

Technical Note 109

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Flashing the TDI and TDI Extension

I. <u>Overview</u>

The following will guide you through flashing the Tucor TDI and TDI Extension. Read this over first before trying. The sequence must be followed exactly and may take a few tries to do it within the allotted time. You'll have one minute from the time you power on the TDI to finish steps 3-6.

- II. Parts needed
 - A Windows PC with a USB port
 - A USB cable: A-Male to Mini-B (Fig 1)
 - TDI firmware file
 - a. Hard-wired flow: TDI_1.2b1.chx
 - b. SD-100 flow: Tucor_x_2.0b1.chx
 - Tera Term Software (or other HyperTerminal software)



- III. Flashing the TDI
 - A. If this is the firm time connecting a TDI to your PC, drivers may need to install. If this is the case, connect the TDI to your PC with the USB cable (*Fig 2*) and apply power. The drivers should install automatically. After installed, determine the COM port number by opening Device Manager on your PC (*Fig 3*). This example uses COM5.



- B. Open the Tera Term software.
 - i. At the New Connection dialog, click **Cancel**.

Click Setup. (Fig 4)

- ii. Click on the **Port** drop box and choose the appropriate COM port (from Step A).
- iii. Set the following parameters:
 - a. Baud Rate: 115200
 - b. Data: 8 bit
 - c. Parity: none
 - d. Stop: 1 bit
 - e. Flow control: none
 - f. Transmit delay: 0 0
 - g. Click OK

Tera Term: Serial port setu	р	×				
Port:	COM5	ок				
Baud rate:	115200	~				
Data:	8 bit	~ Cancel				
Parity:	none	~				
Stop:	1 bit	~ Help				
Flow control:	none	\sim				
Transmit delay 0 msec/char 0 msec/line						
Figure 4						

Note: The serial port setup configuration can be saved by clicking **Saved setup...** under the **Setup** tab.

- C. Power off the TDI. Press and hold the **Enter** button, apply power, and release. The **Power ON** and **Alarm** LEDs should flash alternately. The TDI is in program mode for the next 60 seconds. Step D must be completed during that time.
- D. Using the Tera Term software (Fig 5)
 - i. Press Enter on your keyboard four or more times. You will see the Password prompt, type: t098.
 - ii. The Flash Menu will appear with your options. To flash the TDI, type 1.
 - iii. Flash new firmware? will appear, type y.
 - iv. Load TDI.chx file appears. Click File and Send File...
 - v. An Explorer window will open. Locate the .chx file and click **Open**. (Fig 6)

🔟 COM5 - Tera Term VT	—	×				1
File Edit Setup Control Window	Help		💻 Tera Term	: Send file		×
Password: ****		^	Look in: 🦉	Flashing the TDI.zip	Solution > 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10	
TDI boot V1.5			Name	^	Туре	4
** Flash Menu **			☐ TDI_1	.2b1.chx	CHX File	
1. Flash 2. Get Status 3. Get Flash Info 4. Start 5. Exit Choose -> 1			■ terate	erm-4.97.exe	Application	
Flash new firmware? y Load TDI.chx file		~	 File name: Files of type: 	TDI_1.2b1.chx All(*.*)		> Open Cancel
Figure 5				Fi	gure 6	

- vi. A new window will open to display the status of the upload. (*Fig 7*)
- vii. When flashing is complete, the software will verify it was uploaded correctly.
- viii. The **Flash Menu** will be displayed again, type **5** to exit (*Fig 8*). The TDI will reboot.
- E. Verify the firmware version from the TDI's LCD screen by pressing the Left button to view the Main Menu. Scroll down to About using the Down button and press Enter.

Tera Term: Send file		-		×		
Filename: Fullnath:	TDI_1.2b1.ch×					
Bytes trans Elapsed tim	197200 (96.5%) 0:40 (4.87KB/s)					
Close	Pause		Help			
	Figure	7				

🔟 COM5 - Te	era Term VT			_	Х
File Edit Se	tup Control	Window	Help		
TDI boot V1	5				^
** Flash Me 1. Flash 2. Get Stat 3. Get Flask 4. Start 5. Exit Choose -> 1 Flash new f Load TDL.cl Flash compl Uerif ying ** Flash Me 1. Flash 2. Get Flask 3. Get Flask	enu ** cus ch Info firmware? ix file leted, 262 . OK enu ** cus ch Info	y 7 recor	ds rec	eived	
5. Exit Choose -> 5					~
		Figure	e 8		

IV. Flashing the TDI Extension

Flashing the TDI Extension board is similar to flashing the main TDI board with one major exception: You use the TDI extension board, not the PC and hyperterminal.

- A. Connect the TDI with the TDI extension (*Fig 9*).
- B. Connect the Mini-B end of the USB cable into the extension board.
- C. Power on both the TDI and the extension.
- D. From the TDI's LCD screen, press the Left button to view the Main Menu. Scroll down to Upgrade menu using the Down button and press Enter.
- E. Scroll **Down** to **Ext Upgrade** and press **Enter**.
- F. Follow the instructions in Step III. Flashing the TDI



For additional support, please contact Tucor directly: 1-800-272-7472 www.tucor.com