

WLINK-I²C ISP Operation Manual

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Weltrend WLINK-I²C ISP Operation Manual

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Chapter 1 WLINK-I²C ISP Description

1.1 WLINK-I²C Description

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WLINK-I²C ISP program can be used with WLINK-I²C Adapter, after compiled the Hex file, programming it to IC. Connecting port is from USB port of PC through WLINK-I²C Adapter, transfer to I²C, and then connect to Evaluation board, as below (Figure 1).



(Figure 1)

(PS**)** WLINK-I²C Adapter driver installation procedure, please see "WLINK-I²C Adapter Installation Description".



1.2 ISP Start Procedures

Use WT51F516 IC for an example to explain WLINK-I²C ISP:

Following (Figure 1), connect PC, WLINK-I²C and Evaluation Board, then go to Weltrend website and click WT51F516 ISP_Kit.exe to start ISP Program.

> ISP program start figure as below (Figure 2):

🖼 Weltrend ISI	P_₩T51F516			
ISP EEPROM	Config. Help E	xit		
Load Hex/Bin	Size:	Check	: Sum:	
Auto.	Program	Verify	Erase	Cancel
Clear			ISP Start Addr	ress From :0x0

(Figure 2)

- ▶ ISP program start figure summary:
 - ISP: Programming window interface
 - E^2 PROM.: Read and Write window interface for assigned IP
 - Config.: Connecting window interface

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1.3 Program Window Interface

There are five buttons on the ISP programming window (as Figure 2), they are "Load Hex/Bin", "Auto", "Program", "Verify" and "Erase", before using these functions, the following will go through its features.

- > Load Hex/Bin: Choose the files that you want programming.
- > Erase: Press the button all the connecting Flash ROM of IC will be erased.
- Program: Press the button all of the Hex or Bin files that are chosen will program to IC. Since Hex or Bin files will program to IC, the destination file must be loaded in advance, and then press "Program" for programming IC.
- Verify: The function of the button is comparing IC internal programming code with original program code if the same, by that to confirm all the chosen files if programming to IC correctly. (Please press "Load Hex/Bin" to load the files which you will execute comparison.
- Auto: The function of the button is to integrate "Erase", "Program" and "Verify" functions, after you press it, IC will be erased, then the file which is assigned will program to IC. At last, when the programming is finished, the internal program can be read and compared with the destination folder that is assigned programming, any error appeared in the comparison process, window will show the error information and interrupt operation.



1.4 Read and Write Interface Window for Assigned IP

Press "E²PROM" then will show the window as below (Figure 3) :

"Select E²PROM Data": The Drop-down menu is for choosing the *.LST file which will be loaded, the file should be saved in the same folder with ISP program, by that it will show on the menu.

-	🕶 Weltrend ISP _ WT51F516					
IS	P EEPRO	M Config.	Help Exit			
	Select Ee	prom Data:				
	Index	Value(d)	Function Description			
Add Insert Delete Save Read Write Erase						
	Start Address : 0x 600 0 Data size : BYTE 💌					



"Add": The button is for adding "Read" and "Write" index address (Figure 4); the actual address is "absolute address" plus "index position" of Start Address.

	🖉 Weltrend ISP _ WT51F516 📃 🗖 🔀						
IS	ISP EEPROM Config. Help Exit						
	Select Eeprom Data :						
	Index	Value(d)	Function Description				
	000						
	001						
	002						
	003						
	004						
	005						
Г	Add Insert Delete Save Read Write Erase						
	Start Addr	ress : Ox	600 0 Data size : BYTE 💌				

(Figure 4)



- Save": Save "E²PROM" window sheet as *.LST file.
- > "Read": Read the value from assigned address as (Figure 5).

	🗰 Weltrend ISP _ W T51F516						
IS	P EEPRO)M Config. 1	Help Exit				
	Select Ee	prom Data:					
	Index	Value(h)	Function Description				
	000	02					
	001	OA					
	002	5D					
	003	02					
	004	11					
	005	16					
	Add Insert Delete Save Read Write Frase						
	Start Add	dress : Ox	0 0 Data size : BYTE 💌				

(Figure 5)

- > "Write": Fill the value that will be changed into the assigned address.
- ▶ "Erase": Erase the assigned "Page", press "Erase" then will show the (Figure 6).

Page Erase	
From Page: 🗙 O	Page Count: x 1
Byte : 0(0)	1FF(511)
[OK	Cancel

(Figure 6)



1.5 Connecting Window Interface

The interface window is for IC type setting and communication as below (Figure 7).

Configuration						
ISP Target : WT51F516 🔻 16 KB						
Control Interface : U	SB 🔹					
Parallel Port Setting						
Select I2C Bus:	ddcI2C 🔄					
Printer Port Addr.:	378 💽					
SCL Clock Delay :	100					
Byte Delay :	100					
CPU CLK:2943 MHz	Speed detect					
I2C Speed ; KHz						
ISP Start Arresss : 0 00 h						
P.S. Address should be multiple of 0x400						
	OK Cancel					

(Figure 7)



Chapter 2 WLINK-I²C ISP Programming Description

2.1 Erase IC

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Start window as below (Figure 8), now make sure PC, WLINK-I²C and Evaluation Board all connected, press "Erase". The IC on the Evaluation Board can be erased (Figure 9)

-	Weltrend ISP	_ WT51F516		
IS	P EEPROM (Config. Help	Exit	
[Load Hex/Bin	Size:	Chec	ck Sum:
	Auto.	Program	Verify	Erase Cancel
	-			
				TOD Chart Address From 10-0
	Liear			15P Start Address From (UXU

(Figure 8)



(Figure 9)



2.2 Programming IC

If you want to program "HEX" or "BIN" file to IC, please make sure PC, WLINK-I²C and Evaluation Board had connected, then press "Load Hex/Bin" to load the files that will be programmed (Figure 10).

😾 SWUT ISP 🔤	WT56F216			
ISP Encryp. Co	de Opt. Config	Help Exit		
Load Hex/Bin	Size: 24227/	8285 Cher	k Sum: 1D3C/	3722
Auto.	Program	Verify	Erase	Cancel
<				3
Clear Operation file	-> WT56F216	.ini	ISP Start Addre S/N	ess From :0x0 Last : 000001

(Figure 10)

Then press "Program" for programming loaded files to IC, programming information and time will show on the window (Figure 11).

🖉 SWUT ISP 🔤 WT56F21	6		
ISP Encryp. Code Opt. C	onfig. Help Exit		*************
Load Hex/Bin Size: 24	1227/8285 Che	ck Sum: 1D3C,	/3722
Auto. Progra	m Verify	Erase	Cancel
D:\WT_Work\WT56F2: Begin programming program successful, el	16_DemoCode_12 apsed time : 5.3 (ue_u.u4\OUT\5i	6F216_DemoCi
<			>
Clear Operation file -> WT56	F216.ini	ISP Start Addre S/N	ess From :0x0 Last : 000001

(Figure 11)



2.3 IC Verification

After programming files to IC, you can use "Verify" function to confirm the files of IC internal had programmed successfully. After programming, then press "Verify" you can compare IC internal information with HEX files contents (Figure 12).

🛩 SWUT ISP _	WT56F216			
ISP Encryp. Co	de Opt. Config	Help Exit		
Load Hex/Bin	Size: 24227/	/8285 Che	tk Sum: 1D3C	/3722
Auto.	Program	Verify	Erase	Cancel
D:\WT_Work Begin progra program suc D:\WT_Work Begin verifyin Verify elapse	\WT56F216_D mming cessful, elapse \WT56F216_D ig d time : 3.0 se	d time : 5.3 s emoCode_12 d time : 5.3 s emoCode_12 conds	08_0.04\0UT\5 econds 08_0.04\0UT\5	6F216_DemoC
Clear (ICP Start Addr	ess From 10v0
Operation file	-> WT56F216	i.ini	S/N	Last : 000001

(Figure 12)

2.4 Auto Operation

Please load HEX files which will be programmed before operating "Auto", when you press "Auto", IC will execute "Erase", "Program" and "Verify".