WH-NB63 固件烧录流程及 LOG 工具使用说明

V1.0.1

一、固件烧录流程

1. 安装

FlashTools 为绿色,解压后即可使用。在解压后的目录下,运行 FlashTools.exe。

~				
名称	修改日期	类型	大小	
ExtReset	2020/1/2 11:08	文件夹		
🔄 image	2020/1/2 11:08	文件夹		
🗋 agentboot.bin	2019/12/31 9:56	BIN 文件	27 KB	
📄 cfg.digest	2020/1/2 11:24	DIGEST 文件	1 KB	
🔄 config.ini	2019/12/18 11:30	配置设置	1 KB	
🔄 config_ext_reset.ini	2019/7/12 10:03	配置设置	1 KB	
🔡 FlashTools.exe	2020/1/2 11:20	应用程序	13,213 KB	
format.json	2019/12/26 10:20	JSON 文件	1 KB	
📧 littlefs_pc.exe	2019/6/25 11:33	应用程序	25 KB	
🗋 logging.conf	2019/6/25 11:33	CONF 文件	1 KB	
Release_Note_FlashTools.txt	2020/1/2 11:20	文本文档	1 KB	
Tmp_config.ini	2020/1/2 11:25	配置设置	1 KB	

2. 设置下载模式

将 WH-NB7X-EVK 中 RTS2 引脚(对应模块第 30 引脚 GPIO1)跳线接置 3.8V 电平(WH-NB7X-EVK 中 V_NB 引脚),将 UART1 的跳线帽放置在 TTL 与 USB 上(由于 232 速率限制,需使用右上角 microUSB 口烧录),并给模块上电或者按复位按键,进入下载模式。 (可观察电流表,若模块进入下载模式之后,电流为 6mA 左右。)



3. 烧写系统文件

3.1 系统文件准备

将准备烧写的文件(app和boot)复制到解压后的 image 目录,如果当前存在同名文件,请覆盖它。

> 此电脑	` > 系统 (C:) > 用户 > Administrator > 舅	崑面 → FlashTools_\	/2.3.22 → image		~ 0
	名称	修改日期	类型	大小	
	WH-NB63_APP_V2.1.2.000000.0000.bin	2020/5/21 11:33	BIN 文件	1,899 KB	
3	WH-NB63_BOOT_V2.1.2.000000.0000	2020/4/21 16:25	BIN 文件	52 KB	
*					
*					
*					
t					

3.2 端口号和波特率

双击 FlashTools.exe 运行程序后。如下图所示:

界面会列出 PC 上所有 COM 口,选择AT串口的串口号,烧写与AT串口共用一个串口,波特率选择921600。 注意:232 串口无法满足下载波特率需求,需要用 usb 转 TTL, 若底板是 WH-NB7X-EVK,则直接用 USB 烧录!

💽 flashTo	ools V2.3.22						<u>_</u>		×
Download	Readback Calibratio	on		•					
Com Port	COM1	baudrate:	921600 ~	Erase All	Erase	NVM			
Prj me:	COM2 COM48 COM59	trator\Desktop\ load	FlashTools_V2.3.22\co	nfig.ini			Brov	vse	
path ☑ C:\Us ☑ C:\Us	COM61 COM64 ers\/COM254 ers\/COM255 NULL_COM2 NULL_COM254 NULL_COM255	ktop\FlashTools ktop\FlashTools	_V2.3.22\.\image\bootl _V2.3.22\.\image\app-i	oader.bin demo-flash.bin	addr default default	type bootle systen	oader n		
Status 11:56:10	ELTIMA VSPort Contro	olling Device for	r COM255						^
11:56:10	ELTIMA VSPort Contro	olling Device for	COM254						
11:56:10	ELTIMA VSPort Contro	olling Device for	r COM2						
11:56:10	ELTIMA Virtual Serial	Port (COM255)							
11:56:10	ELTIMA Virtual Serial	Port (COM254)							
11:56:10	USB Serial Port (COM	164)							¥

3.3 烧写选项

在文件列表中,勾选准备烧写的文件

Tiash i oo	ls V2.3.22						_		×
Download F	Readback Calibratio	n							
Com Port:	COM48 ~	baudrate:	921600 ~	Erase Al	l <mark>Erase</mark>	NVM			
Prj file:	C:\Users\Adminis	trator\Desktop	FlashTools_V2.3.22	2\config.ini			Brow	wse	
	Down	oad]						
C:\Users	s\Administrator\Des	top\FlashTools	V2.3.22\.\image\b	ootloader.bin	default	bootle	oader		
C:\Users	s\Administrator\Des	ctop\FlashTools	 V2.3.22\.\image\a	ıpp-demo-flash.bin	default	systen	n		
Status 11:57:42 El	s\Administrator\Desi	olling Device fo	 	ıpp-demo-flash.bin	default	systen	n		^
Status 11:57:42 El	s\Administrator\Desi	ctop\FlashTools	r COM255 r COM254	ıpp-demo-flash.bin	default	systen	n		^
Status 11:57:42 El 11:57:42 El	s\Administrator\Desi	dop\FlashTools	r COM255 r COM254 r COM2	ıpp-demo-flash.bin	default	systen	n		^
Status 11:57:42 El 11:57:42 El 11:57:42 El 11:57:42 El	s\Administrator\Desi LTIMA VSPort Contr LTIMA VSPort Contr LTIMA VSPort Contr LTIMA VSPort Contr LTIMA VSPort Contr	ctop\FlashTools olling Device fo olling Device fo olling Device fo Port (COM255)	r COM255 r COM254 r COM2	ıpp-demo-flash.bin	default	systen	n		^
Status 11:57:42 EI 11:57:42 EI 11:57:42 EI 11:57:42 EI 11:57:42 EI	LTIMA VSPort Contr LTIMA VSPort Contr LTIMA VSPort Contr LTIMA VSPort Contr LTIMA VSPort Contr LTIMA Virtual Serial LTIMA Virtual Serial	olling Device fo olling Device fo olling Device fo Port (COM255) Port (COM254)	r COM255 r COM254 r COM2	ıpp-demo-flash.bin	default	systen	n		^

3.4 编辑文件

请选中列表中的某个文件, 鼠标右键弹出菜单 Edit Item, 点击此菜单可以选择文件。

flashTool	s V2.3.22							_		×
Oownload R	eadback Calibrati	on								
Com Port:	COM48 v	baudrate:	921600	~	Erase All	Erase	NVM			
P <mark>rj file:</mark>	C:\Users\Admini	trator\Desktor	p\FlashTools_V	2.3.22\cont	fig.ini			Bro	wse	
	Dowr	load								
nath	_					addr	type			
Dati						auui				
C:\Users	\Administrator\Des \Administrator\Des	ktop\FlashToo ktop\FlashToo	ls_V2.3.22\.\imi ls_V2.3.22\.\imi	age\bootlc age\app-d	Edit iten		bootle system	oader N		
C:\Users	\Administrator\Des	ktop\FlashToo ktop\FlashToo	ls_V2:3.22\\im ls_V2:3.22\.\im	age\bootlc age\app-d	Edit iten		bootid system	pader n		
C:\Users	\Administrator\Des	ktop\FlashToo ktop\FlashToo	ls_V2.3.22\\im ls_V2.3.22\\im	age\bootlc age\app-d	Edit iten		systen	oader n		~
Status 11:57:42 El	\Administrator\Des \Administrator\Des	ktop\FlashToo ktop\FlashToo olling Device fr	Is_V2.3.22\\im Is_V2.3.22\\im Is_V2.3.22\\im	age∖bootic age∖app-d	Edit iten		bootid system	oader n		^
C:\Users C:\Users C:\Users Status 11:57:42 EI 11:57:42 EI	\Administrator\Des \Administrator\Des LTIMA VSPort Contr LTIMA VSPort Contr	ktop\FlashToo ktop\FlashToo olling Device fr	Is_V2.3.22\\im Is_V2.3.22\\im Is_V2.3.22\\im or COM255 or COM254	age\bootlc	Edit iten		bootid	oader n		^
Status 11:57:42 EI 11:57:42 EI	\Administrator\Des \Administrator\Des LTIMA VSPort Contr LTIMA VSPort Contr LTIMA VSPort Contr LTIMA VSPort Contr	ktop\FlashToo ktop\FlashToo olling Device fr olling Device fr olling Device fr	Is_V2.3.22\\im Is_V2.3.22\\im or COM255 or COM254 or COM2	age\bootic	Edit iten		systen	n		
Status 11:57:42 EI 11:57:42 EI 11:57:42 EI	\Administrator\Des \Administrator\Des LTIMA VSPort Contr LTIMA VSPort Contr LTIMA VSPort Contr LTIMA VSPort Contr LTIMA VSPort Contr	ktop\FlashToo ktop\FlashToo olling Device fr olling Device fr olling Device fr olling Device fr	Is_V2.3.22\\im Is_V2.3.22\\im or COM255 or COM254 or COM2	age\bootic	Edit iten		systen	n		^
Status 11:57:42 El 11:57:42 El 11:57:42 El 11:57:42 El	\Administrator\Des \Administrator\Des LTIMA VSPort Contr LTIMA VSPort Contr LTIMA VSPort Contr LTIMA VSPort Contr LTIMA VSPort Contr LTIMA Virtual Serial	ktop\FlashToo ktop\FlashToo olling Device fr olling Device fr olling Device fr olling Device fr Port (COM255 Port (COM254	Is_V2.3.22\\im Is_V2.3.22\\im or COM255 or COM254 or COM2 i)	age\bootic	Edit iten		systen	n		

选择要烧录的文件

PS: 请注意选择的文件和 type 列相对应,否则可能烧写出错。

om Port: rj file:	COM48 C:\Users\Adr	→ baudra	ate: 921600 ✓ □ Eras	e All 🛛 Erase NVI	M Browse
	D	ownload			
path ☑ C:\Users ☑ C:\Users	\Administrator\ \Administrator\	Desktop\Flas Desktop\Flas	hTools_V2.3.22\image\WH-NB63_BOOT_ hTools_V2.3.22\.\image\app-demo-flash.	addr V2 default .bin default	type bootloader system
I Ch 组织	oose a file ▼ 新建文件	夹	/		×
	此电脑 WPS网盘	▲ 名称 □ WI	A-NB63_APP_V2.1/2.000000.0000.bin	修改日期 2020/5/21 11:33	类型 BIN 文件
2.00	视频		H-NB63_BOGT_V2.1.2.000000.0000.bin	2020/4/21 16:25	BIN XIT
Sta 11: 11: 11: 11: 11: 11: 11:	图片 文档 - 下載 音乐 桌面 - 系統(C:)				

3.5 烧写过程

点击 download 按钮,开始下载,通过界面上的状态区可以查看下载的状态。

Com Port:	COM48 → baudrate: 921600 → Erase A	All Erase	• NVM		
rj file:	C:\Users\Administrator\Desktop\FlashTools_V2.3.22\config.ini			Bro	wse
Г	Download				
path 🗖		addr	type		
	\Administrator\Desktop\FlashTools V2.3.22\image\WH-NB63 BOOT V2	default	boot	oader	
I C: (Users					
⊡ C:\Users'	\Administrator\Desktop\FlashTools_V2.3.22\image\WH-NB63_APP_V2.1.	default	syster	m	
C:\Users	\Administrator\Desktop\FlashTools_V2.3.22\image\WH-NB63_APP_V2.1.	default	syster	m	
C:\Users'	\Administrator\Desktop\FlashTools_V2.3.22\image\WH-NB63_APP_V2.1.	default	syster	m	
C:\Users' C:\Users' C:\Users' C:\Users' C:\Users'	\Administrator\Desktop\FlashTools_V2.3.22\image\WH-NB63_APP_V2.1. 	default	syster	m	
C:\Users' C:\Users' Status 11:57:42 EL 11:57:42 EL 11:57:42 EL	\Administrator\Desktop\FlashTools_V2.3.22\image\WH-NB63_APP_V2.1. .TIMA VSPort Controlling Device for COM255 .TIMA VSPort Controlling Device for COM254 .TIMA VSPort Controlling Device for COM254 .TIMA VSPort Controlling Device for COM2	default	syster	m	
C:\Users' C:\Users' C:\Users' 11:57:42 EL 11:57:42 EL 11:57:42 EL 11:57:42 EL	Administrator\Desktop\FlashTools_V2.3.22\image\WH-NB63_APP_V2.1. TIMA VSPort Controlling Device for COM255 TIMA VSPort Controlling Device for COM254 TIMA VSPort Controlling Device for COM254 TIMA VSPort Controlling Device for COM2 TIMA VSPort Controlling Device for COM2	default 状态区	syster	m	
C:\Users' C:\Users' 11:57:42 EL 11:57:42 EL 11:57:42 EL 11:57:42 EL 11:57:42 EL	Administrator\Desktop\FlashTools_V2.3.22\image\WH-NB63_APP_V2.1. TIMA VSPort Controlling Device for COM255 TIMA VSPort Controlling Device for COM254 TIMA VSPort Controlling Device for COM254 TIMA VSPort Controlling Device for COM2 TIMA Virtual Serial Port (COM255) TIMA Virtual Serial Port (COM254)	default 状态区	syster	m	

烧写完成

lashToo	ls V2.3.22							<u> </u>		>
wnload F	Readback Calibratic	on								
om Port:	COM48 ~	baudrate:	921600	~	Erase All	Erase	e NVM			
rj file:	E:\NB_NEW\NB63	3\FlashTools_V	2.3.22\config.i	ini				Bro	wse	
	Downl	load								
path						addr	type			
E:\NB_N	EW\WH-NB63\bran	ches\PLAT\out\	ec616_0h00\b	pootloader\b	ootloader	default	bootle	ader		
E:\NB_N	NEW\WH-NB63\bran NEW\NB63\WH-NB63	ches\PLAT\out\ 3_V2.1.2\WH-N	ec616_0h00\b B63_V2.1.3.00	oootloader\b 0000.0000\N	oootloader /H-NB63_A	default default	systen	n n		
⊻ E:\NB_N E:\NB_N	IEW\WH-NB63\brand	ches\PLAT\out\ 3_V2.1.2\WH-N	ec616_0h00\b B63_V2.1.3.00	000010ader\b	vootloader	default default	bootla system	oader 1		
⊻ E:\NB_N	IEW\WH-NB63\brand IEW\NB63\WH-NB63 IEW\NB63\WH-NB63	ches\PLAT\out\ 3_V2.1.2\WH-N : end.	ec616_0h00\b B63_V2.1.3.00	000010ader\b	vootloader /H-NB63_A	default default	bootla system	n		
✓ E:\NB_N ✓ E:\NB_N ✓ E:\NB_N Status 12:04:41 D 12:04:41 D	IEW\WH-NB63\brand IEW\NB63\WH-NB63 Iew\NB63\WH-NB63 Iewnloading process Iewnloading process	ches\PLAT\out\ 3_V2.1.2\WH-N ; end. ; success	ec616_0h00\b B63_V2.1.3.00	0000.0000\W	vootloader /H-NB63_A	default default	bootla system	n		
Status Status 12:04:41 D	IEW\WH-NB63\brand IEW\NB63\WH-NB63 Oownloading process Oownloading process Oownload progress:1	ches\PLAT\out 3_V2.1.2\WH-N ; end. ; success 00%	ec616_0h00\b B63_V2.1.3.00	000010ader\b	vootloader /H-NB63_A	default default	bootla system	oader n		
Et:\NB_N Et:\NB_N Et:\NB_N Et:\NB_N Et:\NB_N Et: Et: Et: Et: Et: Et: Et: Et:	IEW\WH-NB63\brand IEW\NB63\WH-NB63 Downloading process Downloading process Download progress:1 :\NB_NEW\NB63\WF	ches\PLAT\out 3_V2.1.2\WH-N ; end. ; success 00% 4-NB63_V2.1.2\	ec616_0h00\b B63_V2.1.3.00	200010ader\b 20000.0000\W 2.1.3.000000.0	00010ader /H-NB63_A /H-NB63_A	default default 53_APP_V2.1.3	bootla system	Do.bin E	Downloa.	

4. 版本校验

验证固件版本 AT+VER, 查询升级是否成功。

二、LOG 工具使用说明

1、安装

EPAT 为绿色软件,解压即可使用。在解压后的目录下,运行 EPAT.exe。

A		216 770	1	
名称	修改日期	类型	大小	
config	2019/12/26 18:54	文件夹		
DB	2019/12/26 18:54	文件夹		
freertos	2019/12/26 18:54	文件夹		
temp	2019/12/26 18:54	文件夹		
🚳 7z.dll	2018/11/28 10:17	应用程序扩展	893 KB	
Tz.exe	2018/11/28 10:17	应用程序	160 KB	
🗟 7-zip.dll	2018/11/28 10:17	应用程序扩展	55 KB	
CommandEngine.dll	2019/12/26 18:53	应用程序扩展	110 KB	
Communications.dll	2019/12/26 18:53	应用程序扩展	234 KB	
Cores.dll	2019/12/26 18:53	应用程序扩展	786 KB	
ec616_tpl.cmm	2019/6/5 15:58	CMM 文件	2 KB	
C EPAT.exe	2019/12/26 18:54	应用程序	494 KB	
GraphComponental	2019/12/26 18:54	应用程序扩展	68 KB	
GraphViewer.dll	2019/12/26 18:54	应用程序扩展	466 KB	
Logger.dll	2019/12/26 18:53	应用程序扩展	485 KB	
RamDump2RamLog.t32	2010/11/18 22:52	T32 文件	1 KB	
RunT32.batm	2019/3/27 9:39	BATM 文件	1 KB	
SigLogger.dll	2019/12/26 18:53	应用程序扩展	351 KB	
t32SimulatorArgs.tmp	2019/3/26 15:08	TMP 文件	1 KB	
UniLogViewer.dll	2019/12/26 18:54	应用程序扩展	738 KB	
JpdateDatabases.dll	2019/12/26 18:53	应用程序扩展	139 KB	
vc redist.x86.exe	2018/11/28 9:29	应用程序	14,119 KB	

2、配置 LOG 串口参数

C EPAT				
Log View Help				
	Salast Data Saursa	×		
	Serial Device	~		
	Select From Local Files			
		ОК		
D				

C EPAT - SigLogger		- 🗆 X
Log SigLog View Help		
UniLogViewer SigLogger		
Index UE Time N	Aessage 1	PC Time
	Device X COM3) USB Serial Port Serial 600000 Settings CK	
	Communications Settings X	
	Serial Port (COM48) USB Serial Port Baue Rate 2000000 OK Cancel	-3
Ready		AutoSave: OFF 🧧 Device 0

3、更新 DB 文件

tog Sigleg View Help Control View Siglegger Index Elime Message PC Time State UE View 0x65084951 Control View Realls Control View Realls Control View 0x65084951 Control View 0x65084951	🕲 EPAT - Si	gLogger		- 🗆 X
Index E Time Message PC Time State	Log SigLog	y View Help > []] = 🍏 🗟 🗘 > <mark>SigLogger</mark> 🗙		
State Image: CheckDbVersion	Index	VE Time	Message PC Time	
		State Detabase UE Ver: 0x0000000 PC Ver: 0x65084851	Image: CheckDbVersion Image: CheckDbVersion <td< th=""><th></th></td<>	
	Ready			AutoSave: OFF 🚦 Device 0 🔒

选择 comdb.txt 文件,并点击 update。出现 Databases updated,点击确定即可。



4、保存 LOG 文件

选择路径保存即可。



UniLogViewer	× SigLogger					
Index	ModuleName	SubName	Message	Hex	Length	UE Time ^
5220		PsifTcpipStoreTcpCon	PsifTcpipStoreTcpContext not exist valid tcp context			04:098
5221	TCPIP_LWIP	dns_find_adpt_hib_tin	dns_find_adpt_hib_tiny_entry	56 F8 01		04:098
5222		PsifTcpipStoreDnsCa	PsifTcpipStoreDnsCache not exist valid dns cache			04:098
5223		PsifTcpipStoreUdpCor	PsifTcpipStoreUdpContext not exist valid udp context			04:098
5224	CMS_SOCK_MO	cmsSockMgrEnterHib	cmsSockMgrEnterHibCallback enter	58 D0 00		04:098
5225	PLA_DRIVER	pmuCheckCodeRunTi	IIIIIII PMU Run Time Checker 0 Too Long , 1<<5 IIIIIIIII	58 20 00		04:098
5226	PLA_DRIVER	SwCntUpdate_01	SwCnt Update Input: Aon2048H = 0x00000000 , Aon2048L :	58 20 00		04:098
5227	PLA_DRIVER	SwCntUpdate_03	Sty Info × 00000000, sc_diff_32I = 0;	58 20 00		04:098
5228	PLA_DRIVER	SwCntUpdate_02	Siv I = 0x00000000 , Aon2048L	58 20 00		04:098
5229	PLA_DRIVER	SwCntUpdate_01	Sw Save Log completed! = 0x00000000 , Aon2048L :	58 20 00		04:098
5230	PLA_DRIVER	SwCntUpdate_03	Sw 00000000 , sc_diff_32I = 0;	58 20 00		04:098
5231	PLA_DRIVER	SlowCounter32KFreqI	32 = 3 <mark>2</mark> 770	58 20 00		04:098
5232	PLA_DRIVER	PmuUpdateFlash_1	Wr 00007	58 20 00		04:098
5233	PLA_DRIVER	PmuUpdateFlash_3	Flash Venify Pass for phy-Cost 20 cycle	58 20 00		04:098
5234	PLA_DRIVER	PmuUpdateFlash_5	Flash Verify Pass for plat psCost 21 cycle	58 20 00		04:098
5235	PLA_DRIVER	pmuCheckCodeRunTi	IIIIIII PMU Run Time Checker 14 Too Long , 18<<77 IIIIIIIII	58 20 00		04:098
5236	PLA_DRIVER		write flash = 7	58 20 00		04:098
5237	PLA_DRIVER	pmuCheckCodeRunTi	IIIIIII PMU Run Time Checker 3 Too Long , 19<<79 IIIIIIIII	58 20 00		04:098
5238	PLA_DRIVER	SwCntUpdate_01	SwCnt Update Input: Aon2048H = 0x00000000 , Aon2048L :	58 20 00		04:098
5239	PLA_DRIVER	SwCntUpdate_03	SwCnt Update: sc_diff_32h = 0x000000000 , sc_diff_32l = 0;	58 20 00		04:098
5240	PLA_DRIVER	SwCntUpdate_02	SwCnt Update Output: Aon2048H = 0x00000000 , Aon2048L	58 20 00		04:098
5241	PLA_DRIVER	Enter_Hibernate	Enter Hibernate 86377432 ms PreSlp = 19 ms Wakeup SC	58 20 00		17:099
۲.						```
_						
Saving log					e: OFF	Device 0