EM7180DVK QUICK START GUIDE

USB Memory Stick
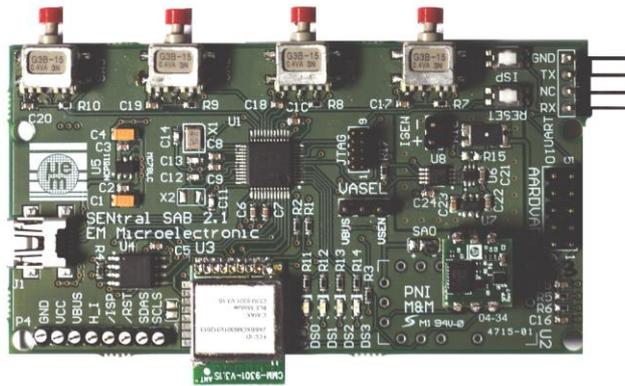
Serial Port to USB Converter

SAB2 Board

Your EM7180DVK Development Kit contains:

l **SAB2** Board featuring EM7180SFP sensor fusion platform module, Cortex M3 ARM processor, EM9301 BLE Module,…
l **Serial converter** (UART to USB) to read out some data and its USB cable
l **USB Cable** to perform different firmware updates and PC communication
l **USB memory stick** containing the Host Application Kit Installation setup

Your Host Application Toolkit installer installs:

HOST APPLICATION TOOLKIT
HAT API
HAT API DOCUMENTATION
APPLICATION BINARIES
APPLICATION PROJECT SOURCE FILE
SAB2 USER MANUAL

EM MONITOR
EM MONITOR GUI SOFTWARE
EM COMMAND SHELL
EM MONITOR USER GUIDE

This quick start document guides you through the set-up of your development hardware kit, software and demo.

1   INSTALL THE HOST APPLICATION TOOLKIT SOFTWARE TOOL FROM THE USB STICK

l   **Connect the USB memory stick** to your PC

l   **Open** an **explorer** window

l   **Click** on the relevant **USB stick drive** (Host Application Toolkit *.msi)

l   **Double click** on this **setup executable file**

This setup will guide you through the installation process

2   BOARD SETUP

Before using the SAB2, firmware may need to be installed or updated.

Board connected to USB PC port

ISP button

RESET button

EM7180 SFP Module inserted
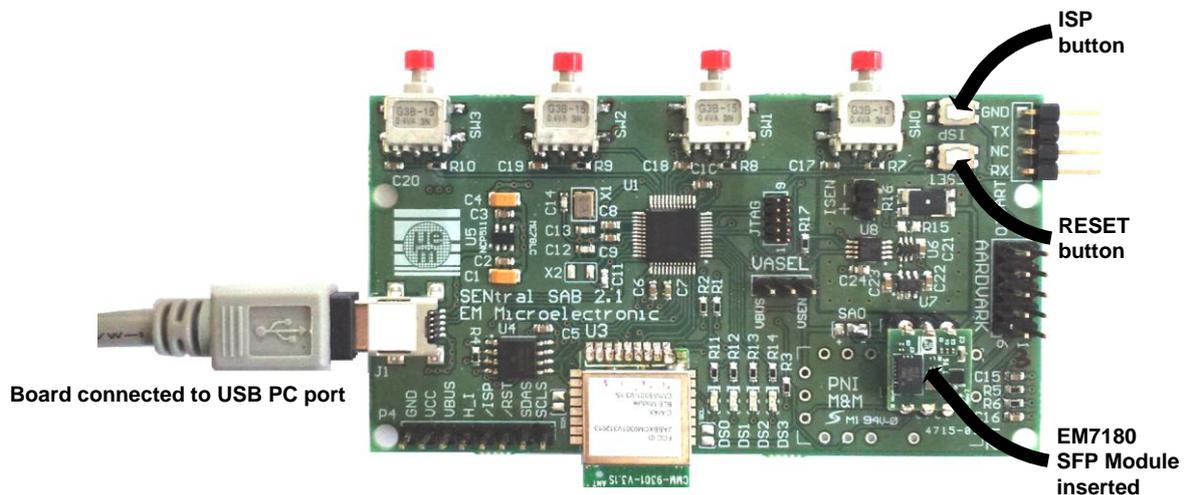
l   Once connected to the PC through the USB port, a board which has not yet been programmed will show up as a typical Mass Storage Device labelled **CRP DISABLED** in the **explorer** window.

l   Simply delete any files on this device, and copy over the firmware file. In order to utilize the provided utilities (detailed following), load the firmware **I2CHID.bin** from {Installation path}\EM718x Host Application Toolkit\sab folder onto the board. Once copied press the **RESET** button on the board

Notes:

*If the board has already been programmed, then it will not enumerate as CRP DISABLED. In this case, press the **ISP** and **RESET** buttons, releasing the **RESET** button before the **ISP** button.*

For more details refer to the SAB2 User Manual

3   SOFTWARE APPLICATION

Several software applications are included for evaluating the EM7810SFP module These applications required that the SAB2 have the **I2CHID.bin** firmware installed.

3.1   EM MONITOR

l   EM Monitor is a graphical application capable of displaying and plotting sensor data, recording data to file. **Use** the Start Menu **shortcut** EM Monitor x.y.z located under {Start Menu / EM Microelectronic / EM718x Host Application ToolKit} to launch the software.

l   Press the button **Connect** to see the different plots.

l   Press the button **Cube** to see the cube 3D-view
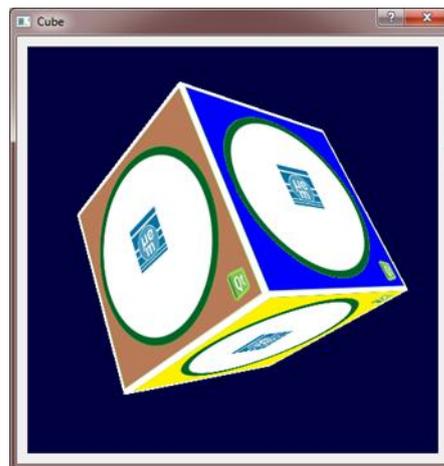
For more information, see the EM Monitor User Guide.

3.2 EM COMMAND SHELL

EM Command Shell is a modified Windows command line environment designed to make running the EM718x command line utilities easier.

The **em718xcli** is a command line utility for interacting with the EM7180SFP module.

l   To run the em718xcli, simply start the EM Command Shell

l   Then execute   **em718xcli**. Usage and option information can be found by adding the -h or --help flag.

4   FIRMWARE

Several firmware images are provided for different functions and demos.

l   The firmware binary files can be found under {Installation path}\EM718x Host Application Toolkit\sab folder

l   The firmware source files and project files can be found under under {Installation path}\EM718x Host Application Toolkit\src\sab folder

For more details refer to the SAB2 User Manual (SAB2 Firmware application paragraph).