

# 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

FileOptionsHelp



Selected Script:



Select Device

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

Device PropertiesControl Endpt XfersOther Endpt XfersMisc.

VendorID . . . . . 0x04B4

ProductID . . . . . 0x8613

Manufacturer . . . . . Trez Electronic

Product . . . . . TE USB FX2

Serial Number . . . . . 101

Class . . . . . 0xFF

Subclass . . . . . 0xFF

Protocol . . . . . 0xFF

bcdDevice 0xA001

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

**Cypress USB Console**

File Options Help

Selected Script:

Select Device

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

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

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

Device Configurations ( 1 )

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

Configuration Interfaces ( 1 )

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

Interface Endpoints ( 6 )

| 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 Et

Clear

Load Mon

S EEPROM

Select Mon

Get Dev

Get Conf

Get Pipes

Get Strings

Download

Re-Load

Lg EEPROM

URB Stat

HOLD

RUN

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

Reset Pipe

Abort Pipe

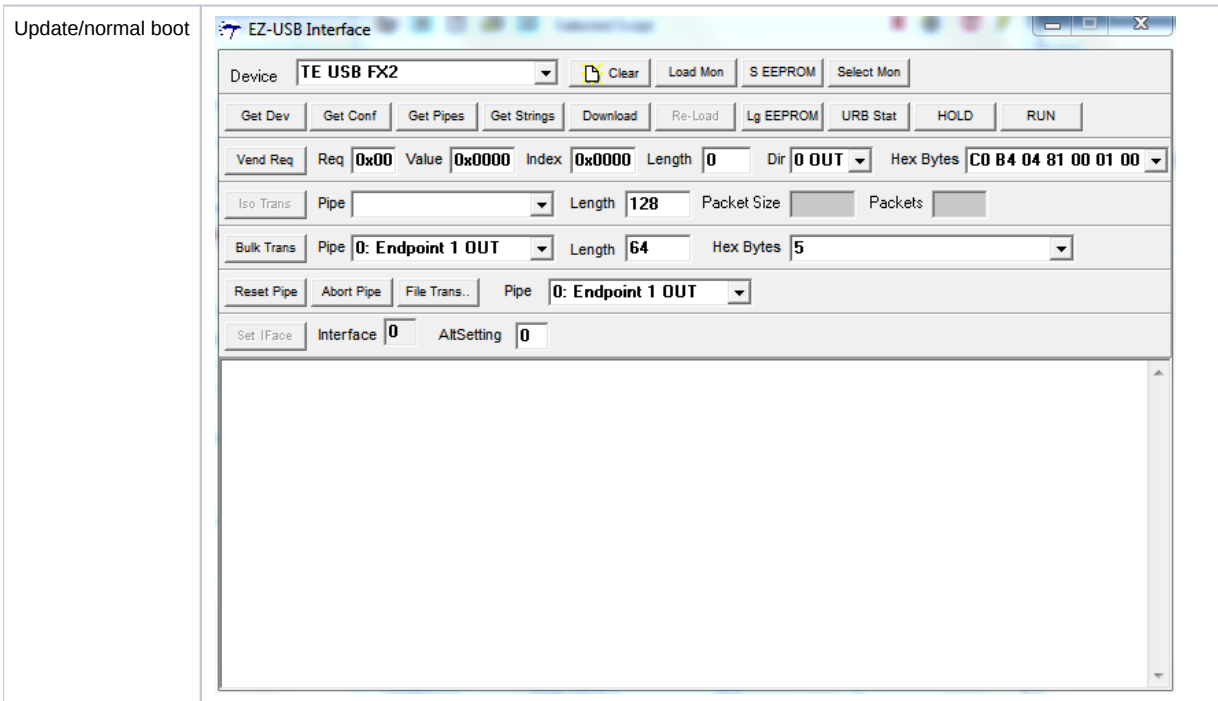
File Trans...

Pipe:

Set IFace

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.

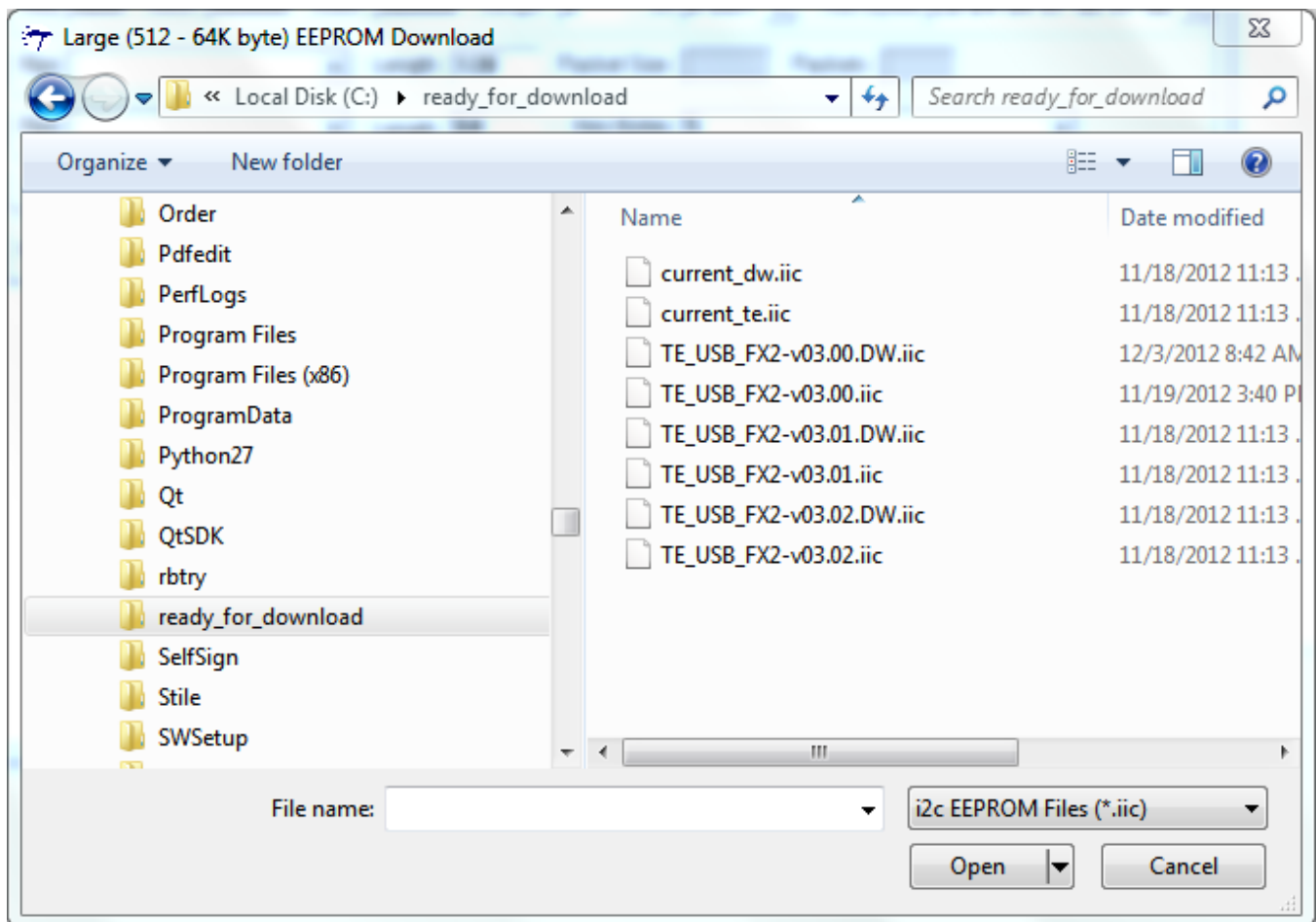


The RAM can be programmed even if EEPROM switch is disabled.

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.

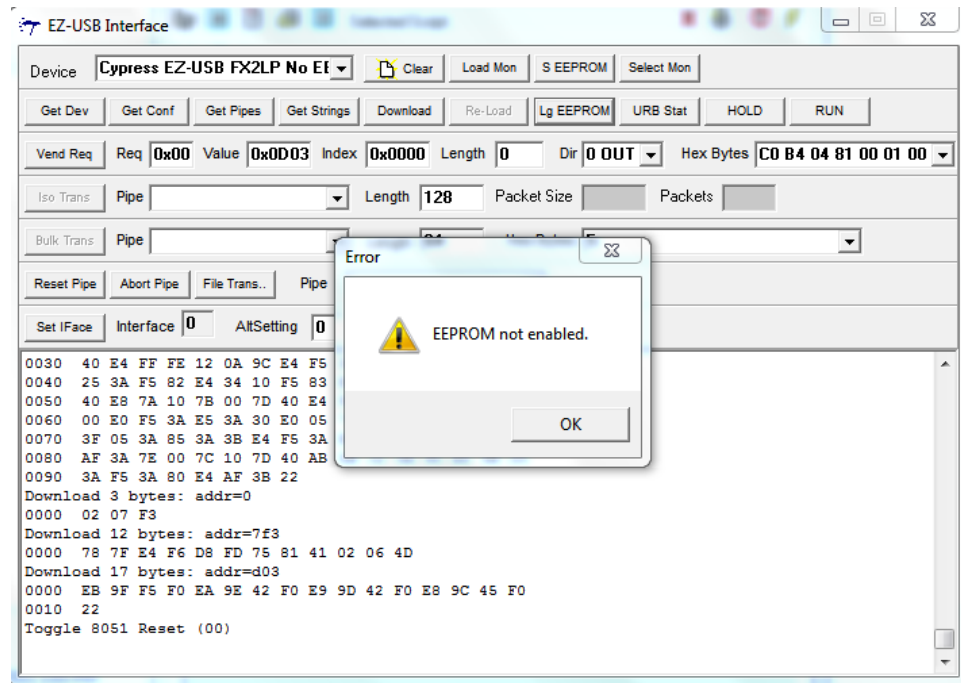
## EEPROM programming

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

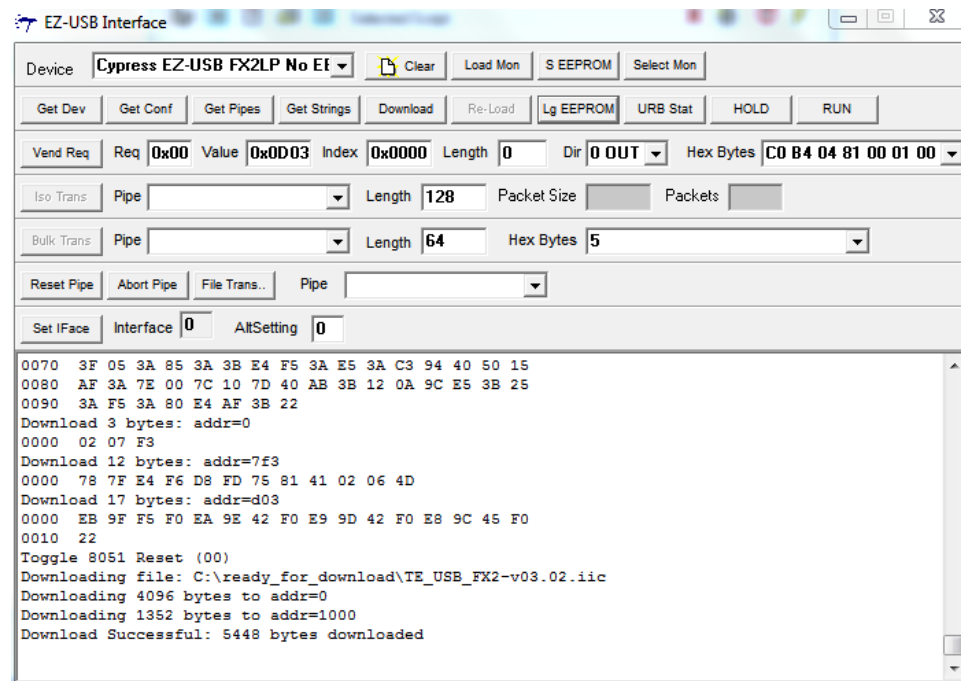


Select .iic file to download

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