

FUFA

Fujitsu USB Firmware API

The Universal Serial Bus (USB) is supported by many microcontrollers, e.g. the F²MC-16LX MB90330 series. The USB interface is implemented by a Serial Interface Engine (SIE), which covers the lower layer of the USB protocol. The higher layer of the protocol must be handled in the software of the microcontroller. The quality of this software implementation is very important to guarantee compatibility with various operating systems and host controllers. By using the FUFA firmware library it is possible to get the USB interface up and running without spending the time and the effort of developing a new USB firmware.

The Fujitsu USB Firmware API - FUFA

FUFA is a USB firmware library for Fujitsu microcontrollers of the F²MC-16LX MB90335, F²MC-16FX MB96330 and FR80 MB91660 series. It controls the USB function of a microcontroller and provides a programming interface (API) that is convenient to use. The handling of USB standard requests is covered completely by the library. USB events like Reset, Suspend, Resume, or SetConfiguration are passed on to the embedded application by means of call back functions. The FUFA API exposes a function-based interface that is used to exchange data with the PC. The library supports DMA and double buffering.

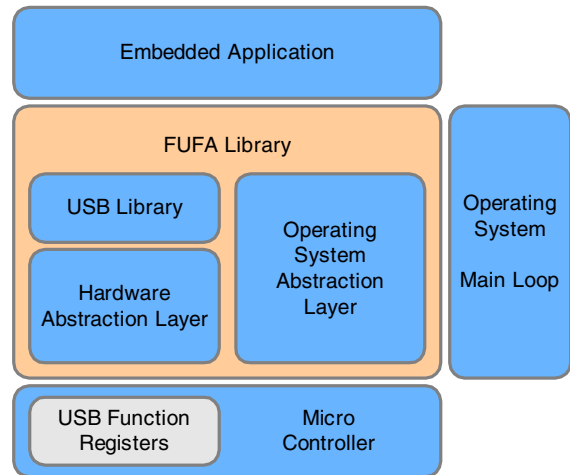
All device-specific parameters like endpoint layout, protocol and USB descriptors can be configured by application software. The FUFA library can be used to implement class or vendor specific device interfaces and can be used in most projects without changes. High quality of the software and comprehensive tests ensure that a device that is using the FUFA library is compatible to all host controllers and operating systems.

Visit the Fujitsu homepage for more detailed information about supported microcontrollers.



Download Package

The FUFA package contains precompiled object code for several evaluation platforms from Fujitsu and Glyn. The package is full functional. It contains documentation and the source code of the library. A demo version of the USBIO Development Kit (www.thesycon.de/usbio) is part of the package and is used to communicate on the PC side.



Features

- ❑ Complies with USB 1.1 and USB 2.0 standard, full speed data transfer
- ❑ Handles all USB standard requests
- ❑ Implementation is compliant with the Command Verifier Test of the USB Implementers Forum
- ❑ Supports all data transfer types: control, bulk, interrupt, and isochronous (isochronous transfers have small limitations)
- ❑ Supports class and vendor specific requests
- ❑ Provides static USB events to the application, e.g. Reset, Resume, Suspend, SetConfiguration
- ❑ Easy-to-use programming interface
- ❑ Implementation supports double buffering and DMA transfers
- ❑ Supports data rates greater than 1 Mbyte/s in bulk at full speed
- ❑ Complies with all common host controllers: Universal (UHC), Open (OHC) and Enhanced (EHC)
- ❑ Interrupt driven programming model

The Fujitsu USB Firmware API is free of charge.

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