PRODUCTS   APPLICATIONS   DESIGN SUPPORT   BUY & SAMPLE   ABOUT CYPRESS

SK-FM3-176PMC-TFT HMI Reference Design, TFT Direct Drive
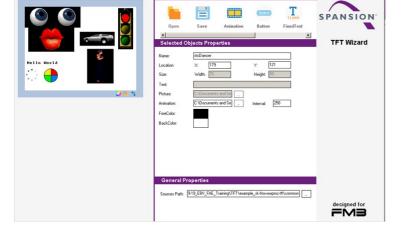
Last Updated: Jul 01, 2016

The evaluation board is a versatile solution to develop HMI – human   To List for Evaluation Board
machine interface applications, based on Cypress's FM3 microcontrollers of the MB9BD10T series. It
covers TFT direct drive, capacitive touch sensors and various communication interfaces, including USB,
CAN and Ethernet.

Beside the evaluation board hardware, the package includes a 3.5" QVGA TFT display, software
examples and the PC GUI "TFT Wizard".

FEATURES:

- FM3 MB9BFD18TPMC Microcontroller
- 1MB Flash, 128KB RAM on-chip
- 1MBit x 16-Bit (2MByte) on-board SRAM
- 4MBit x 16-Bit (8MByte) on-board Flash
- 4 MHz main crystal, 144/160MHz Main Clock (via internal PLL)
- 8-9V unregulated external DC power supply
- On-board 5.0V and 3.3V voltage regulator
- Power-LED, Reset button, Reset LED
- EDT 40-pin FPC connector (TFT connector)
- Fujitsu/Spansion 40-pin TFT connector
- 22/5 pins available for user interaction
- 2x Multi-connector (I2C, UART or SPI)
- 6 capacitive touch buttons (assembly option for 6 mechanical buttons)
- 1 push button (user button)
- In-Circuit Flash programming (UART, USB, JTAG)
- RS232 interface (SUB-D9 connector)
- USB to serial converter (Type-B connector)
- USB to JTAG converter (CMSIS-DAP)
- CAN interface (SUB-D9 connector)
- USB Host (Type-A) and Device (Type-B) connectors
- 10/100MBit Ethernet (via MII)
- JTAG interface (20-pin)
- TFT ET0350G0DM6, 3.5" 320x240 pixel QVGA
- RoHS compliant , CE conform

SK-FM3-176PMC-TFT evaluation board, including display

TFT Wizard, PC GUI

Download

- Quick Start Guide
- Schematic
- MB9BFxxx ethernet driver (v1.6)
- CMSIS-DAP Firmware Update (v2.4)
  (For the on-board JTAG adaptor "CMSIS-DAP" is a new firmware available fixing communication errors on high data transfers via UART. Please refer the readme_cmsisdap_firmwareupdate.pdf within the cmsis_fw_update.zip package how to update.)
- Complete Driver, Documentation, Software & Tools package (v1.1)
- Tools (contains Spansion Serial Port Viewer, Flash MCU USB direct programmer, Flash MCU programmer and USB Wizard)
- Drivers (contains USB-Virtual-COM-port (VCP) driver (see http://www.ftdichip.com/Drivers/VCP.htm for latest version), CMSIS-DAP debugging and Direct Flash programming)

SK-FM3-176PMC-TFT - SOFTWARE EXAMPLES

The following software is for demonstration purposes only. It is not fully tested, nor validated in order to fulfill its task under all circumstances. Therefore, this software or any part of it must only be used in an evaluation laboratory environment.

Use only the template-project as starting point for your application. Only the template-project will be updated in case of any change of the header files, startup code etc.!

Tool specific Software Examples	
Template project for the MB9BFD10T Series.	mb9bfd1xt_template.zip (v1.9)
Software Examples	SoftwareWeb.zip
Support Software	
CMSIS-DAP USB drivers	CmsisDapDriverInstaller.zip (V1.4)
For the on-board JTAG adaptor "CMSIS-DAP" is a new firmware available fixing communication errors on high data transfers via UART. Please refer the readme_cmsisdap_firmwareupdate.pdf within the cmsis_fw_update.zip package how to update.	cmsisdap_fw_update.zip (V2.5)
Serial Port Viewer and Terminal	SerialPortViewerAndTerminalV57.zip

This content contains information on Cypress products that have been migrated from Spansion's website in conjunction with our merger. Although marked with the name of the company that developed the material (Spansion or Fujitsu), Cypress continues to offer the content to our customers. There is no change to this information as a result of this migration. Future revisions will occur when appropriate, and changes will be noted in the revision history.

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Contact Us

Corporate Headquarters:
Cypress Semiconductor
198 Champion Court
San Jose, CA 95134 USA
Tel: +1-408-943-2600

Customer Service Support:
+1-800-541-4736
Hours:
8:00AM - 5:00PM (local time)
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