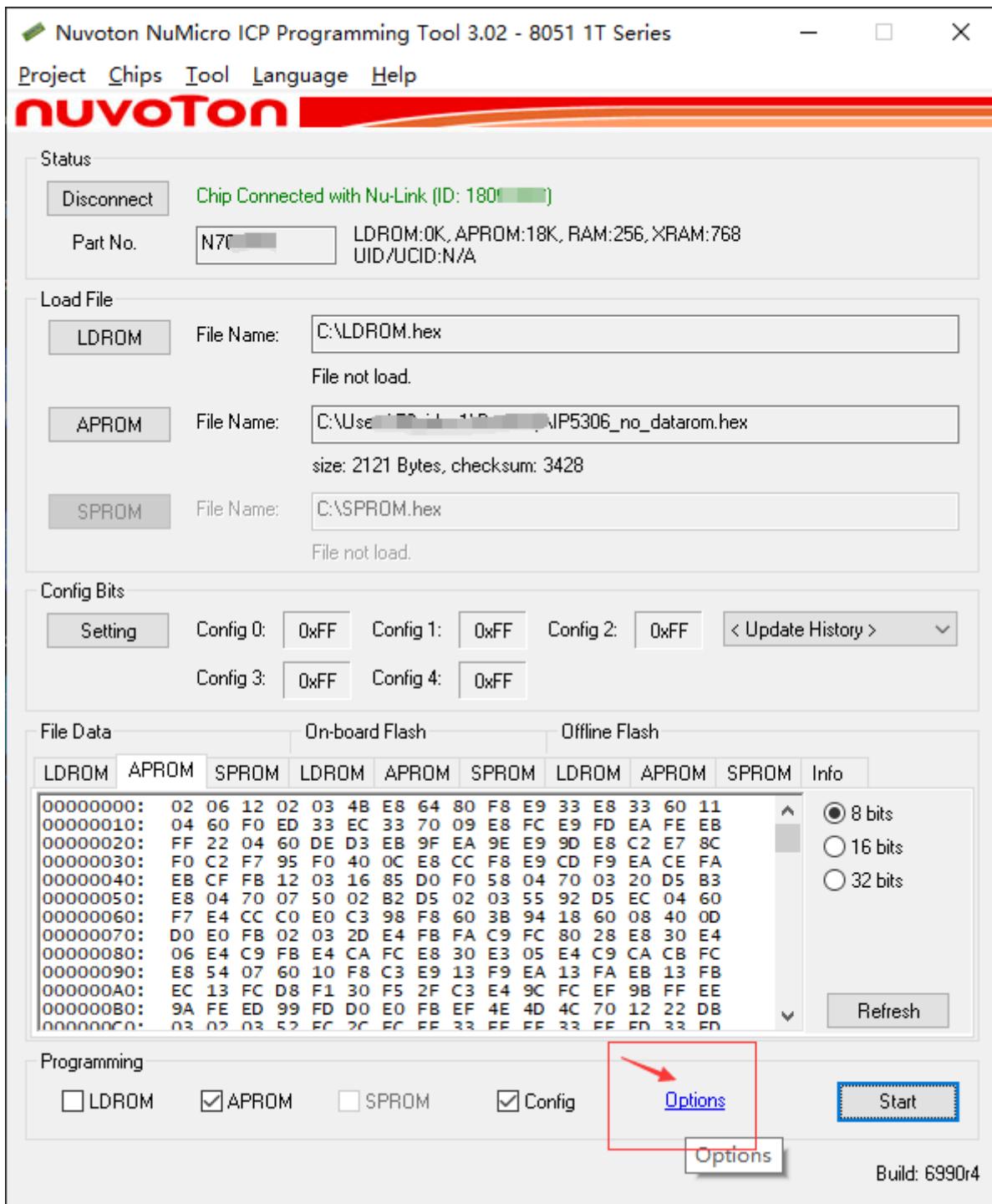
LDROM APROM SPROM LDROM APROM SPROM LDROM APROM SPROM Info

00000000:	02	06	12	02	03	4B	E8	64	80	F8	E9	33	E8	33	60	11
00000010:	04	60	F0	ED	33	EC	33	70	09	E8	FC	E9	FD	EA	FE	EB
00000020:	FF	22	04	60	DE	D3	EB	9F	EA	9E	E9	9D	E8	C2	E7	8C
00000030:	F0	C2	F7	95	F0	40	OC	E8	CC	F8	E9	CD	F9	EA	CE	FA
00000040:	EB	CF	FB	12	03	16	85	D0	F0	58	04	70	03	20	D5	B3
00000050:	E8	04	70	07	50	02	B2	D5	02	03	55	92	D5	EC	04	60
00000060:	F7	E4	CC	C0	E0	C3	98	F8	60	3B	94	18	60	08	40	0D
00000070:	D0	E0	FB	02	03	2D	E4	FB	FA	C9	FC	80	28	E8	30	E4
00000080:	06	E4	C9	FB	E4	CA	FC	E8	30	E3	05	E4	C9	CA	CB	FC
00000090:	E8	54	07	60	10	F8	C3	E9	13	F9	EA	13	FA	EB	13	FB
000000A0:	EC	13	FC	D8	F1	30	F5	2F	C3	E4	9C	FC	EF	9B	FF	EE
000000B0:	9A	FE	ED	99	FD	D0	E0	FB	EF	4E	4D	4C	70	12	22	DB
000000C0:	03	02	03	52	FC	2C	FC	FF	33	FF	FF	33	FF	FD	33	FD

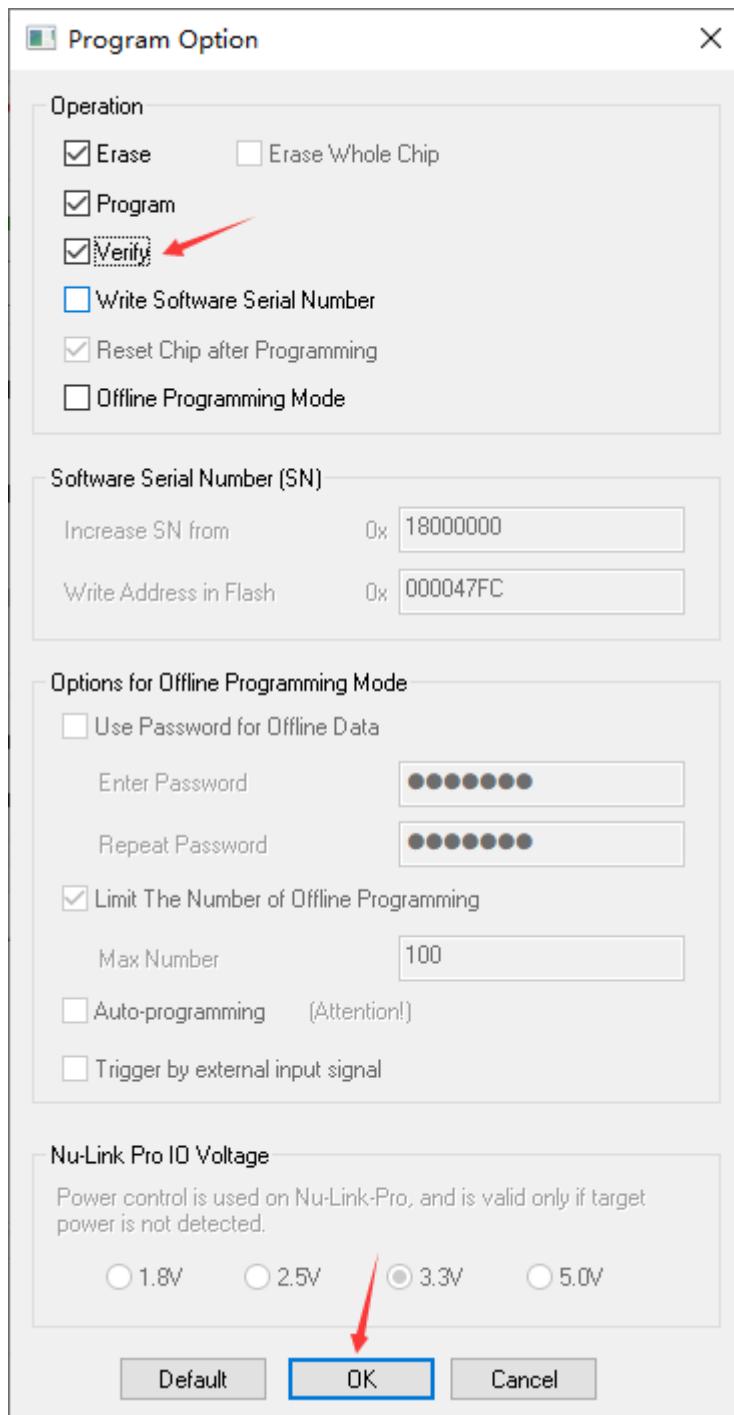
Programming

LDROM APROM SPROM Config Options Start

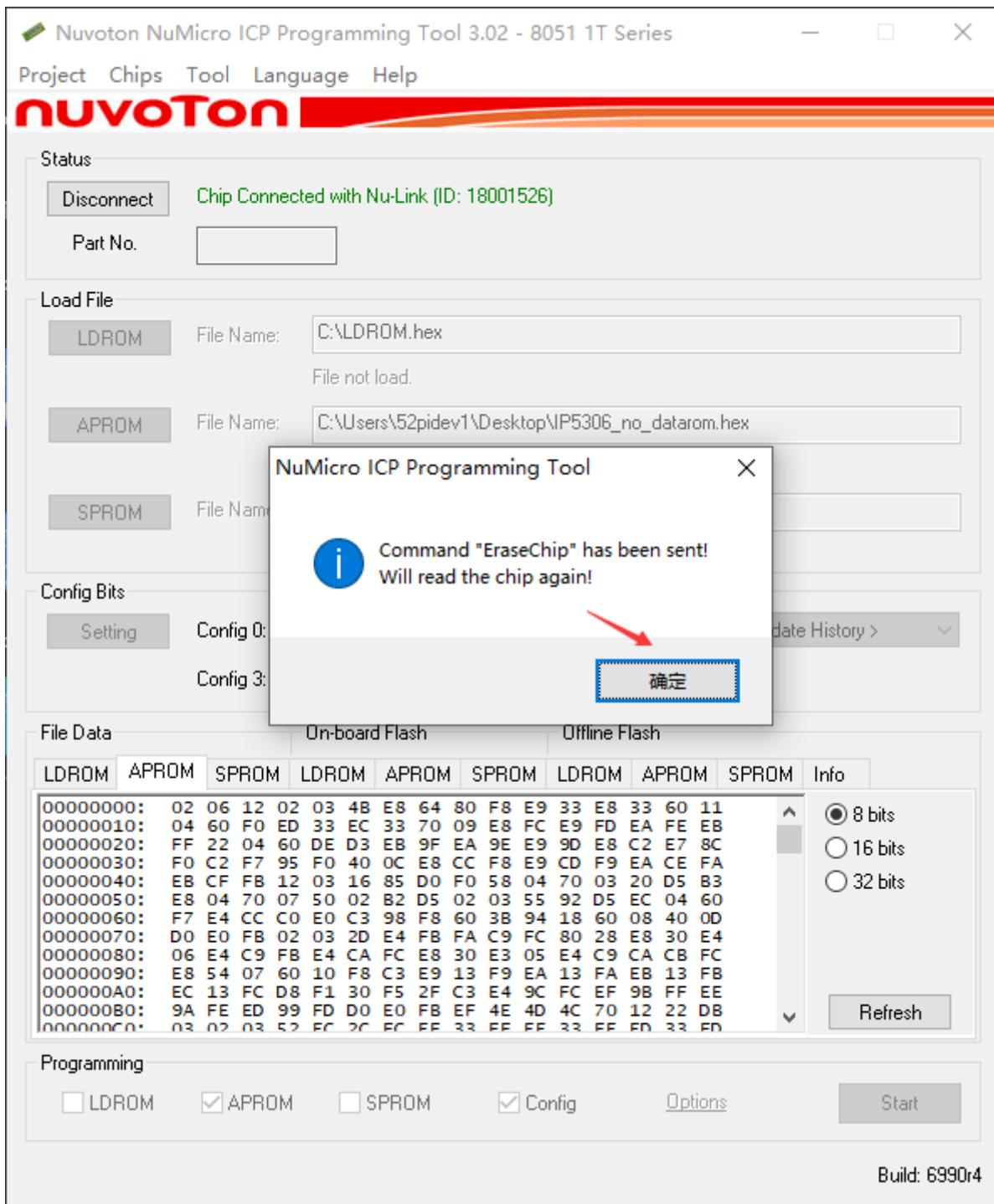
Build: 6990r4

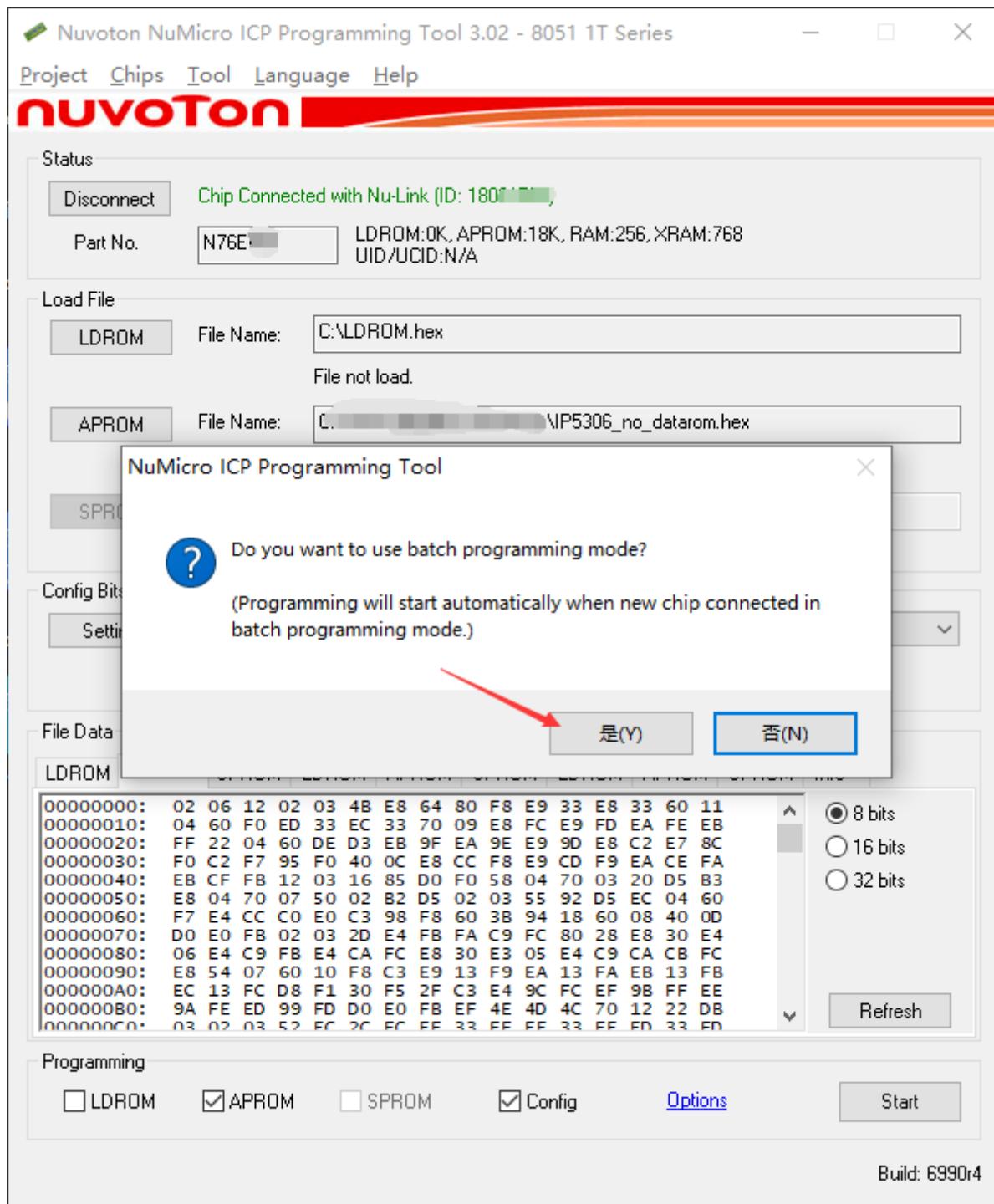


Select “Verify” in Program Option page.



Finally, press start to upload firmware.





Nuvoton NuMicro ICP Programming Tool 3.02 - 8051 1T Series

Project Chips Tool Language Help

nuvoTon

Status

Disconnect Batch programming mode finish!

Part No. N76E LDRUM:0K, APRUM:18K, RAM:256, XRAM:768
UID/UCID:N/A

Load File

LDROM File Name: C:\LDROM.hex
File not load.

APROM File Name: C:\Users\52pidev1\Desktop\IP5306_no_datarom.hex
size: 2121 Bytes, checksum: 3428

SPROM File Name: C:\SPROM.hex
File not load.

Config Bits

Setting Config 0: 0xFF Config 1: 0xFF Config 2: 0xFF < Update History >

Config 3: 0xFF Config 4: 0xFF

File Data

On-board Flash Offline Flash

	LDROM	APROM	SPROM	LDROM	APROM	SPROM	LDROM	APROM	SPROM	Info						
00000000:	02	06	12	02	03	4B	E8	64	80	F8	E9	33	E8	33	60	11
00000010:	04	60	F0	ED	33	EC	33	70	09	E8	FC	E9	FD	EA	FE	EB
00000020:	FF	22	04	60	DE	D3	EB	9F	EA	9E	E9	9D	E8	C2	E7	8C
00000030:	F0	C2	F7	95	F0	40	OC	E8	CC	F8	E9	CD	F9	EA	CE	FA
00000040:	EB	CF	FB	12	03	16	85	D0	F0	58	04	70	03	20	D5	B3
00000050:	E8	04	70	07	50	02	B2	D5	02	03	55	92	D5	EC	04	60
00000060:	F7	E4	CC	C0	E0	C3	98	F8	60	3B	94	18	60	08	40	0D
00000070:	D0	E0	FB	02	03	2D	E4	FB	FA	C9	FC	80	28	E8	30	E4
00000080:	06	E4	C9	FB	E4	CA	FC	E8	30	E3	05	E4	C9	CA	CB	FC
00000090:	E8	54	07	60	10	F8	C3	E9	13	F9	EA	13	FA	EB	13	FB
000000A0:	EC	13	FC	D8	F1	30	F5	2F	C3	E4	9C	FC	EF	9B	FF	EE
000000B0:	9A	FE	ED	99	FD	D0	E0	FB	EF	4E	4D	4C	70	12	22	DB
000000C0:	03	02	03	52	FC	2C	FC	FF	33	FF	FF	33	FF	FD	33	FD

8 bits
16 bits
32 bits

Refresh

Programming

LDROM APROM SPROM Config Options Start

Verify 100%

Right now, the firmware update finished!

Thank you for select 52Pi series product, and at the same time, sorry for the inconvenient.



The final interpretation right of this product belongs to 52Pi Company