Introduction

HC-ISPIt is the new generation of XinshengISPDownload tool, suitable for Xinsheng8051kernel seriesFlash MCUof burning. Main document

To introduce the use of this tool to help customers improve product development speed.

- Currently supported chips are:HC89F0411P,HC89F0421,HC89F0431,HC89S003F4,HC89F0531, HC89F0541,HC89S103K6,HC89S105C8,HC89S105K8,HC89S105S8,HC89S001P
- Relevant data sheets, tools and technical documents download website:http://www.holychip.cn/ .

Table of contents

1, brief description

HC-ISPas core saintFLASHProduct development and debugging download tool. Users can use this debugging download tool to improve product development speed.

Note:

HC-ISPThere is also an android versionapp,supportOTGfeature phones can use thisappDownload the client program. thisapponly supportISP Auto ProgrammerorUSB-TTLdownload, not supportedHC-LINK. thisappOnly supports downloading client applications, not downloadingOPTIONS. appDownload URL:http://www.holychip.cn/ .

- passISP Auto ProgrammerorUSB-TTLThe tool can be debugged and passed by connecting the user application boardHC-LINK V3.0,HC-LINK V4.0,
- SDKThe development board is connected to the user application board to realizeISPDownload can observe the status changes of each download
- channel in real time
- optionalISP Auto Programmer 3.3Vpower supply or5.0VPower supply saves
- when it was last turned onoptionset up
- resettableoptionset up
- Fast programming
- Support multi-channel simultaneous download
- Support code option selection,FLASHRead and write protection, customer information setting, programming page, erasing page
- selection supports loading and savinghcfdocument(PM51burner burn file)

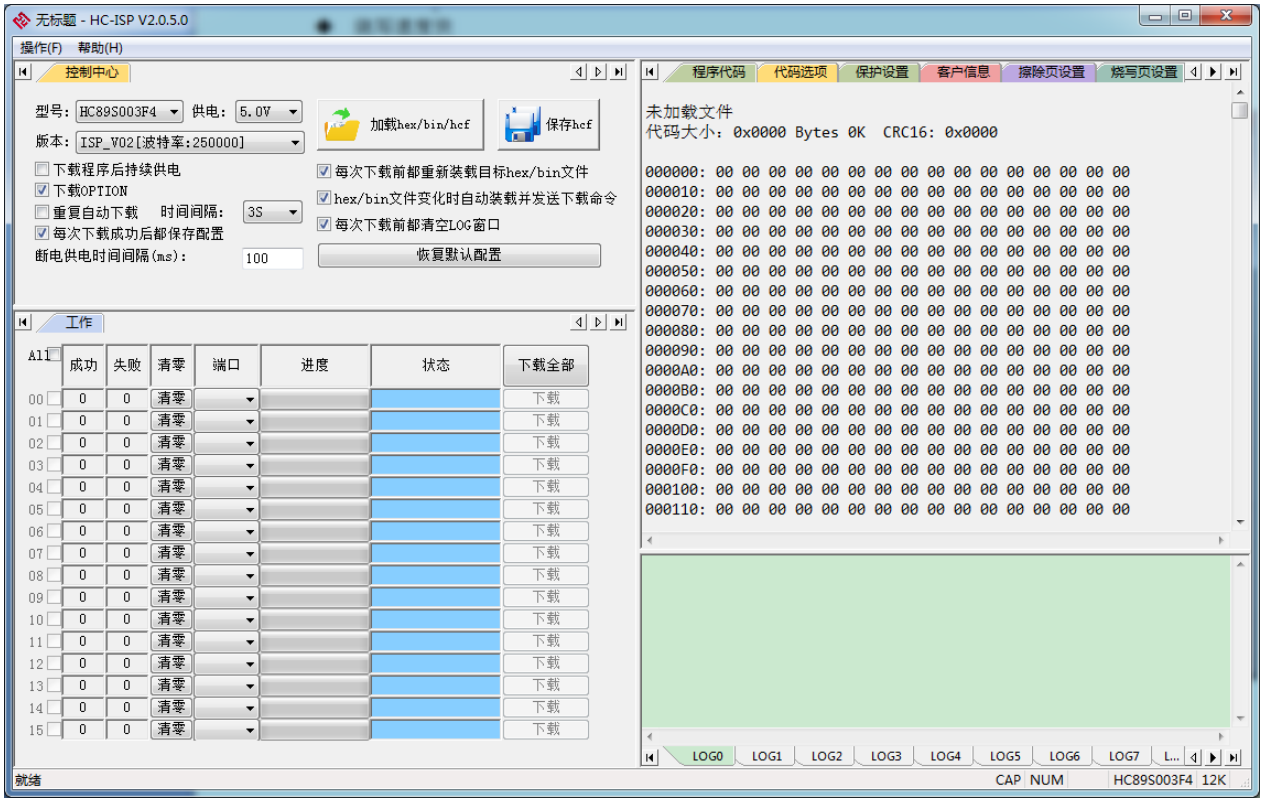

Figure 1-1 HC-ISPOperation interface

2, hardware connection

user's target application board viaHC ISP Auto ProgrammerorUSB-TTLorHC-LINKtools andPCconnect, As shown below.

Figure 2-1hardware connection (HC ISP Auto Programmer)

Figure 2-2 HC-LINK V3.0(TK-RXRight nowHC-LINKofRX,TK-TXRight nowHC-LINKofTX)

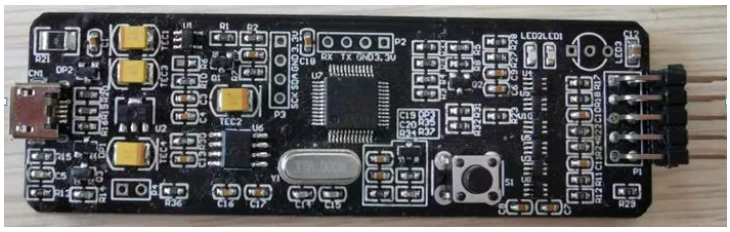

Figure 2-3 HC-LINK V4.0(footprint seePCBboard back)

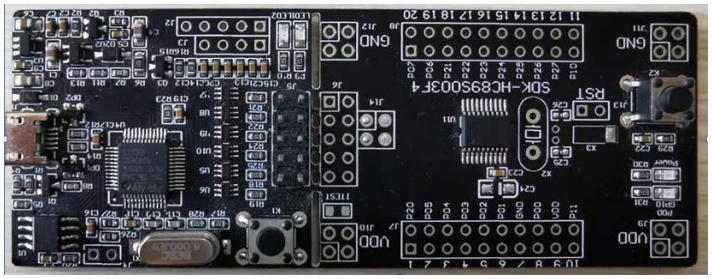

Figure 2-4 SDKDevelopment board (see the pin diagramPCBboard back)

useHC ISP Auto ProgrammerWhen downloading, set theHC ISP Auto ProgrammerofTXDConnected toMCUof ISP_RXDport,RXDConnected toMCUofISP_TXDport, then set theHC ISP Auto ProgrammerofGNDandVDD respectively connected toMCUofGNDandVDDThat's it.

useUSB-TTLWhen the tool is downloaded, theUSB-TTLofTXDConnected toMCUofISP_RXDport,RXDConnected toMCU of ISP_TXDport, then set theUSB-TTLofGNDConnected toMCUofGND, and then click Download to giveMCUofVDD Just power on.

useHC-LINK(includeHC-LINK V3.0,HC-LINK V4.0,SDKdevelopment board) when downloading, set theHC-LINKof TX Connected toMCUofISP_RXDport,RXConnected toMCUofISP_TXDport, then set theHC-LINKofGNDand VDDrespectively connected toMCUofGNDandVDDThat's it.

currently supportedISPofMCUModel CorrespondenceISP_TXD,ISP_RXDpins as well as customer maximumRomancapacity, as shown in the table below:

MCUmodel	ISP_TXDpin	ISP_RXDpin	clientROMMaximum capacity	Remark
HC89S003F4	P2.1	P0.3	12K	
HC89S001P	P0.2	P0.1	12K	
HC89F0431	P0.0	P0.1	12K	
HC89F0421	P0.0	P0.1	12K	
HC89F0411P	P0.0	P0.1	12K	
HC89S105C8	P4.3	P3.7	60K	
HC89S105K8	P4.3	P3.7	60K	
HC89F0541	P2.1	P2.2	28K	

Form 2-1 MCUmodel pins andRomancapacity

3, Operating procedures

This chapter will beHC89S003F4as an example and useHC ISP Auto ProgrammerIntroduce the operation process

1, After connecting the hardware, open the control center and click Loadhex/bin/hcf, select the one to downloadhex/bin/hcffile, chooseMCU Model, power supply voltage, whether to continue to supply power after the program is downloaded, whether to downloadOPTIONS, whether to repeat the automatic download program and its time, whether to save the configuration after each download, the time interval of power failure (ms), if you don't need it, you can click to restore the default.

Figure 3-1control center

2, You can observe whether the code path, check code, and size are correct in the program code option

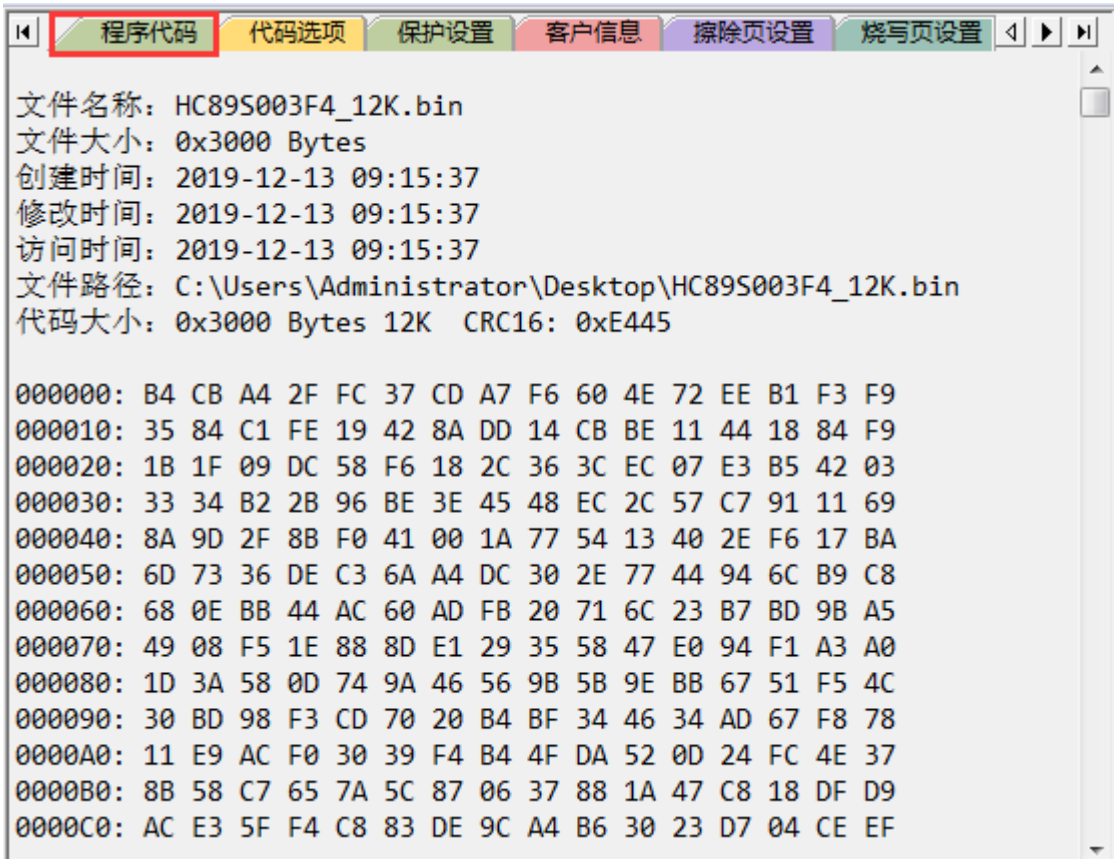

Figure 3-2code

3, Click the code option, select the corresponding configuration in the code option

Figure 3-3code option

6, In the protection configuration tab, different sectors can be protected

Figure 3-4protection settings

7, in the Customer Information tab, you can configureSN_DATAas well asID_DATAconfigure

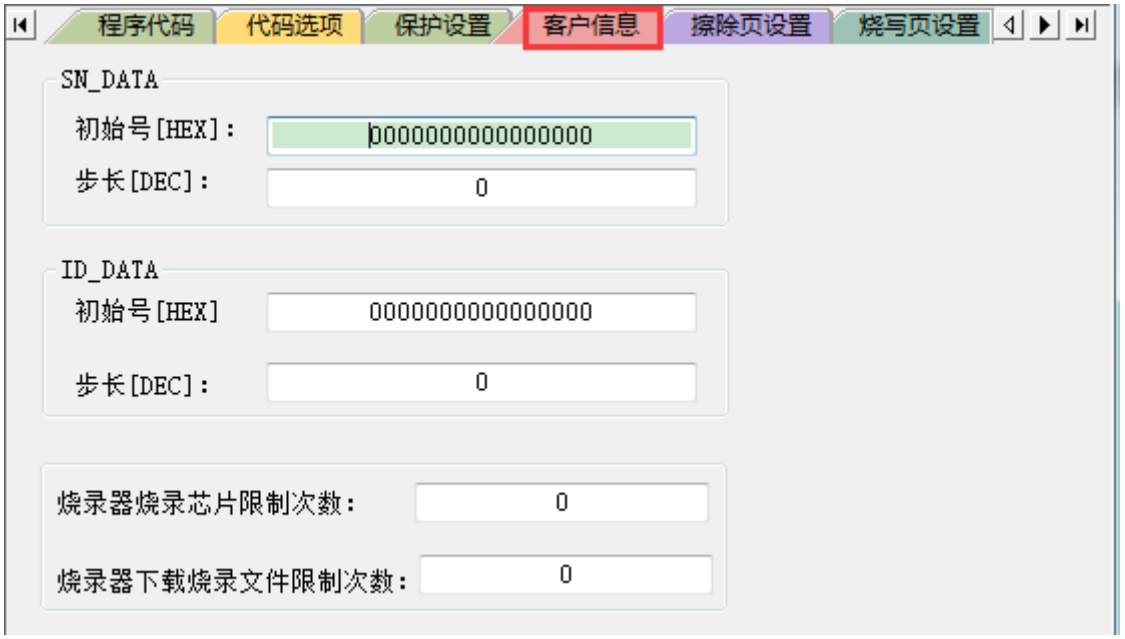

Figure 3-5Customer Information

9, In the erase page settings, the user can choose the desired address to erase, the default is full erase, and it is also recommended for users to erase all when programming.

Figure 3-6Erase Page Settings

10, In the programming page settings, the user can select the desired address for programming. By default, the corresponding sector is programmed according to the code capacity, which can reduce the Less burning time.

Figure 3-7Burn page settings

11, After the configuration is complete, select the port, click download, the status window andLOGThe burning status can be displayed in the window.

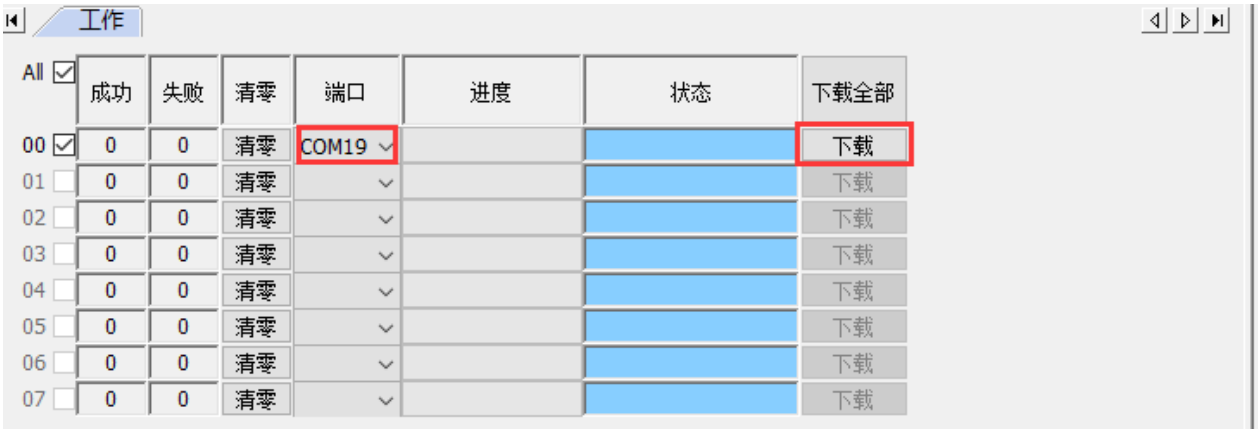

Figure 3-8work area

4, Precautions

1、When the capacitance on the user’s target board is large, please adjust the resistance value of the resistor in the red box in the figure below. The larger the capacitance, the smaller the solder resistance, and it is best do itR*CThe value of0.2Sinside, for example:2200uFweld100Europe below.

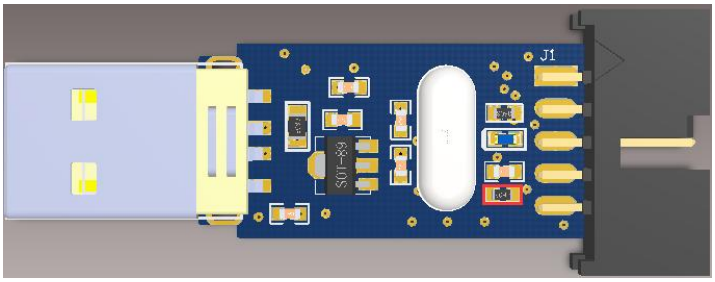

Figure 4-1 HC ISP Auto Programmer

5, release notes

Version	date	describe
V1.00	2018/5/24	first edition
V1.01	2018/8/22	againstHC-ISP V2.0.0.0rewrite
V1.02	2018/9/13	againstHC-ISP V2.0.1.0rewrite
V1.03	2018/10/18	IncreaseISPofMCUmodel Add configuration save
V1.04	2018/11/13	Add power-off power supply time interval configuration
V1.05	2019/12/13	againstHC-ISP V2.0.4.0andHC-ISP V2.0.5.0re-write increase ISP_V01,ISP_V02Two versions with select function added to theHC-LINKsupport Added loading and savinghcffile function

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