

# CyConsole: write Firmware in the USB FX2 microcontroller's EEPROM and/or RAM

## Open CyConsole



The firmware actually changes (it runs on USB FX2 microcontroller's RAM) only when

- you reset the TE USB FX2 module;
- you power off and power on the TE USB FX2 module;
- you write the USB FX2 microcontroller's RAM (but the new firmware is lost if the TE USB FX2 module goes under reset or power off/on cycle).

To start CyConsole (Cypress USB Console) you should double click the file CyConsole.exe.

After this one of this two windows appears.

Recovery boot

Cypress USB Console

File Options Help

Selected Script:

Select Device

USB Address	Device Name	Name in Windows Device Mgr (from .inf)
1		Cypress EZ-USB FX2LP No EEPROM(3...

Device Properties | Control Endpt Xfers | Other Endpt Xfers | Misc.

VendorID . . . . . 0x04B4                      Class . . . . . 0xFF  
ProductID . . . . . 0x8613                    Subclass . . 0xFF  
Manufacturer . . . . . Trez Electronic                      Protocol . . 0xFF  
Product . . . . . TE USB FX2                                  bcdDevice 0xA001  
Serial Number . . . . . 101

Device Configurations ( 1 )

Value	Attributes	Max Power
0x01	0x80	0x32 (100 mA)

Configuration Interfaces ( 4 )

Intfc	Alt Setting	Class	Subclass	Protocol
0	0	0xFF ( Vendor )	0xFF	0xFF
0	1	0xFF ( Vendor )	0xFF	0xFF
0	2	0xFF ( Vendor )	0xFF	0xFF

Interface Endpoints ( 0 )

Address	Attributes	Max Pkt Size	Interval
---------	------------	--------------	----------

Update/normal boot

The screenshot shows the Cypress USB Console application window. The title bar reads "Cypress USB Console". The menu bar includes "File", "Options", and "Help". Below the menu bar is a toolbar with icons for file operations and a "Selected Script:" field. The main area is titled "Select Device" and contains a table with the following data:

USB Address	Device Name	Name in Windows Device Mgr (from .inf)
1	TE USB FX2	Trenz Electronic USB FX2

Below the table are tabs for "Device Properties", "Control Endpt Xfers", "Other Endpt Xfers", and "Misc.". The "Device Properties" tab is active, showing the following details:

VendorID . . . . . 0x0BD0                      Class . . . . . 0x00  
ProductID . . . . . 0x0300                    Subclass . . 0x00  
Manufacturer . . . . . Trenz Electronic        Protocol . . 0x00  
Product . . . . . TE USB FX2                    bcdDevice 0x0000  
Serial Number . . . . . 101

Below this is a section for "Device Configurations ( 1 )" with a table:

Value	Attributes	Max Power
0x01	0x80	0xFA (500 mA)

Next is "Configuration Interfaces ( 1 )" with a table:

Intfc	Alt Setting	Class	Subclass	Protocol
2	0	0xFF ( Vendor )	0x00	0x00

Finally, "Interface Endpoints ( 6 )" is shown with a table:

Address	Attributes	Max Pkt Size	Interval
0x01 ( Out )	0x02 ( Bulk )	64	0
0x81 ( In )	0x02 ( Bulk )	64	0
0x82 ( In )	0x02 ( Bulk )	512	0
0x86 ( In )	0x02 ( Bulk )	512	0

CyConsole starts



### "Misc" tab step: force the selection of the desired driver

If you encounter some problem here or after this step the problem may be caused by the fact that CyConsole could be unable to automatically select Cypress\_generic\_USB\_driver.MS-Windows-Vista+7-64-bit.signed (or the other desired driver).

You may need to follow this procedure (in particular if you are using Cypress\_generic\_USB\_driver.MS-Windows-Vista+7-64-bit.signed):

- Run Cypress USB console
- Go to "Misc" tab and select the driver in the drop-down menu, even if it is already selected (this is a small bug of CyConsole).
- After that, a USB device should appear in the list.

The "Misc" tab step is not always required, but it could be necessary for Cypress\_generic\_USB\_driver.MS-Windows-Vista+7-64-bit.signed driver. We have not observed this behavior with other drivers.

## EZ-USB Interface

To program the EEPROM and/or the RAM you should click "Option" and select "EZ-USB Interface".

Recovery boot

EZ-USB Interface

Device: **Cypress EZ-USB FX2LP No E...**

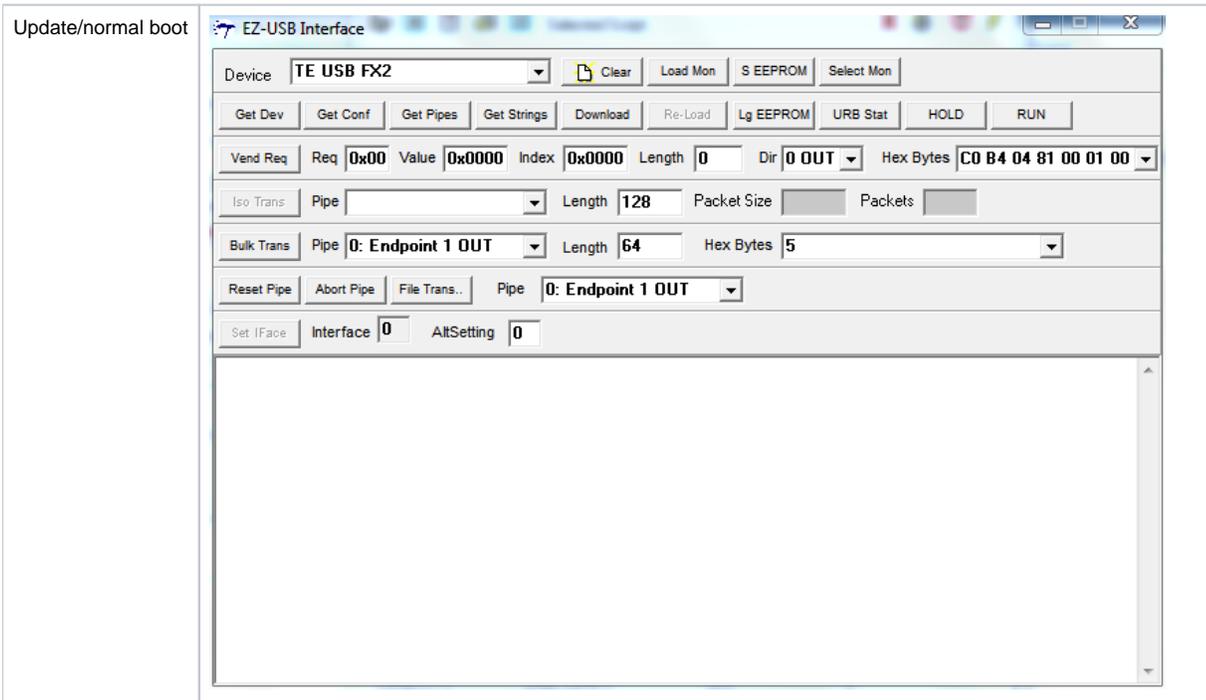
Vend Req: Req: **0x00** Value: **0x0000** Index: **0x0000** Length: **0** Dir: **0 OUT** Hex Bytes: **C0 B4 04 81 00 01 00**

Iso Trans: Pipe:  Length: **128** Packet Size:  Packets:

Bulk Trans: Pipe:  Length: **64** Hex Bytes: **5**

Pipe:

Interface: **0** AltSetting: **0**



"EZ-USB Interface" starts

## RAM programming

The .iic file can be successfully downloaded in RAM but it doesn't actually work: if you desire to program RAM with .iic file you should use [CyControl](#) or [Open FutNet](#) instead.

To program the RAM you should click "Download" button in "EZ-USB Interface" window and select the desired file to download. Unfortunately, you couldn't actually use .iic files but only .hex or .bix files.

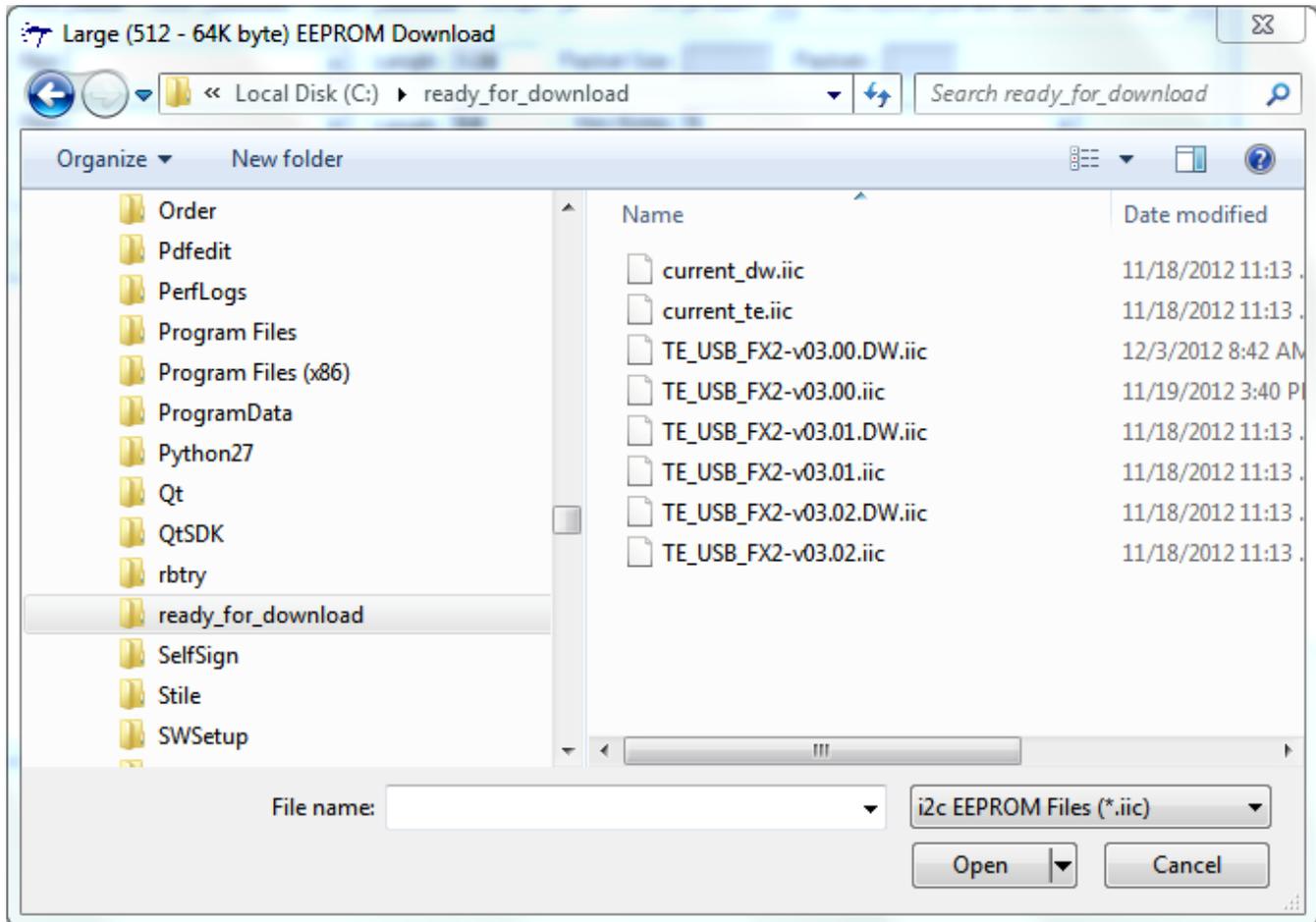


The RAM can be programmed even if EEPROM switch is disabled.

If you don't also write the IIC EEPROM ("Options" > "EZ-USB Interface" > "Lg EEPROM"), the new firmware is lost if the TE USB FX2 module goes under reset or power off/on cycle.

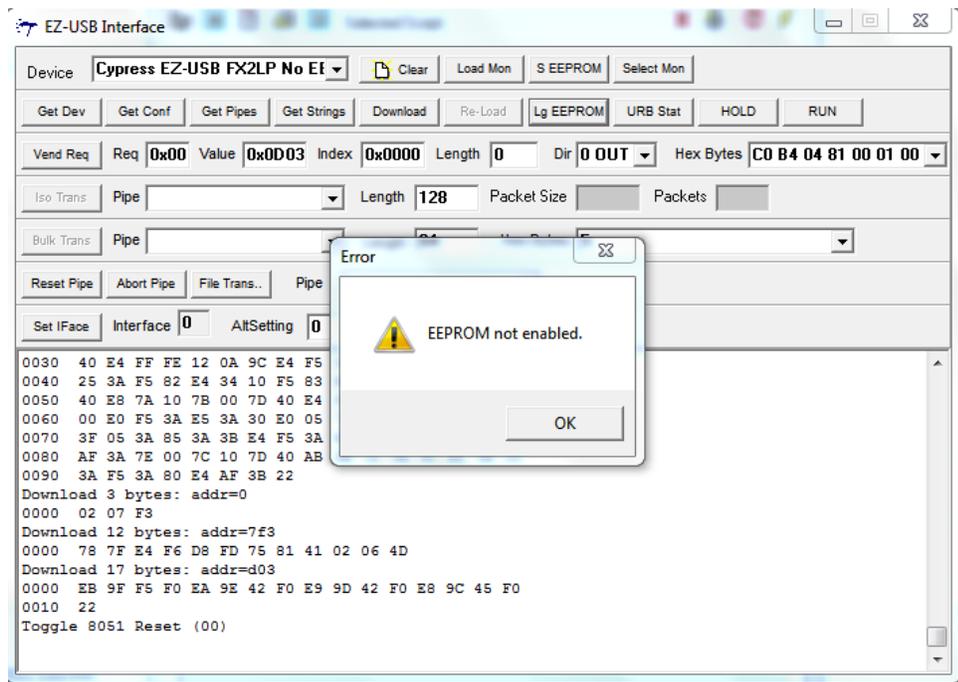
## EEPROM programming

To program the Large (64K) EEPROM you should click "Lg EEPROM" button in "EZ-USB Interface" window and select the desired file to download.

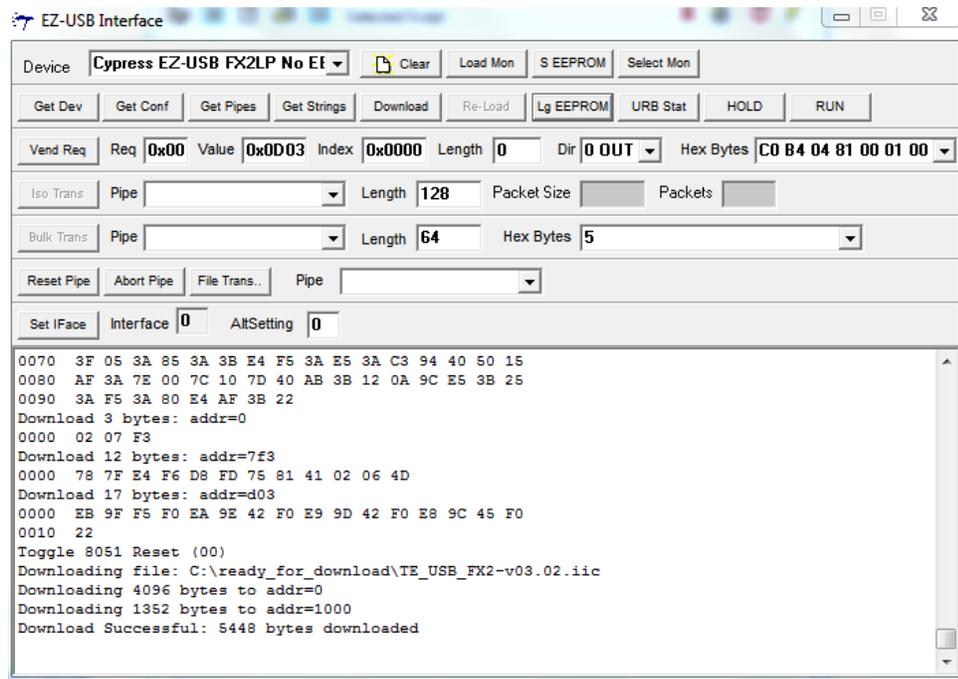


Select .iic file to download

Programming failed:  
it happens when  
EEPROM  
switch is disabled.



Programming succeeded:  
it happens when EEPROM  
switch is enabled.



### EEPROM Programming Status



If the TE USB FX2 module exit from reset or is powered on, the IIC EEPROM content programs/configures the USB FX2 microcontroller RAM