# User Guide Standards

## Hulk_ demo board

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# Firmware Update SOP

## 1 Hardware Guide

### (1) Hardware Requirements

Buy a set of MSP-EXP430G2 from Digi-Key

You will get following stuffs in the package
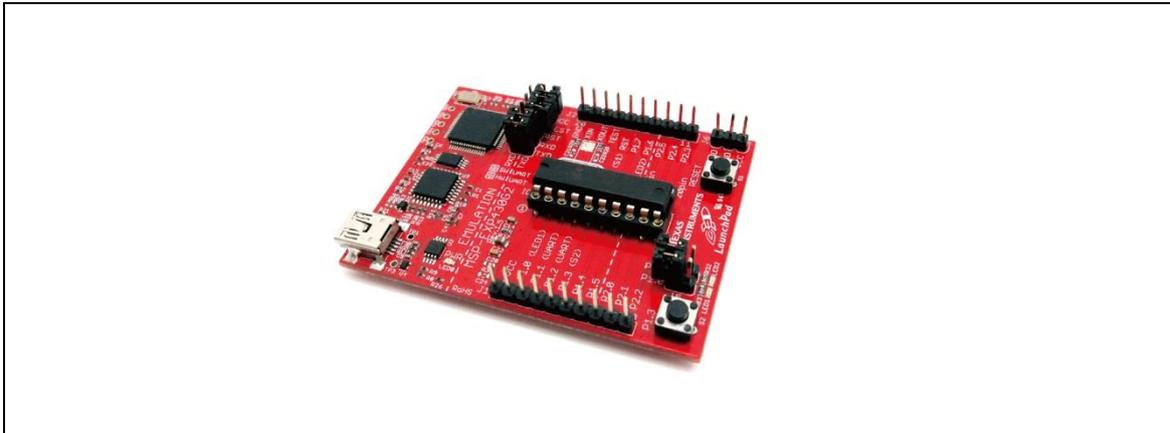


MSP-EXP430G2

### (2) Hardware Installation

The programmer need the jump line as the picture below
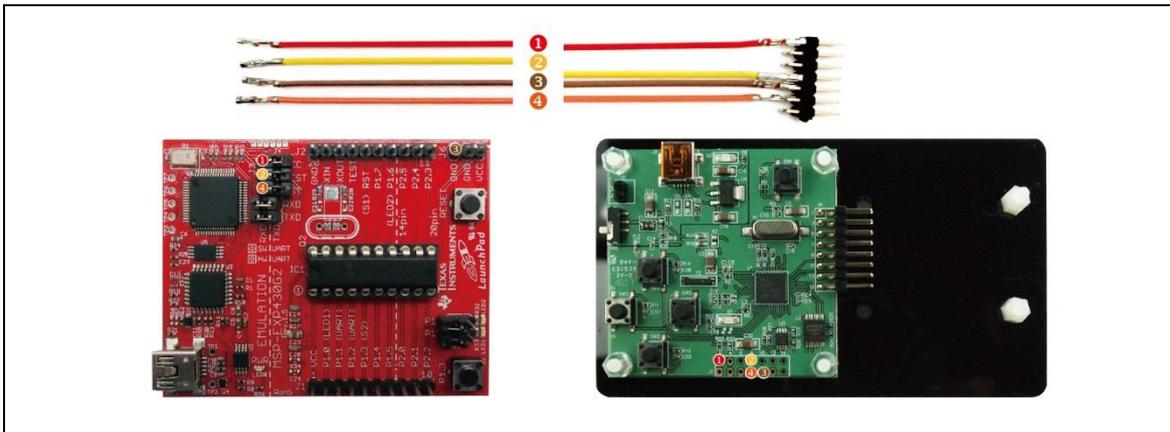


Connect to MSP430 and Hulk MCU board

- Please connect the Dupont line from J3 (VCC pin) of MSP430 LaunchPad to J1's 2nd pin of Hulk

- Please connect the Dupont line from J3 (TEST pin) of MSP430 LaunchPad to J1's 8th pin of Hulk

- Please connect the Dupont line from J3 (RST pin) of MSP430 LaunchPad to J1's 11th pin of Hulk

- Please connect the Dupont line from J6 (GND pin) of MSP430 LaunchPad to J1's 9th pin of Hulk

Please pay attention! It must remove the Hulk's adapter board when updating Firmware.

When you update Firmware, please confirm if the D2(power indicator) or D2(power indicator) and D1(data indicator) of Hulk are lighted.

- It can update Firmware when indicators are lighted.

- If the indicators are not lighted, please confirm the connect again.

Refer to following figure to setup MSP-EXP430G2 and connect it to your PC
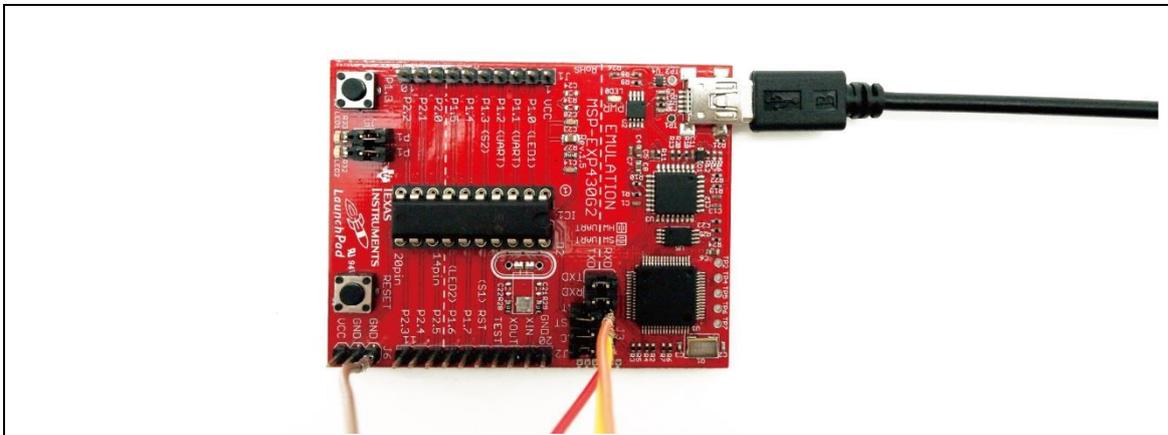


Connect to PC

## 2   Software Guide

### (1)   Software Requirements

Refer the guideline in following FET-Pro430 Lite website to download and setup driver of MSP-EXP430G2

https://www.elprotronic.com/productdata;jsessionid=2C6DF835A1996E7636AE8582109D1EC7



Refer to following figure to connect MSP-EXP430G2 with your PC and Hulk together.
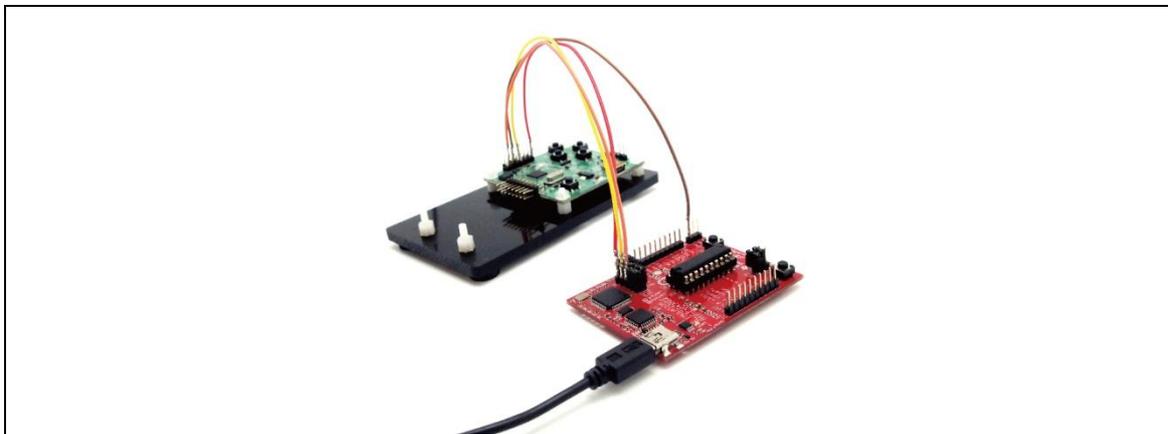

Connect to PC

### (2)   Firmware Update by Application Software

● Press drop-down menu "Microcontroller Type" to select a MCU model MSP430F5502
● Please check "Port USB Automatic" to select 4-wires
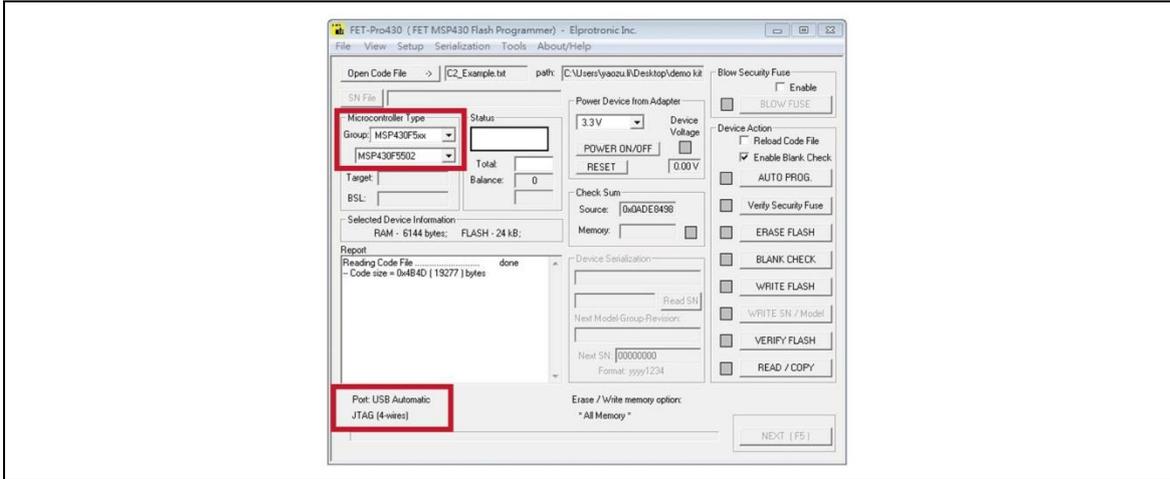
● Press "Open code file" button to select a firmware file (.txt)

● Press "AUTO PROG" button to update the firmware into MCU
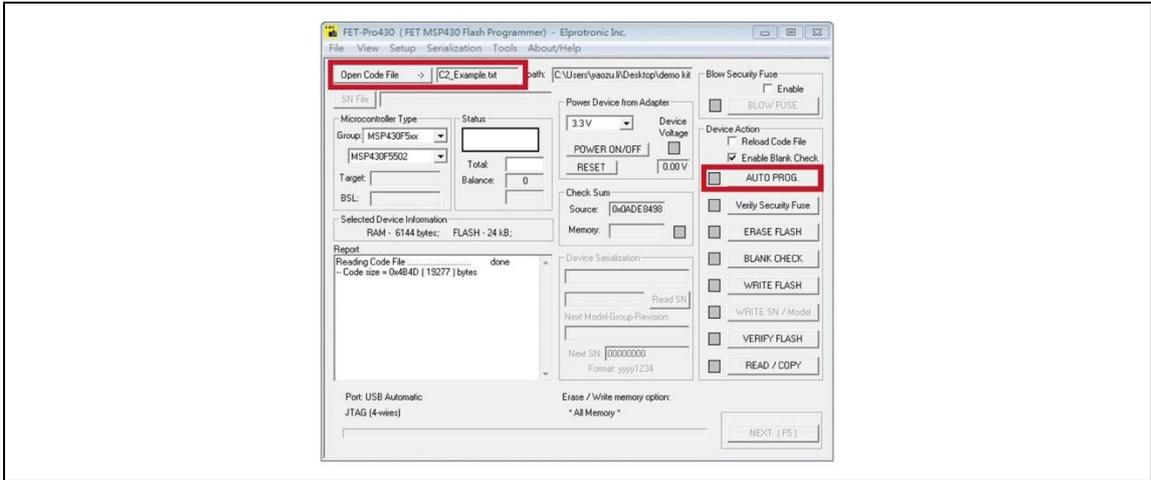


● Show the Pass is firmware update ok.
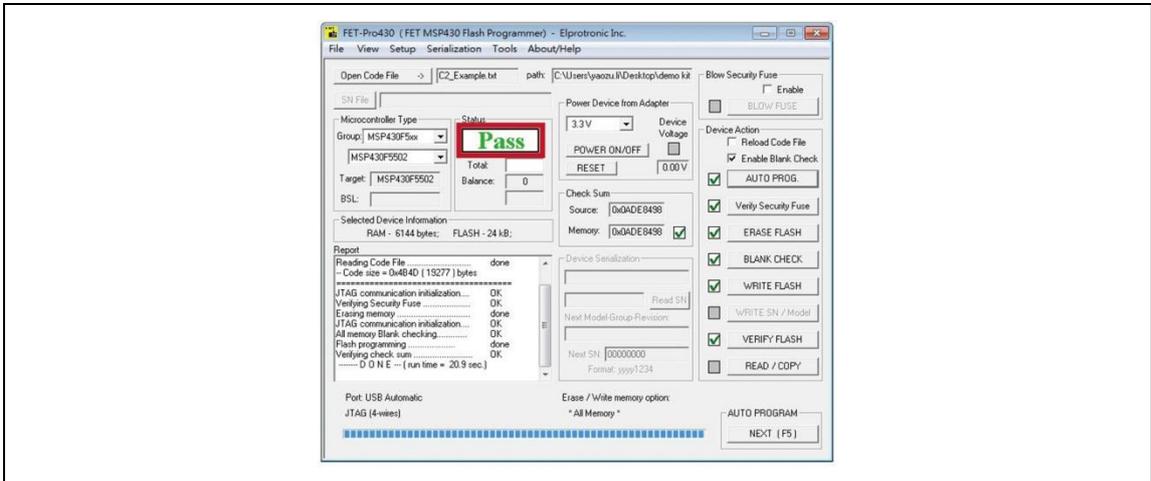
# Hardware Guide

## 1 Hardware Requirements



MCU board and display adapter



Mini USB cable



Windows PC

Table 1 Minimum PC Requirements

| CPU | Pentium III 800 MHz or later |
|---|---|
| RAM | 128MB or greater |
| Required Software | Windows XP |
| Interface | USB port |

## (1) Demo Kit Hardware Description

The HULK demo Kit includes an MCU board and an E Ink display adapter board. The MCU board and E Ink display adapter board are connected via a 16 pin header. The mini USB port on the demo kit supplies data and power to the MCU board and E Ink panel. Using the E Ink PC application, users can send image data to the board or update settings.
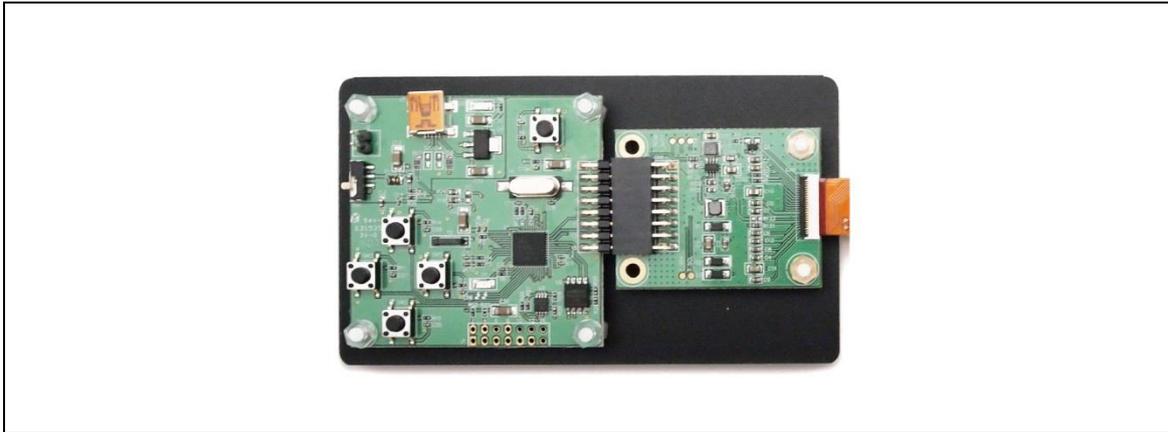


Demo Kit

There are two LEDs on the MCU board, LED 1 and LED 2. LED 1 indicates the board is powered. LED 2 is used as a multi-purpose function light
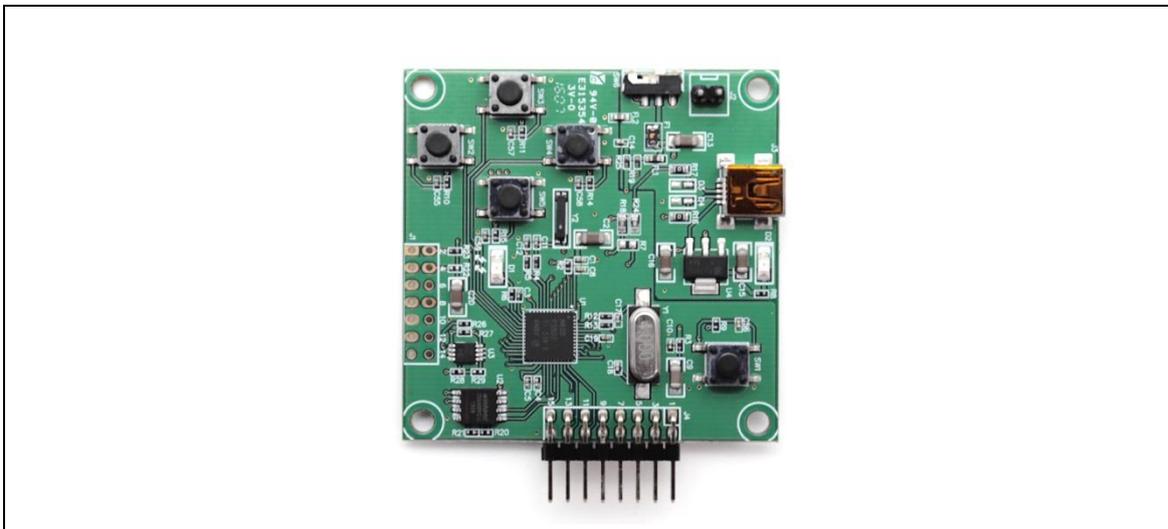


MCU Board for Demo Kit

∗ When LED2 is light on, EPD can't accept any command

**(2) Hardware Installation**

The HULK demo kit is connected to a PC via a mini USB cable. The PC requires a USB driver to be installed on the PC.

● Connect one end of the mini-USB cable to the HULK demo kit and other end to a USB port on a PC.
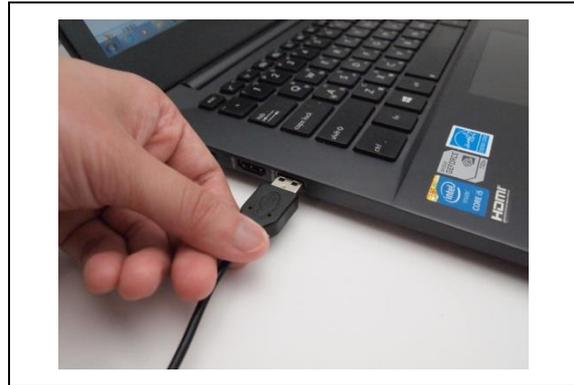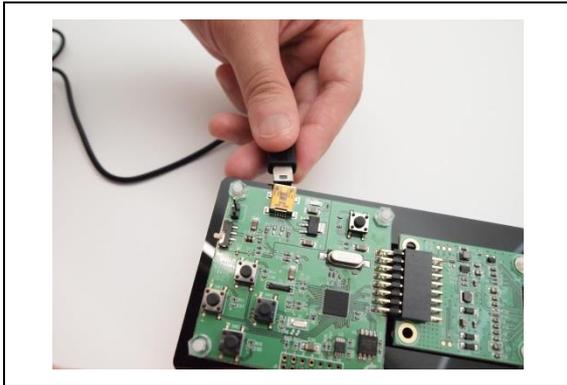


● Open Device Manager on the computer. A new device called **MSP430-USB Example** should be in the list. If this is the first time setting up the hardware, installation of the device driver is required.



1
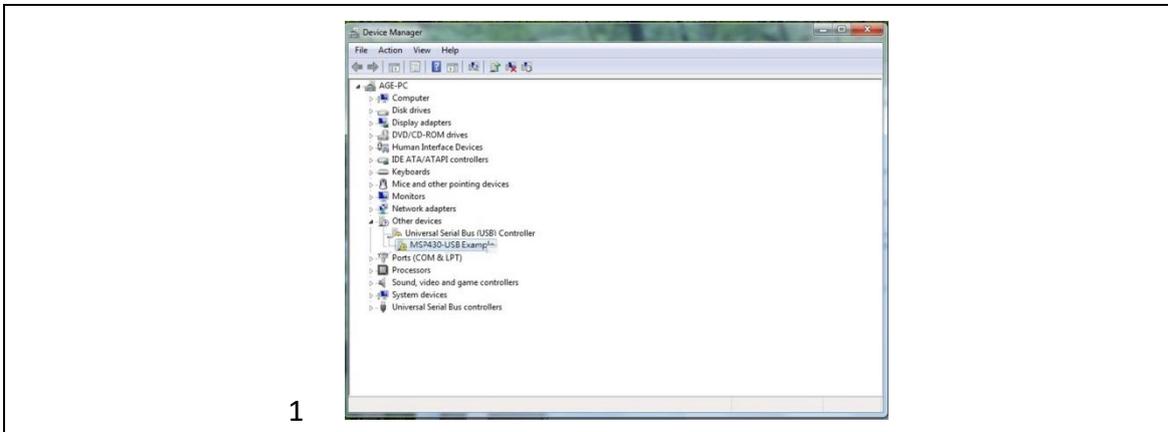
● To install the device driver for **MSP430-USB Example**, double click on the device to bring up the device Window. Click on "Update Driver" and select the file "Hulk-USB-Driver.inf".
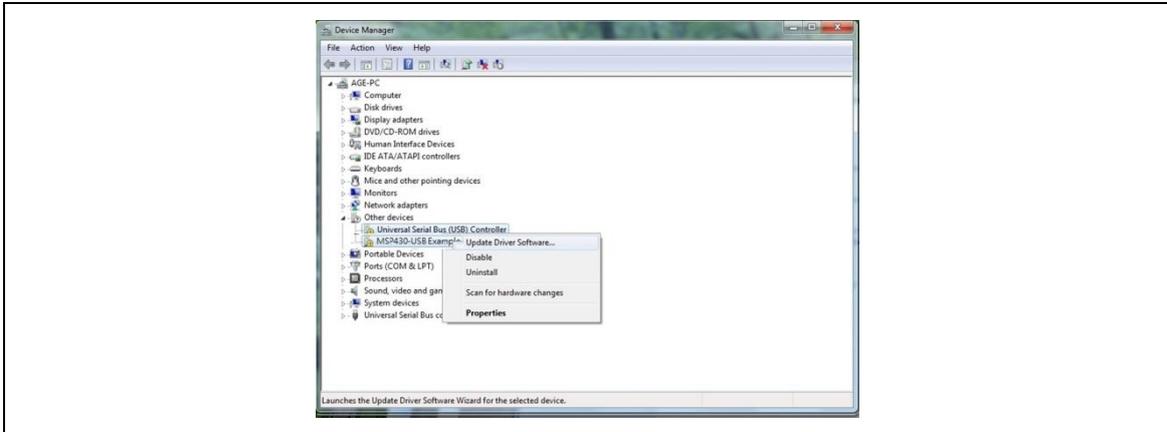


&ast;  This driver has been tested on Windows 7 64-bits

● To verify the installation of the driver was successful, a new device called **Virtual COM Port (CDC)** should be present under **COM LPT.**
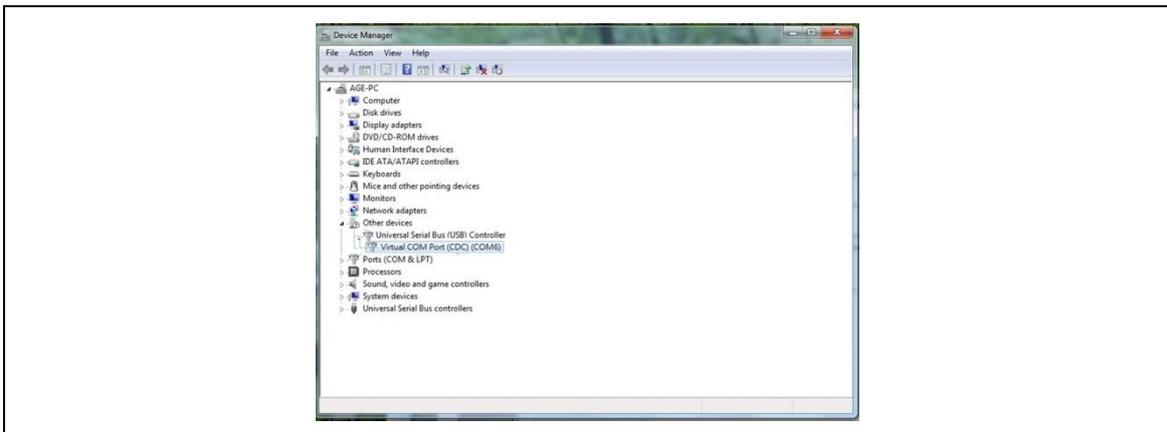
## 2  Hulk Function Block
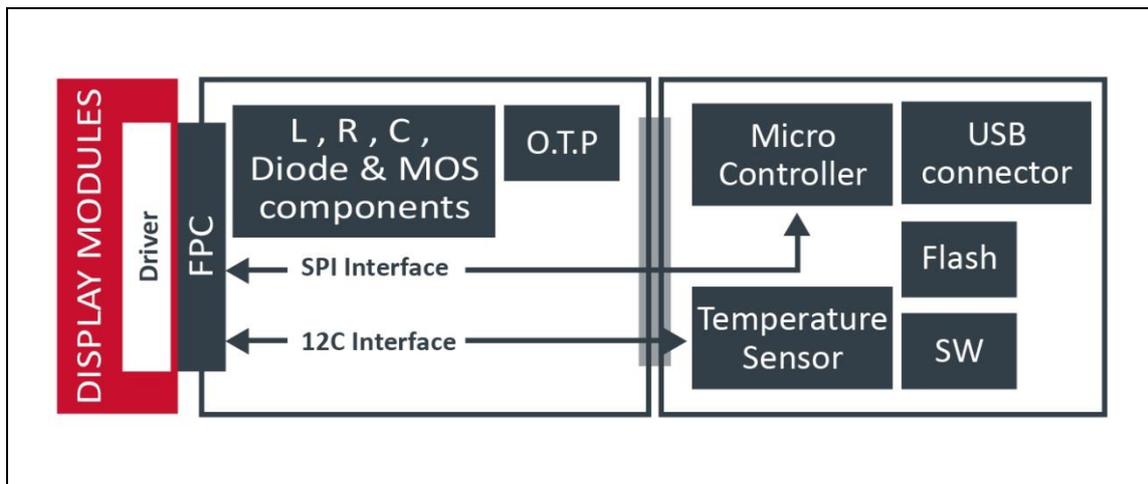


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