HYC◇N 紘康科技

HY16F 系列

烧录器使用说明书



目录

1. 包装内容	4
2. 安全注意事项	5
3. 烧录器简介	6
3.1. 烧录器简介	6
3.2. 硬件版本要求	6
3.3. 软件安装	6
4. 整体操作说明	11
4.1. 烧录器硬件说明	11
4.2. HY16F 系列烧录档区域说明	12
4.3. 烧录器软件说明	14
5. 烧录操作范例说明	20
5.1. 在线烧录功能	20
5.2. 离线烧录功能	21
5.3. Read Chip 功能	22
5.4. Read Burner 功能	23
5.5. ISP Resource Setting 设置说明	24
5.6. Update Firmware 操作说明	25
6. 烧录器信息说明	28
6.1. 烧录配置信息	28
6.2. 错误信息	29
7. 修订记录	31



注意:

- 1、本说明书中的内容,随着产品的改进,有可能不经过预告而更改。请客户及时到本公司网站下载更新 http://www.hycontek.com。
- 2、 本规格书中的图形、应用电路等,因协力厂商工业所有权引发的问题,本公司不承担其责任。
- 3、本产品在单独应用的情况下,本公司保证它的性能、典型应用和功能符合说明书中的条件。当使用在客户的产品或设备中,以上条件我们不作保证,建议客户做充分的评估和测试。
- 4、 请注意输入电压、输出电压、负载电流的使用条件, 使 IC 内的功耗不超过封装的容许功耗。对于客户在超出说明书中规定额定值使用产品, 即使是瞬间的使用, 由此所造成的损失, 本公司不承担任何责任。
- 5、本产品虽内置防静电保护电路,但请不要施加超过保护电路性能的过大静电。
- 6、本规格书中的产品,未经书面许可,不可使用在要求高可靠性的电路中。例如健康医疗器械、防灾器械、 车辆器械、车载器械及航空器械等对人体产生影响的器械或装置,不得作为其部件使用。
- 7、本公司一直致力于提高产品的质量和可靠度,但所有的半导体产品都有一定的失效概率,这些失效概率可能会导致一些人身事故、火灾事故等。当设计产品时,请充分留意冗余设计并采用安全指标,这样可以避免事故的发生。
- 8、 本规格书中内容,未经本公司许可,严禁用于其他目的之转载或复制。



1. 包装内容

目前对外支援 HY16F 系列的最新款烧录器为 HY10000-WK08D 整合型烧录器,以下为包装 内容说明:



图 1-1

Model No.		Part Name	Description	Quantity
	1.	HY10000-WK08D	Integrated Writer	1
	2.	Cable line	USB Type A to Mini B Cable	1
HY10000-WK08D	3.	Programming line	6pin/2.0 (2.0mm pitch)	1
	4.	Programming line	4x2pin/2.54 (2.54mm pitch)	1
	5.	Power Supply	Output: DC 5V	1

表 1-1



2. 安全注意事项

- 请勿放置重物在本应用展示板上,以避免重压导致损坏。
- 请勿本应用展示板置于重心不稳处,以免掉落造成损坏。
- 请勿使用不符合本产品电气规格之输入电压,以免造成工作异常或损坏。
- 操作时避免本应用展示板淋到液体、污物掉落于板上及暴露在湿气当中。应保持本应用 展示板在干燥的环境下使用,以免影响功能与效能。
- 不用时应移去电源。
- 当发生下列情况时请马上移去电源,并联络本公司工程人员。
 - 电源线磨损或毁坏。
 - 电源(电池)接上时灯号无显示。
 - 元器件脱落。



3. 烧录器简介

3.1. 烧录器简介

HY16F 烧录器的目的为,针对 AndeSight IDE 编译所产生的.bin 文档,可以透过烧录器应用 程序下载程序码到烧录器中,支援透过在线应用程序操作,对芯片进行烧录动作;也同时支援量产时,离线烧录芯片的流程。

3.2. 硬件版本要求

HY10000-WK08C 或 HY10000-WK08D 整合型烧录器 (以下简称 WK08x)皆可, 需内建 能支援 HY16F 产品烧录的 F/W Ver 3.4 以上。

3.3. 软件安装

3.3.1. 安装

运行烧录器应用软件 HY16F Writer 所需的系统配置:

● PC 硬件需求:

PC 兼容的奔腾 (PENTIUM®) 级系统

256MB 存储器(推荐 512MB)

500MB 硬盘空间

- 支援作业系统 -Windows XP(32 bit), Windows 7 (32 bit/64 bit), Windows 8 (32 bit/64 bit), Windows 10 (64 bit)
- 适用软件支援版本

HY16F Writer V3.3 以上

● 支援芯片产品型号:

-HY16F18X 产品:HY16F184、HY16F187、HY16F188

-HY16F19X 产品:HY16F196、HY16F197、HY16F198

-HY16F19XB 产品:HY16F196B、HY16F197B、HY16F198B、HY16F1983 -HY16F3981

● 适用下列界面模式

USB Port with HID-compliant device

HY10000-WK08X 的 USB Port 驱动是使用 Windows 标准的 HID 驱动(如图 3-1), 所以不用另外安装 USB 驱动就能使用。



内存技术驱动程序
 人体学输入设备
 HID-compliant device
 USB 輸入设备
 USB 輸入设备
 声音、视频和游戏控制器

●程序版本兼容性:

HY16F IDE 各版本所组译出的烧录档案(.bin),都可经由 HY16F Writer 软件,进行 下载烧录。

- 解压缩 HY16F Writer 软件并执行 Setup.exe 执行档
- 按画面照指示一步一步向下执行安装步骤

解压缩 HY16F Writer 软件包后运行 ^{◆ setup} 就可以进行软件的安装(步骤如下图),安装 完毕后直接运行\HYCON\HY16F Writer 目录下的 ^{● HY16F Writer} 就可以开启软件进行操作。

Note:在运行软件时请以『系统管理员身份』来运行

图 3-1







Select Components	· · · · · · · · · · · · · · · · · · ·
Which components should be installed?	
Select the components you want to ins	tall; clear the components you do not want to
install. Click Next when you are ready t	to continue.
Full installation	2 E MP
Main procedure Documents	2.5 MB 2.7 MB
Current selection requires at least 5.9 (MB of disk space
IYCON Technology Corporation	
	< Back Next > Cancel
Setup - HY16F Writer	
Select Start Menu Folder	
Where should Setup place the program	i's shortcuts?
	`
Setup will create the program	's shortcuts in the following Start Menu folder.
To continue, click Next, If you would lik	e to select a different folder, click Browse.
HYCON-HY 16E Writer	Browse
	bionaciii
Don't create a Start Menu folder	
IYCON Technology Corporation	
	< Back Next > Cancel
	< Back Next > Cancel
	< Back Next > Cancel
Setup - HY16F Writer	< Back Next > Cancel
Setup - HY16F Writer	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would lii Writer, then dick Next.	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would lik Writer, then click Next. Additional icons:	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would lik Writer, then click Next. Additional icons: © Create a desktop icon	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then dick Next. Additional icons: Create a desktop icon Create a Quick Launch icon	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional Tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon WCON Technology Corporation	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon WYCON Technology Corporation	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional Tasks should be perfor Select the additional tasks should be perfor Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon WYCON Technology Corporation Setup - HY16F Writer	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional Tasks should be perfor Select the additional tasks should be perfor Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon VCON Technology Corporation Setup - HY16F Writer	< Back Next > Cancel
Setup - HY16F Writer Select Additional Tasks Which additional Tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon VCON Technology Corporation Setup - HY16F Writer Ready to Install Setup is now ready to begin installing H	< Back Next > Cancel med? ke Setup to perform while installing HY 16F < Back Next > Cancel KY 16F Writer on your computer.
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon VCON Technology Corporation Setup - HY16F Writer Ready to Install Setup is now ready to begin installing H	< <p>Rest < Back</p>
Setup - HY16F Writer Select Additional Tasks Which additional Tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon VCON Technology Corporation Setup - HY16F Writer Ready to Install Setup is now ready to begin installing H Click Install to continue with the installa change any settings.	< Back Next > Cancel med? Ke Setup to perform while installing HY 16F << Back Next > Cancel (< Back Next > Cancel (1) F Writer on your computer. (1) If Writer on your computer. (2) (2) (2) (2) (2) (2) (2) (2) (2) (2)
Setup - HY16F Writer Select Additional Tasks Which additional Tasks Which additional Tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon VCON Technology Corporation VCON Technology Corporation Setup - HY16F Writer Ready to Install Setup is now ready to begin installing H Click Install to continue with the installa change any settings. Destination location:	< Back Next > Cancel med? ke Setup to perform while installing HY 16F < Back Next > Cancel fY 16F Writer on your computer. ation, or click Back if you want to review or
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then cick Next. Additional icons: Create a desktop icon Create a Quick Launch icon TYCON Technology Corporation Setup - HY16F Writer Ready to Install Setup is now ready to begin installing H Click Install to continue with the installa change any settings. Destination location: C:\HYCON\HY16F Writer	< Back Next > Cancel med? ke Setup to perform while installing HY 16F < Back Next > Cancel < Cancel
Setup - HY16F Writer Select Additional Tasks Which additional Tasks Which additional Tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a desktop icon Create a Quick Launch icon VCON Technology Corporation VCON Technology Corporation Setup - HY16F Writer Ready to Install Setup is now ready to begin installing H Click Install to continue with the installa change any settings. Destination location: C:\HYCON\HY16F Writer Setup type: Full installation	< Back Next > Cancel rmed? (< Back Next > Cancel (< Back Next > Cancel (Y16F Writer on your computer. ttion, or click Back if you want to review or
Setup - HY16F Writer Select Additional Tasks Which additional Tasks Which additional Tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a quick Launch icon YCON Technology Corporation YCON Technology Corporation Setup - HY16F Writer Ready to Install Setup is now ready to begin installing H Click Install to continue with the installa change any settings. Destination location: C:\HYCON\HY16F Writer Setup type: Full installation Selected components:	< Back Next > Cancel Trend? Cancel Cancel Cancel Cancel Cancel Cancel Cancel Cancel Cancel Cancel Cancel Cancel Cancel Cancel Cancel Cancel Cancel Cancel Cancel
Setup - HY16F Writer Select Additional Tasks Which additional Tasks Which additional Tasks should be perfor Select the additional tasks should be perfor Create adesktop icon Create a desktop icon Create a desktop icon Create a Quick Launch icon YCON Technology Corporation Setup - HY16F Writer Ready to Install Setup is now ready to begin installing H Click Install to continue with the installa change any settings. Destination location: C:YHCONYT16F Writer Setup type: Ful installation Selected components: Magn procedure	< Back Next > Cancel rmed? Ke Setup to perform while installing HY 16F < Back Next > Cancel AY 16F Writer on your computer. Atton, or click Back if you want to review or E
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon YCON Technology Corporation Setup - HY16F Writer Ready to Install Setup is now ready to begin installing H Click Install to continue with the installa change any settings. Destination location: C:\HYCON\HY16F Writer Setup type: Ful installation Selected components: Main procedure Documents	< Back Next > Cancel med? Ke Setup to perform while installing HY 16F < Back Next > Cancel (Setup to perform while installing HY 16F (Setup to perform while install hy 16F (Setup to perf
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon YCON Technology Corporation YCON Technology Corporation Setup - HY16F Writer Ready to Install Setup is now ready to begin installing H Click Install to continue with the installa change any settings. Destination location: C:\HYCON\HY16F Writer Setup type: Full installation Selected components: Main procedure Documents Start Menn Kolder: HYCON+HY16F Writer	< Back Next > Cancel med? Ke Setup to perform while installing HY 16F < Back Next > Cancel (Second Second
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon YCON Technology Corporation Setup - HY16F Writer Ready to Install Setup is now ready to begin installing H Click Install to continue with the installa change any settings. Destination location: C:\HYCON\HY16F Writer Setup type: Full installation Selected components: Main procedure Documents Start Menu folder: HYCON.HY16F Writer	< Back Next > Cancel med? Ke Setup to perform while installing HY 16F < Back Next > Cancel (Setup to perform while installing HY 16F (Setup to perform while install hy 16F (Setup to perf
Setup - HY16F Writer Select Additional Tasks Which additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then click Next. Additional icons: Create a desktop icon Create a Quick Launch icon (YCON Technology Corporation Setup - HY16F Writer Ready to Install Setup is now ready to begin installing H Click Install to continue with the installa change any settings. Destination location: C:\HYCONHY16F Writer Setup type: Full installation Selected components: Main procedure Documents Start Menu folder: HYCONHY16F Writer (WCON Technology Corporation	< Back Next > Cancel med? Ke Setup to perform while installing HY 16F < Back Next > Cancel (< Back Next > Cancel (< Back Next > Cancel () () () () () () () () () () () () () (
Setup - HY16F Writer Select Additional Tasks Which additional tasks should be perfor Select the additional tasks you would li Writer, then cick Next. Additional icons: Create a desktop icon Create a Quick Launch icon TYCON Technology Corporation Setup - HY16F Writer Ready to Install Setup is now ready to begin installing H Click Install to continue with the installa Change any settings. Destination location: C: \HYCON\HY16F Writer Setup type: Full installation Selected components: Main procedure Documents Start Menu folder: HYCON-HY16F Writer (WYCON Technology Corporation	< Back Next > Cancel rmed? < Back Next > Cancel Ke Setup to perform while installing HY 16F



Setup - HY16F Writer	
Installing Please wait while Setup ins	stalls HY 16F Writer on your computer.
Extracting files C:\HYCON\HY16F Writer\E	Documents\APD-HY16IDE006_TC.pdf
HYCON Technology Corporat	Cancel
	4
Satura HV16E Writer	
	Completing the HY16F Writer Setup Wizard
/ j	Setup has finished installing HY16F Writer on your computer. The application may be launched by selecting the installed icons.
7 - E	Click Finish to exit Setup.
	 View Revision.txt View APD-HY16IDE006_TC.pdf
	View APD-HY16IDE006_EN.pdf
	V Launch Hi 10F Writer
⊥ ¥	

3.3.2. 卸载

请到控制面板的"卸载或更改程序"寻找 HY16F Writer 选择卸载程序,亦或是直接运行 HY16F Writer 软件目录下的 🗇 unins000,就能解除软件的安装。



4. 整体操作说明

4.1. 烧录器硬件说明

4.1.1. 烧录器按键与灯号功能说明

4.1.1.1. Program 按键(外部按钮)

程序烧录到芯片中,包含检查 Chip 型号→Erase All→Program→Verify,当在烧录过程中, 烧录按键敲击无任何作用。

4.1.1.2. 状态指示灯

绿灯 L1:代表烧录按键执行后,检查与烧录动作均正常。

红灯 L2:代表按键执行后,烧录执行的任一行为失败。

黄灯 L3:烧录过程显示灯,配合自动化机台烧录使用、烧录前灯灭、烧录过程中灯恒亮,烧 录完成或是烧录失败后灯灭。



名称	说明
芯片烧录端界面	PIN1 : Reset(VPP)
	PIN2 : NC(SCK)
	PIN3 : EDIO(SDI)
	PIN4 : ECK(SDO)
	PIN5 : VDD
	PIN6 : VSS
状态指示灯	L1 : OK (Green LED)
	L2 : Error (Red LED)
	L3 : Busy (Yellow LED)



USB 连接端	烧录器电源输入端/资料传输线连接端
Program 按键	烧录按键
Blank 按键	此按键无效
Information 按键	烧录信息查询

4.1.2. 侧边端&烧录脚位对应说明图





图 4-1 烧录器烧录端

4.2. HY16F 系列烧录档区域说明

项目程序透过 AndeSight IDE 编译后会产出一个 Bin File 的烧录程序码(如图 4-2),而在一些 需要分区烧录的需求上,也能选择分开编译以产生区块的烧录程序码(如图 4-3,其中 App Bin 及 Data Bin File 中区分出来的),烧录程序码可直接烧录至芯片的 Flash ROM(分为 App Flash ROM 及 Data Flash ROM 两区),详细芯片的 Flash ROM 烧录区配置如图 4-4:









- App Bin File:此烧录程序码由使用者应用程序所产生的,烧录在芯片的 App Flash ROM 区,为烧录时的必要性程序码。
- Data Bin File:此烧录程序码由使用者自行规划的固定参数或校正参数所产生的,烧录在芯片的 Data Flash ROM 区,因此程序码为依客户应用需求产生,故非必要性。
- 3. App Bin 及 Data Bin 是由 Bin File 分开而得的烧录档,目的是用来做分区烧录的应用, 若不需要做分区烧录则在烧录时直接用 Bin File 取代 App Bin File 烧录至芯片就行。



4.3. 烧录器软件说明

HY16F Writer 软件界面功能区块,功能介绍如下:

	Les Die		Deter in date	Territoria I				Function	
HYCON HY16F Serial	App Din	Data Din App in Chip	Data in Chip	App in Burner	Data in Burner	Clock Calibrate		Tunction	
	6	7		8		10-1		10	
1 Connection check 2					Load	File size:	Checksum:		
Connect 👻 Flash Erase				9					
	20								
Part No. 000	40								
000	60								
4 F/W Ver: N/A Software Ver 3.8.1 000	80								
Encrypt & Decrypt 000	CO								
5 • Encrypt with password 000	EO								
Password 0x FFFFFFFF 801	00								
Encrypt without password 001	40								
Target: O Chip Burner 801	60								
Program Read Area 001	80								
1 Burn of numb 001	CO								
12 Chip Code 001	EO								
13 ISP Resource Settr	00								
App Bin 002	40								
14 App Writing Address Begin: 0 002	60								
002	80								
Data Bin 002	CO								
13 Data writing Address Begin: Pool 002	EO								
16 Erase AI 003	00								
Read Burn 003	40								
17 18 003	60								
003	80								
003	AU								
003	EO								
004	00								
004	20								
004	60								
004	80								
984	AB CB								
984	EO								
005	00								
19						05			

图 4-5 界面功能区块图

4.3.1. 连接界面

HYCON HY16F Serial
Connection check
1 Connect 🔽 Flash Erase
Status
Part No.
4 F/W Ver: N/A Software Ver 3.8.1
Encrypt & Decrypt 5 Encrypt with password
Password 0x FFFFFFF

图 4-6 连接界面图

HY16F 系列 烧录器使用说明书



(1)连接状态:Connect/Disconnect 按钮:当显示 Connected 为 USB 连线;当显示 Disconnect 为 USB 离线,当芯片有做加密保护时,在连接时会有以下情况:

- 当芯片选择的型号是 HY16F18X 或 HY16F19X 时:
 - > 若芯片是做硬件加密,要输入正确密码解密后芯片才能正常连线。
 - > 若芯片是做软件加密,要透过 Flash Erase 功能先解密后芯片才能正常连线。
- 当芯片选择的型号是 HY16F19XB 或 HY16F3981 时:
 - 若芯片是做硬件加密,要输入正确密码解密后芯片才能正常连线,连线后芯片的 App ROM 会被清除。
 - > 若芯片是做软件加密,要透过 Flash Erase 功能先解密后芯片才能正常连线。

(2)Flash Erase 按钮:直接清除芯片里的所有资料(包含 Flash ROM 及解密)

- 当芯片选择的型号是 HY16F18X 或 HY16F19X 时:
 - > 若芯片未做硬件加密保护,直接清除芯片内 Flash ROM 资料。
 - 若芯片已做硬件加密保护(显示 Code Protection),则需要检查密码,密码错误显示 Password Error 不做任何动作,密码正确才会清除芯片内 Flash ROM 资料并同时 解密,完成后显示芯片为空白讯息。
- 当IC 选择的型号是 HY16F19XB 或 HY16F3981 时:

无论芯片是否做过加密保护,经由 Flash Erase 按钮(不需要输入密码)就可以直接清除芯片内 Flash ROM 资料,并同时解密。

(3)Part No.:显示当前芯片型号,以及 RAM、APROM 的大小。

(4)版本信息:显示烧录器 F/W 版本与软件版本

- F/W Ver.:显示 WK08x 所载入的 F/W 版本
- Software Ver.:显示 HY16F Writer 的软件版本

NOTE:使用 WK08x 前要确定烧录器有载入能支持 HY16F 产品烧录的 F/W,具体 F/W 的载入方式可参考 『整合型烧录器使用说明书 APD-HYIDE013 文档』。HY16F Writer V3.8.1 以后的版本,不再支持 Burner Transformer 软件更新烧录器 F/W. 烧录器 F/W 的更新方式可以直接从 HY16F Writer V3.8.1 的选项 Function, Update Firmware 来完成.

(5) Encrypt & Decrypt:加密保护功能

 Encrypt with password:带密码之硬件加密功能,密码输入范围为 0x0 ~0xFFFFFFFF 的数值以作为硬件保护;预设为无密码状态 0xFFFFFFFF,每次下载程序时都会将密码 输入 Burner 与 Chip 中,密码正确与否决定程序是否可以被读出;若忘记密码,此芯片 将不能重复被烧录。



- Encrypt without password:无密码之软件加密功能,不须输入密码;若芯片已加密,连 接时需手动按"Flash Erase"按钮才能解密。
- 4.3.2. 程序界面



图 4-7 程序界面图

程序显示界面分为三页

(6)AppBin & Data Bin:分别显示待烧录程序码的内容,预设显示 AppBin 画面。

(7)Appin Chip & Data in Chip:分别显示读回自芯片的烧录程序码的内容。

(8) Appin Burner & Data in Burner: 分别显示读回自烧录器的烧录程序码的内容。

(9)Load file:载入待烧录程序码的.bin 文档,并显示 File size & Checksum。

(10)Function:有7个选项如下



- I. Unlock Flash:不开放使用。
- II. Lock Flash:不开放使用。
- III. Restore to UnSeal State:使已加密 IC 解除密码,进入未加密状态。NOTE: HY16F188及 HY16F19X 产品无法使用此功能。
- IV. Save Option Project:保存工程,包括烧录配置和烧录档。
- V. Open Option Project:载入工程。
- VI. Download LCM String:下载 LCM 显示 String。 Note:如果遇到 LCD 无字体显示或是乱码情况,可选择更新下载 LCM String
- VII. Update Firmware: 在线更新 WK08D 烧录器 Firmware, HY16F Writer V3.8.1 以后的版本都建议使用此方式更新烧录器 Firmware,使用者不要再透过 HYCON Burner Transformer 软件来更新烧录器 Firmware。

(10-1) Clock Calibrate:频率校正功能.此为特殊应用需求,如需执行此功能,请联系 HYCON 工程人员.



4.3.3. 状态界面

	Target: O Chip	🔘 Burner
	Program Re	ad Area
1	Burn of number	
1	2 Chip Code	
1	3 ISP Resource Setti	ng
1	4 App Bin App Writing Ad	dress Begin: 0
1	Data Bin Data Writing Ad	ddress Begin: F000
1	6 Erase All	Read Burn
		17 18

图 4-8 状态界面图

(11)Burn of number:设定限制烧录次数,可设定的范围为 0~99999999。

(12)Chip Code:滚码写入功能(写入地址在芯片 Flash ROM 的最后 4 个字节),支援离线烧 录使用,每烧录成功一次会自动加1,最大加到 999999999 就会停止;当有勾选 Chip Code 时才能启用此功能,用户可自行设定起始的初值(范围为 1~99999999)。

例如:假设使用 HY16F198B 芯片烧录,而当前的滚码计数到 10000,则在 Flash ROM 的 滚码写入地址 0xFFFC~0xFFFF 会显示=> 0x2710

(13)ISP Resource Setting : 定义 ISP UART Pin & ISP Check Pin

烧录器版本 HY16F Writer V3.3 以后的版本开放使用,如有需要 ISP Bootloader 功能,可以利用此功能来做 ISP Bootloader Enable 的设定。

(14)App Bin and address Begin:一般烧录都是先勾选 AppBin 后,可输入烧录的起始位置(初始值为0,不需要刻意变更)。

(15)Data Bin and address Begin:如需要烧录 Data Bin 可勾选并可输入烧录的起始位置 (初始值为 F000,不需要刻意变更)。



(16)Erase All:可决定烧录前是否对芯片的 Flash ROM 空间全部清除。

- 有**勾选** Erase All 时:烧录前会先清除芯片的 Flash ROM(即 App ROM 及 Data ROM),
 再进行烧录动作,故芯片第一次烧程序时建议勾选 Erase All 功能。
- 未**勾选** Erase All 时:烧录前芯片的 Flash ROM 资料不会被清除,就直接进行烧录动作, 故当需要将 App Bin 及 Data Bin 做分开烧录的动作时,则不需要勾选 Erase All 功能。

(17)Read 功能:依据 Target 选择以决定是读取 Chip 或 Burner 的程序码

- 当芯片选择的型号是 HY16F18X 或 HY16F19X 时:
 - ➢ 当 Target 选择 Chip:
 - 1. 若芯片未做任何加密保护,可直接读取芯片完整的 Flash ROM 资料。
 - 2. 若芯片已做软件加密保护,则无法读取芯片的程序码。
 - 3. 若芯片已做硬件加密保护,则要输入正确的密码才能读取芯片中完整的 Flash ROM 资料。
 - ➢ 当 Target 选择 Burner :
 - 1. 若芯片未做硬件加密保护,则可以直接读取 WK08x 中的 Flash ROM 资料。
 - 2. 若芯片已做硬件加密保护,则要输入正确的密码才能读取 WK08x 中完整的 Flash ROM 资料,当密码错误时会显示 Password read fail 而无法读取。
- 当芯片选择的型号是 HY16F19XB 或 HY16F3981 时:
 - ➢ 当 Target 选择 Chip:
 - 1. 若芯片未做任何加密保护,可直接读取芯片完整的 Flash ROM 资料。
 - 2. 若芯片已做软件加密保护,则无法读取芯片的程序码。
 - 3. 若芯片已做硬件加密保护,则要输入正确的密码才能读取芯片中的 Flash ROM 资料(读取之前 App ROM 会自动被清除)。
- 当 Target 选择 Burner:
 - 1. 若芯片未做硬件加密保护,则可以直接读取 WK08x 中的 Flash ROM 资料。
 - 2. 若芯片已做硬件加密保护,则要输入正确的密码才能读取 WK08x 中完整的 Flash ROM 资料,当密码错误时会显示 Password read fail 而无法读取。

(18)Burn 功能:依据 Target 选择来动作,说明如下

- 当 Target 选择 Chip 时:将 App Bin、Data Bin 及加密讯息烧录到芯片内。 NOTE:如果芯片已做过加密保护,则要先进行解密才能执行以上动作。
- 当 Target 选择 Burner 时:将 App Bin、Data Bin、加密讯息、芯片型号及烧录设置下载 到 WK08x 内。



(19)烧录状态:显示烧录进度百分比,如下图:

(1.0)	
(19)	AK .
	图 4-9 烧录进度图

(20) Reading Address Begin & End:此功能同图 4-8 中(17)Read 读取芯片功能,差别在于用户可自行设定起点和终点的读取地址,如下图:

Program	Read Area (20)	·
Readir Readir	ng Address Begin ng Address End	0 FFFF
		Read

图 4-10 Read Area 界面图



5. 烧录操作范例说明

以 HY16F198B 芯片烧录来举例说明

5.1. 在线烧录功能

STEP01:开启 HY16F Writer 软件,点选 Connect 以连接 WK08x 及芯片,并依显示的 Part No.芯片型号来选择所要烧录的芯片型号。

STEP02:选择 Target 为 Chip。

STEP03: App Bin 必须勾选,正常烧录需勾选"Erase All"。

STEP04: 点选 Load 载入烧录 App bin File,显示档案 Checksum 及其他讯息。

STEP05:点选 Burn 烧录按键,若芯片未做硬件加密保护,可直接将程序码烧录到芯片中, 若芯片已做硬件加密保护,则必须输入正确的密码解密后才能正常烧录,烧录完成后显示烧 录结果。

	App Bin Data Bin App in Chip Data in Chip App in Burner Data in Burner Function
Connection check	C:\Users\Administrator\Desktop\BIN198\HY16F198RW_LCD01.b Load File size: 1704 Bytes Checksum: 0x1700
Disconnect Flash Erase	STEP04
Part No.	00000 48 00 00 C2 92 00 92 00 92 00 92 00 40 00 00 94 80 00 0B F92 00 92 00 92 00 92 00 40 00 00 9 H
16F1981C RAM: 8 K Bytes APROM: 64 K Bytes	00060 48 00 00 72 00 92 00
F/W Ver:3.4 Software Ver: 2.2 Encrypt & Decrypt	000A0 48 00 00 D7 92 00 92 00 92 00 92 00 40 00 00 09 48 00 00 D3 92 00 92 00 92 00 92 00 40 00 00 9 H
Encrypt with password Password 0x FFFFFFFF	UUUEU 48 UU UU C7 92 UU 92 UU 92 UO 92 00 40 00 00 94 88 00 00 C3 92 00 92 00 92 00 92 00 40 00 00 09 H
Encrypt without password	00140 CA 02 09 00 42 05 09 00 46 05 09 00 4A 05 09 00 4E 05 09 00 52 05 09 00 56 05 09 00 CA 02 09 00BF.J.N.R.V. 00160 CA 02 09 00 CA 02 09 00BF.J.
Program Read Area	00180 CA 02 09 00 48 00 00 8D 92 00 92 00 92 00 84 01 46 F0 00 90 58 F7 82 CA DD 0F 84 02 46 F0 00 90
Burn of number Chip Code	001E0 3A 2F 88 3C 46 10 00 90 64 12 00 02 64 22 A4 02 64 32 04 02 3A 1F 60 32 94 16 3A 25 44 A6 12 00 03 60 5F 65Y. Pdd"., dZ, J 001E0 3A 2F 88 3C 46 10 00 90 58 10 81 44 38 10 82 02 DD 21 05 FF 80 00 3A 0F 88 04 64 02 00 43 64 00 ;;/. <fx. d8!<br="">00200 00 08 64 02 00 03 64 12 A4 03 64 22 04 03 3A FF BF 84 3A 1F 94 04 3A 0F 80 04 64 00 00 04 3A 0Fdd</fx.>
☐ ISP Resource Setting FFFFFFFF	00220 80 3C 84 00 D5 CA 3A 0F 80 3C 84 01 D5 C6 3A 0F 80 3C 84 02 D5 C2 3A 0F 80 3C 84 03 D5 BE 3A 0F
App Writing Address Begin: 0	00260 80 3C 84 08 D5 AA 3A 0F 80 3C 84 09 D5 A6 3A 0F 80 3C 84 0A D5 A2 3A 0F 80 3C 84 0B D5 9E 3A 0F
Data Bin Data Bin Data Writing Address Begin: F000	002C0 E0 03 49 00 00 66 48 00 01 2F FC 00 05 00 FC 01 46 10 00 05 80 10 80 10 80 50 46 00 00 05 80 10 00 40FKPF. 002E0 9A 08 80 40 46 00 00 05 80 00 04 46 10 00 90 58 10 86 98 46 F0 00 90 58 F7 86 84 DD2F 46 10@FX@FX
V Erase All	00300 00 00 58 10 80 50 46 00 00 00 58 80 00 40 9A 08 46 20 00 90 58 21 06 98 98 42 46 20 00 00 58 21
Read Burn STEP05	00360 FF FB FC 81 FC 01 64 02 64 02 90 10 F0 81 F0 01 84 28 64 60 80 0B E6 0A E9 25 84 28 4C 00 80 0E
	003A0 AC 40 46 F0 00 81 58 F7 80 28 DD 2F D5 0B 44 04 01 04 44 1F FF 00 AC 40 46 F0 00 81 58 F7 80 28
	003E0 00 E4 84 01 49 00 00 ED 84 01 49 00 00 F7 84 05 44 10 00 FF 49 00 00 FF 84 00 44 10 00 FF 49 00IIIII



5.2. 离线烧录功能

STEP01:开启 HY16F Writer 软件,点选 Connect 以连接 WK08x 及芯片,并依显示的 Part No.芯片型号来选择所要烧录的芯片型号。

STEP02:选择 Target 为 Burner。

STEP03: App Bin 必须勾选,正常烧录需勾选"Erase All"。

STEP04: 点选 Load 载入 App Bin File,显示档案 Checksum 及其他讯息。

STEP05:点选 Burn 按键,将程序码下载到烧录器中,下载完成后显示 PASS。

STEP06:将烧录软件关闭后,透过烧录器上 Program 按键进行芯片烧录,烧录过程中显示 L3(Busy)灯号,烧录完成后 L3 灭灯,显示 L1(OK)灯号或是 L2(Error)灯号。

		App Bin	Data Bin	App in Chip	Data in Chip	App in Burner	Data in Burner		Function
HY16F Serial		ninintenton) Doolo							
STEPHIA	C:\Users\Adr	ninistrator\Desk	top/BIN198/HY	198_HIGH_SC	ALER-	oad File	e size: 13220 Byte	Checksum: 0x987	D
Connect Flash Erase					STI	EP04			
Offline			00.92.00.40.0	0 00 85 20 00	0 BE 92 00 92 1)0 92 00 92 00 4	10 00 00 09 H	@H	L
Part No.	Ull Select all IC	туре			92	JU 92 UU 92 UU 4 10 02 00 02 00 4	10000009 H	@H	 I
16F1981C RAM: 8 K Bytes APROM: 64 K Bytes		List	HY16F	198B>:	92 (0 92 00 92 00 4 0 92 00 92 00 4	10 00 00 09 H 10 00 00 09 H	@H	 L
F/W Ver:3.4 Software Ver: 2.2	000		· · · · · · · · · · · · · · · · · · ·		92 1	10 92 00 92 00 4 10 92 00 92 00 4	10 00 00 03 11 10 00 00 09 H	@n @ H	 I
Engrypt & Degrypt	000 HY16F187		RAM Size		92 (0 92 00 92 00 4	10 00 00 09 H	@н	
 Encrypt with password 	000 HY 16F 188		8K		92 (0 92 00 92 00 4	10 00 00 09 H	@н	
Password 0.:	001 HY16F196		U.V.		92 (0 92 00 92 00 4	10 00 00 09 H	@ H	L
 Encrypt without password 	001 HY 16F 197		APROM S	ize:	92 (0 92 00 92 00 1	E 03 09 00 H	@Н	
	001 HY 16F 196B		64K	_	09 0	0 04 1C 09 00 1	E 03 09 00 .	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • •
Target: Onip Burner SIEP02	HY16F197B		0 m		09 0	JU 1E U3 U9 UU 1	IE 03 09 00		
Program Read Area	001 HY16F198B				0.0	12 DD UF 3A UF 3	94 3U 3A FF		
	001 1110-3981		Part No		05	FF 80 00 3A 0F 8	38 04 64 02	(d. d /) H	(
burn of number	001		16F1981	C	64 (0 00 04 49 00 0	0 DF 64 72 .	ddd":	. : d I
Chip Code	002				00 0	00 59 DE 80 80 6	64 12 00 02 .	drd:<:	GY
ISP Resource Setting FFFFFFF	002				88 3	BC 46 10 00 90 5	58 10 81 44 d'	'd2:<.Jd	:/. <f< th=""></f<>
- V App Bin	002		OK	Cano	el 64 (02 00 03 64 12 A	4 03 64 22 8	!d	Cddc
App Writing Address Begin:	002				84 (00 D5 CA 3A 0F 8	30 3C 84 01 .	:d	.:<:
STEP03	002				 84 (04 D5 BA 3A 0F 8	30 3C 84 05 .	····	.::
Data Bin	002A0 D5 B6 3A 0F	80 3C 84 06 D5	B2 3A OF 80 3	C 84 07 D5 AE 3	A OF 80 3C 84 0	18 D5 AA 3A 0F 8	30 3C 84 09 .	:	. : < :
Data Writing Address Begin: F000	002C0 D5 A6 3A 0	· 80 30 84 0A D5	AZ JA UF 80 J	34 UB D5 9E 3	A UF 80 30 84 1 7 do 00 00 co 1	JC D5 9A JA UF 8	SU 3C 84 UD		.:
	002E0 D5 96 3A 0	00 3C 64 0E D3	02 3A UF 00 3	, 64 UF D5 6E 4	/ DU UU UU 59 I / 2/ E0 03 /9 I	JE 00 00 47 CF F	FFF59CE	C V E VI	.GTC
V Frase All	00300 01 00 47 10 00320 D5 00 EC 01	A6 10 00 00 58	10 80 50 46 0	, 50 21 00 03 04 1 00 00 58 00 0	9 24 20 03 43 0 0 <i>4</i> 0 94 08 80 <i>4</i>	40 46 00 00 00 00 5	58 00 00 4 0	F X PF X	: 03 : 00 07
Read Burn		58 10 83 94 46	F0 00 93 58 F	83 7C DD 2F 4	6 10 00 00 58 1	10 40 50 50 00 00 0	10 00 58 00 F	XFXI.	/ F X PF
	00360 00 40 9A 08	46 20 00 93 58	21 03 94 98 4	46 20 00 00 5	8 21 00 50 46 0	0 00 00 58 00 0	0 50 9A 10 .	Q. F XI BF	. XI . PF >
STEP05	00380 80 40 46 00	00 00 58 00 00	50 46 F0 00 9	58 F7 83 7C D	D2F 46 10 00 0	0 58 10 81 60 4	16 00 00 00 .	- @FXPFX	./FX
	003A0 58 00 00 50	9A 88 84 60 84	20 B6 20 9C 0	1 9C DC 9A 53 4	E 16 FF FB FC (31 FC 01 64 02 6	64 02 90 10 X	. P `	SN
	003C0 F0 81 F0 01	84 2A 4C 00 80	0B E6 0A E9 2	5 84 2B 4C 00 8	0 0E 84 2C 4C I	00 80 16 D5 1E 4	14 04 01 06 .	*L%.+L	, L
	003E0 44 10 10 00	AC 40 64 00 00	00 D5 16 44 0	1 01 04 44 1F F	F 10 AC 40 46 I	FO OO 81 58 F7 8	30 28 DD 2F D	@d D D	@F>
	00400 D5 0B 44 04	1 01 04 44 1F FF	<u>ΠΠ ΔC 4Π 46 Ε</u>	1 AA 81 58 F7 8	0 28 DD 2F FC 1	31 40 00 00 09 4	90 00 00 00	n n @F x	() @
					07				







5.3. Read Chip 功能

STEP01:开启 HY16F Writer 软件连接 WK08x 及芯片。

STEP02:输入正确 Password(密码错误时,则无法与芯片连接),若无密码则不用写入。

STEP03:点选 Connect,若通过芯片检查则显示 Password protection 若检查失败则显示 Chip error(预设 Program->Password:FFFFFF)当检查通过后,就可以重新设定 Password 资料。

STEP04:点选 Chip 设定为 read Chip 模式,选择要读取的是 App Bin。

STEP05:点选 Read 按钮,软件会跳至 App in chip 的显示视窗。

STEP06:Read Chip 功能主要是将 Load 的 BIN file 与芯片的 Flash ROM 进行比对,当比 对通过时,会于视窗中显示 Equal,当比对不通过时则显示 Not Equal。

HYCON HY16F Serial	App Bin Data Bin App in Chip Stan Chip App in Burne Data in Burner	Function 🖃 🗙
Connection check STEP03	File size: 57632 Bytes Checksum: Did160 Equal Objic Code: Ison Ison Ison Ison Ison	
Disconnect Flash Erase		
	00020 FC 00 49 00 01 49 FC 80 FC 00 49 00 01 47 FC 80 FC 00 49 00 01 45 FC 80 FC 00 49 00 01 43 FC 80	.IIGIEIC.
Part No.		
16F1981C RAM: 8 K Bytes APROM: 64 K Bytes	00080 00 00 00 00 00 00 00 00 00 00 00 0	
F/W Ver:3.4 Software Ver: 2.2	000C0FF FC D5 01 3C 0D FF FF 96 04 C0 FD 3C 0D FF FE 90 10 49 00 00 75 3C 1D FF FF 84 1E FE 0E 3C 0F	<
Encrypt & Decrypt	00100 02 19 84 05 44 10 00 FF 49 00 02 21 84 00 44 10 00 FF 49 00 02 1C 84 01 44 10 00 FF 49 00 02 17	DIIDIDI
Encrypt with password STED02	01140 84 00 F0 81 84 00 F0 81 D5 0A F0 01 44 10 00 58 98 01 84 20 AE 40 F0 01 9C 01 F0 81 F0 01 E4 0B	D.X@
Password 0x FFFFFFFF SIEFU2	00160 E9 F5 44 00 00 58 84 2B 49 00 00 5D FC 81 FC 00 84 00 3E 00 00 04 40 00 076 3E 00 00 01 44 0F 0. 00180 FF 86 3E 00 00 22 44 0F FF 63 2F 00 03 44 0F FF F4 3E 00 00 44 00 00 66 3F 00 00 5B 40 0	. X +I m
	001A03E 00 00 06 84 00 3E 00 00 07 84 00 3E 00 00 07 84 70 3E 00 00 08 44 00 00 58 84 28 49 00 00 46 FC 80 FC 02 F0 81 >	
Target: OChip Burner		
Program Read Area	00200 00 58 98 02 AE 40 F1 01 84 0A 40 00 80 37 F0 81 F0 02 9E 01 F0 82 F0 02 4E 04 FF E9 00 0F 80 0FX	.@@.7N
Burn of numbe	00240 FC 82 FC 02 F0 81 80 01 10 0F 80 00 84 00 10 0F 80 0F D5 11 00 0F 80 0F 96 00 F1 01 A6 48 96 48	
Chip Code	00280 42 00 61 A0 F0 01 9C 01 F0 01 00 F 80 0F 9C 01 10 0F 80 0F 9C 01 00 0F 80 0F 00 0F 80 0F 95 40 00 0F 80 00 96 00 1	······································
ISP Resource Settinc	002A0FF FE 3C 0D FF FF 58 00 00 01 3C 0F FF FF FC 80 FC 00 FC 80 FC 00 FC 80 FC 00 FC 80 FC 00 FC 80C.	x
	002E001 A3 44 00 10 00 49 00 00 30 84 01 49 00 01 A2 84 00 84 21 49 00 00 33 84 00 49 00 01 67 49 00D.	
App Writing Address Begin: 0	00300 49 00 00 52 84 00 84 20 49 00 00 52 84 00 49 00 00 72 84 00 84 20 49 00 00 81 84 01 49 00 00 92 1R	l]lrll
	00340 49 00 00 B2 FC 80 FC 01 F0 81 D5 05 92 00 F0 01 9E 01 F0 81 F0 01 C8 FB FC 81 FC 00 E6 0E E8 12 1	M L
Data Bin	00380 05 22 65 10 44 24 11 04 64 62 92 70 40 31 63 08 44 40 FF 00 FE 27 FE 3F 34 04 FE 0F 65 28 40	
Data Writing Address Begin: F000	003A084 00 FC 80 FC 00 E6 02 E9 03 84 01 D5 0A 46 11 00 00 40 00 50 08 FE 0F 44 14 11 00 B6 01 84 00	
Erase All STEP05	003E0 FE UF 40 10 D0 08 EE 47 B6 22 B4 00 D5 02 B4 01 D5 02 B4 00 D5 02 B4 01 D5 0E 40 10 D5 02 44 14 11 04@	
Read Burn	00420 B4 41 45 3F 0F FF 58 31 BF FF FE 9E 40 00 60 08 FE 17 46 10 C 08 FE 42 11 00 B6 22 B4 00 FC 80 F	
	00440 FC 00 E5 02 E9 03 84 01 D5 0E 44 14 11 04 B4 41 46 3F FF 7F 58 31 8F FF FE 9E 40 00 4C 08 FE 17	DAF?XI@L
	00480 FG 00 EG 04 E8 0E EG 22 E8 0C 44 20 FG 04 94 04 FE 17 94 4F FE 47 44 24 03 0C B6 22 84 00 FG 00 2	"D@Q.GD\$"
	004A084 01 FC 80 FC 00 E6 02 E9 03 84 01 D5 08 98 00 58 00 02 00 44 14 11 00 B6 01 84 00 FC 80 FC 00	XD
	004E000 08 B6 20 FC 80 FC 00 44 10 01 01 44 04 11 00 B6 20 FC 80 FC 00 44 04 11 08 B4 00 FC 80 FC 00	
PASS	00500 E6 08 E9 03 84 01 D5 07 58 00 07 00 44 14 1B 00 B6 01 84 00 FC 80 FC 00 E6 04 E9 03 84 01 D5 08	XD

NOTE :

若芯片用 Debug Tool 烧录(芯片之前未用烧录器烧录过),再透过烧录器读取,预设会读取整 个 Flash ROM 的程序码,因此 Check sum 所计算值并非正确的 Check sum;若用 Debug Tool 烧录(芯片之前已经用烧录器烧录过),再透过烧录器读取,预设会读取上一次透过烧录器曾 经烧录过的 App Flash ROM 程序码长度,因此 Check sum 所计算值并非真正芯片正确 Check sum,所以用 Debug Tool 烧录的芯片所读出的 Check sum 不能作为参考。



5.4. Read Burner 功能

STEP01:开启 HY16F Writer 软件连接 WK08x 及芯片。

STEP02:输入正确 Password(密码错误时,则无法与芯片连接),若无密码则不用写入。

STEP03:点选 Connect,若通过芯片检查则显示 Password protection 若检查失败则显示 Chip error(预设 Program->Password:FFFFFF)当检查通过后,就可以重新设定 Password 资料。

STEP04: Target 选项设定为 Burner,选择要读取的是 App Bin。

STEP05: 点选 Read 后,软件会跳至 App in Burner 的显示视窗。

STEP06:Read Burner 功能主要是将 Load 的程序与 Burner 进行比对,当比对通过时会于 Burner 视窗中显示 Equal,当比对不通过时则显示 Not Equal。

HYCON HY16F Serial		App Bin	Data Bin	App in Chip	Data in Chip	App in Burne atSmB	R05	Function 🗖 🗷
	File size:	57632 Bytes	Checksum: 0x	16D B	lum Of None	Writing Address 00000000 Begin	Equal	
Connection check STEP03	Chip Code:	ione	ISP Resource No	ie i	Part No: 16F198	81C	Export STEP06	⊳
Disconnect Flash Erase			Secting.					
	00000 FC 0 00020 FC 0	10 49 00 10 49 00	01 42 FC 8 01 49 FC 8) FC 00 4	9 00 01 40	10 FC 80 FC 00 49 00	0 01 3E FC 80 FC 00 49 00 01 4B FC 8 0 01 45 FC 80 FC 00 49 00 01 43 FC 8	10
Part No.	00040 FC 0 00060 00 0	0 49 00	01 41 FC 8) 00 00 0) 00 00 0	0 00 00 00 0 00 00 0	10 00 00 00 00 00 00 00 10 00 00 00 00 00 00	0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 000 000 000 000 000 000 000 000 000 000 000 000 000	0
16F1981C RAM: 8 K Bytes APROM: 64 K Bytes	00080 00 0	0 00 00	00 00 00 0	0 00 00 0	0 00 00 0	0 00 00 FC 00 49 00	0 01 1B 49 00 00 27 49 00 00 52 44 0	10
	000A027 1 000C0FF F	0 49 00 C D5 01	01 52 49 0 3C 0D FF F) 00 64 4 F 96 04 C	4 00 27 10 0 FD 3C 0	0 49 00 01 4C 84 07 ID FF FE 90 10 49 00	7 44 10 01 FF 49 00 02 C9 84 00 3E 0 0 00 75 3C 1D FF FF 84 1E FE 0E 3C 0)7 '.IRIdD.'.IL.DI>.)F
F/W Ver:3.4 Software Ver: 2.2	000E0 FF F	F D5 F1	FC 00 44 0	4 03 10 4	4 10 FF 10	6 B6 20 B4 03 49 00	0 02 06 84 01 49 00 02 0F 84 01 49 0	10DDII.
Encrypt & Decrypt	00100 02 1	2 44 10	44 10 00 F	02 12 8	4 03 44 1	0 00 FF 49 00 02 0D	D 84 04 84 20 49 00 02 09 FC 80 FC 0	11
	00140 84 0 00160 E9 E	0 F0 81	84 00 F0 8 00 58 84 2	D5 0A F	0 01 44 10 0 6D EC 8	0 00 58 98 01 84 20	0 AE 40 F0 01 9C 01 F0 81 F0 01 E4 0	NB
C Encrypt without password	00180 FF	36 3E 00	00 02 44 0	F FF E0 3	E 00 00 0	3 44 0F FF E4 3E 00	0 00 04 44 00 00 64 3E 00 00 05 84 0	10
STEP04	001A03E 0 001C046 0	0 00 06	84 00 3E 0 F1 01 E2 0) 00 07 8 I E8 0B F	14 00 3E 01 70 01 FE 03	10 00 08 44 00 00 58 13 F0 81 F0 01 9C 01	8 84 213 49 00 00 46 FC 80 FC 02 F0 8 1 F0 81 84 01 10 0F 80 0F D5 04 84 0	11 >>
Target: Ochip Burner	001E010 0	F 80 0F	84 05 F0 8	2 D5 17 F	0 02 F2 0	1 84 2A 40 21 04 37	7 44 20 00 40 98 4A A6 48 96 48 44 2	*@
Program Read Area	00200 00 5	8 98 02 2 84 01	AE 40 FT 0 4C 10 40 0	i 84 0A 4 5 84 01 3	E 00 00 0	17 F0 81 F0 02 9E 01 16 D5 04 84 00 3E 00	1 FU 82 FU 02 4E 04 FF E9 00 0F 80 0 0 00 06 44 00 00 58 84 2B 49 00 00 0	IF X
Burn of numbe	00240 FC 8 00260 49 0	2 FC 02	F0 81 80 0 F0 01 9C 0	I 10 0F 8 I F0 81 0	0 00 84 0 0 0F 80 0	10 10 0F 80 0F D5 11	1 00 0F 80 0F 96 00 F1 01 A6 48 96 4 F 00 0F 80 0F 96 40 00 0F 80 00 96 0	I8НН I0 I @
Chip Code	00280 E2 2	0 E9 E9	FC 82 FC 0) FC 80 F	C 00 FC 8	IO FC 00 49 00 01 1E	E C0 0D 49 00 01 21 49 00 01 2D 3C 0	IFIII
ISP Resource Setting FFFFFFFF	002A0 FF F 002C0 FC 0	E 3C 0D	FF FF 58 0 FC 00 FC 8) 00 01 3) FC 00 8	C OF FF F 4 00 84 2	FF FC 80 FC 00 FC 80 1 49 00 00 D9 84 03	0 FC 00 FC 80 FC 00 FC 80 FC 00 FC 8 3 49 00 01 99 84 00 49 00 01 87 49 0	10
App Bin STEP04	002E0 01 A	A3 44 00	10 00 49 0	00 30 8	4 01 49 0	0 01 A2 84 00 84 21	1 49 00 00 33 84 00 49 00 00 46 84 0	10DI0III3IF
App Writing Address Begin: 0	00320 84 0	0 49 00	00 A2 49 0) 00 D9 4	9 00 00 C	CA 49 00 00 DC 84 01	1 49 00 00 B8 84 00 49 00 00 B5 84 0	M
	00340 49 0 00360 E6 2	0 00 B2	FC 80 FC 0 44 24 11 0	I FO 81 D 1 B4 62 9)5 05 92 0 2 70 40 3	10 F0 01 9E 01 F0 81 11 C0 08 44 40 FE 00	1 F0 01 C8 FB FC 81 FC 00 E6 0E E8 1 0 FE F7 FE 5E 94 04 FE 0F B6 02 84 0	2 1
Data Bin	00380 D5 0	2 84 01	FC 80 FC 0	E6 02 E	9 03 84 0	1 D5 0A 46 12 00 00	0 40 00 54 08 FE 0F 44 14 11 00 B6 0	11 F@TD
Data Writing Address begin.	003A084 0 003C0FC 8	0 FC 80	E6 08 E8 1	2 E9 U3 8 1 E6 24 E	4 UT D5 U 8 12 44 24	IA 46 TT 00 00 40 00 14 11 04 B4 62 46 4F	0 50 08 FE 0F 44 14 11 00 B6 01 84 0 F FC 8F 58 42 0F FF 40 00 40 08 FE E	E6\$
Erase All STEP05	003E0 FE 1	F 40 10	D0 08 FE 4	7 B6 22 8	4 00 D5 0	2 84 01 FC 80 FC 00	0 E6 10 E9 03 84 01 D5 0E 44 14 11 0	14@
Read Burn	00420 E8 0	E 46 20	F0 00 40 0) 48 08 F	E 17 40 1	0 C0 08 FE 47 44 24	4 11 00 B6 22 84 00 D5 02 84 01 FC 8	10F@H@GD\$"
	00440 FC 0 00460 B6 0	0 E6 02	E9 03 84 0 EC 80 EC 0	I D5 0E 4	4 14 11 04	14 B4 41 46 3F FF 7F 11 D5 08 94 02 58 00	F 58 31 8F FF FE 9E 40 00 4C 08 FE 1 0 3C 00 44 14 11 00 B6 01 84 00 FC F	7DAF?X1@L
	00480 FC 0	0 E6 04	E8 0E E6 2	2 E8 0C 4	4 20 F0 4	0 94 04 FE 17 94 4F	F FE 47 44 24 03 0C B6 22 84 00 D5 0	12"D@Q.GD\$"
	004A084 0 004C046 0	1 FC 80	FC 00 E6 0 44 14 00 0	2 E9 03 8 3 B6 01 F	4 01 D5 01 C 80 FC 01	18 98 00 58 00 02 00 10 44 04 00 08 B4 00	0 44 14 11 00 B6 01 84 00 FC 80 FC 0 0 96 04 FC 80 FC 00 44 10 01 00 44 0	10
	004E0 00 0	B B6 20	FC 80 FC 0	44 10 0	1 01 44 04	4 11 00 B6 20 FC 80	0 FC 00 44 04 11 08 B4 00 FC 80 FC 0	0 D D D
PASS	00300 ED U	io E9 03	04 01 1/5 0	r 38 UU U	00 44 1	4 ID UU D6 UI 84 UU	0 FC 00 FC 00 EB 04 E9 03 84 01 D5 U	ο



5.5. ISP Resource Setting 设置说明

选用 HY16F3981 芯片为例子说明,可以透过烧录器来操作 HY16F3981 要致能(Enable) 或关闭(Disable)ISP Bootloader 功能,以下图为例子说明,设定 ISP Method Select 为 Timeout Entry 模式,在致能 Enable ISP 的情况下,并且选择 ISP Uart Port 为 PT2.0 & PT2.1, 这时候可以得到 ISP Resource Setting 的信息为 01000355:

Part No.	ISP Resource Setting	×
016F3981 RAM: 8 K Bytes APROM: 64 K Bytes	Enable ISP	
F/W Ver:WK08 3.4 Software Ver: 3.3 Encrypt & Decrypt Encrypt with password Password 0x FFFFFFF Encrypt without password	Uart Oscillator Setting Internal OSC(HAO) ISP Method Select Timeout Entry	
	O CheckPin Entry	
Target: Chip Burner Program Read Area	ISP Uart Port	ISP Check Pin
Burn of number		0772.1
Chip Code	PT2.08PT2.1 OPT2.48PT2.5	0 PT2.2 0 PT2.3
App Bin App Writing Address Begin:	OPT8.08PT8.1	OPT2.4 OPT2.5
Data Bin	OPT9.08PT9.1	PT2.6
Data Writing Address Begin: F000	019,48919.5	
Read Burn	Read Write	OK Close

如果设定为 CheckPin Entry 模式,同样选择 ISP Uart Port 为 PT2.0 & PT2.1,并且 ISP Check Pin 为 PT2.2,这时候可以得到 ISP Resource Setting 的信息为 01030355.

	Enable ISP			
F/W Ver:WK08 3.4 Software Ver: 3.3	- Uart Oscillator Setting			
Encrypt & Decrypt	Internal OSC(HAO)			
Encrypt with password	TCD Mathead Calact			
Password 0x FFFFFFF	ISP Method Select			
O Encrypt without password	CheckPin Entry			
Target: O Chip O Burner	- ISP Uart Port	ISP Check Pin		
Program Read Area		OPT2.0		
Burn of number		OPT2.1		
Chip Code	PT2.08PT2.1	• PT2.2		
✓ ISP Resource Setting 01030355	OPT2.48PT2.5	OPT2.3		
App Bin	OPT8.08PT8.1	OPT2.4		
App Writing Address Begin:	OPT8.48PT8.5	OPT2.5		
		OPT2.6		
Data Bin Data Writing Address Begin: F000	OPT9.48PT9.5	OPT2.7		
Frank Al				
Lander PM	David White	or of		

呈上,相同设置情况下,如果取消 Enable ISP 功能,这时候会得到的信息为 01030300

✓ ISP Resource Setting 01030300 ...



5.6. Update Firmware 操作说明

HY16F Writer V3.8.1 以后的版本都支援在线更新烧录器 Firmware,使用者不要再透过 HYCON Burner Transformer 软件来更新烧录器 Firmware. HY16F Writer V3.8.1 之后的版 本,都可以直接在 Function 选单里面的 Update Firmware 来更新烧录器 Firmware. 以下将详 细说明如何使用 Update Firmware 功能来进行烧录器 Firmware 更新.

Step1:选单Function,选择并选取 Update Firmware



Step2:进入 Update Firmware 操作页面,按下 Update 按钮,跳出操作说明步骤与图示.



1.Diconnect Burner:硬件端,需要先把烧录器的USB断开电源,并且准备一个短路跳帽 (Jump)短路"Update Pin",参考下图.





2.Link burner with computer:重新把USB电源接上.完成此步骤,对烧录器来说等于重新执行了一次断电&上电的动作,并且因为 Update Pin 已接连接到 ground,等同烧录器上电之后进入 FW 更新模式.



Step3:按下 Next 按钮,开始执行 FW 更新,直到 100%才算完成 FW 更新.

U 1. Disconnect Burner,	2. Link burner with computer.	Update Firmware
 1. Disconnect Burner, Link "Update Pin" to ground 		Support IC Type of Burner FW Version Support H1 16F 186 /H1 16F 196 /H1 16F 398 1
		Update Firmware Support IC Type of Burner Support IC Type of Burner Update Firmware Update Firmware FW Version FW Version
		100\$
		Update Close

Step4:更新完成到 100%之后,按下 Close 按钮,硬件端,记得把烧录器的短路跳帽(Jump) 移除.此时烧录器已经离开 FW 更新模式,可以工作于正常模式.





Step5:按下 Connect 按钮,观察 F/W Ver 是否有更新成功.

使用者可自由选择离线模式(离线模式下需选择任一 IC 型号)或是在线模式来确认 FW 版本.

例如: Software Ver 3.8.1 搭配的 F/W Ver 是 WK08 4.4 版本

Connection check	Connection check
Connect 🚽 Flash Erase	Disconnect 👻 Flash Erase
Offline	Connected
Part No.	Part No.
016F3981 RAM: 8 K Bytes APROM: 64 K Bytes	016F3381 RAM: 8 K Bytes APROM: 64 K Bytes
F/W Ver:WK08 4.4 Software Ver 3.8.1	F/W Ver:WK08 4.4 Software Ver 3.8.1
Encrypt & Decrypt	Encrypt & Decrypt
Encrypt with password	Encrypt with password
Password 0x FFFFFFF	Password 0x FFFFFFF
O Encrypt without password	O Encrypt without password

注意:如果烧录器没有成功进入 FW 更新模式,按下 Update 按钮会无法正常更新 FW,出现 以下错误讯息. 例如: No such USB device 或是 Send sycn packno cmd fail, 并且更新进度 会一直停在 0%. 如遇到无法正常更新 FW 的情况, 请检查是否本章节描述 Step 1~4 有哪些

> 3A OF 80 3C 84





6. 烧录器信息说明

针对 WK08x 整合型烧录器,有如下显示信息

6.1. 烧录配置信息

按下烧录器上的 Information 键,显示各种参数信息





6.2. 错误信息



HY16F 系列 烧录器使用说明书





Error 17 只用于 HY16F 烧录信息说明,表示客户设定的配置信息资料写入失败。



7. 修订记录

以下描述本档差异较大的地方,而标点符号与字形的改变不在此描述范围。

日期	文件版次	页次	摘要
2022/04/02	V12	ALL	初版发行