

COMPLETE USB SOFTWARE FROM THE LEADER IN USB FOR MOBILE

USB software, including FlexiUSB stack

ST-Ericsson supports its industry-leading USB ICs with a comprehensive set of software components that reduce development costs and increase your odds of being first to market.

ST-Ericsson's USB software simplifies development by providing all the software needed to complete a USB design. Each piece of software supports current USB specifications and is optimized to work with our USB ICs. We have software for all the major operating systems, including Windows CE, Linux, VxWorks, Nucleus, ThreadX, pSOS, and more.

Our Linux and Windows CE solutions are always compatible with the latest versions of the OS, and we have drivers for a very wide range of host and device drivers.



KEY FEATURES

- In accordance with USB Specification Rev. 2.0
- All major operating systems
- All major 16- and 32-bit processor architectures
- Wide range of host and device class drivers
- Layered architecture for fast stack implementation
- Code written in C/C++ for easy porting
- Source code for more flexible development
- Robust API for development of class and client drivers
- Extensive support services available

KEY BENEFITS

- All your USB needs met by a single industry-leading supplier
- Simpler development with a technology expert as your partner
- Greater control over the design with easy access to source code
- Quicker issue resolution with a strong support team

TARGETED APPLICATIONS

- Mobile phones, PDAs, media players, gaming devices, digital cameras, printers
- PCs, notebooks, conference phones
- Digital TVs, set-top boxes
- Test and measurement equipment

To reduce overheads and make development more flexible, the software operates independently, without impacting the OS or the processor, and is compatible with 16- and 32-bit processors that use big- or little-endian formats.

Our software drivers can be ported onto additional processor platforms and RTOS that are not listed here. Our world-class support team helps you fix issues quickly, and we offer porting services that let you develop boards faster than ever.

PROVEN FLEXIUSB STACKS

Our robust and optimized USB software solution, called FlexiUSB, is a proven, user-friendly stack that is the smooth, easy way to integrate a USB application. Written in C and built with a modular design, it includes all the required USB software components for a host, peripheral, or OTG design, and makes it simple to port code to various operating systems, hardware platforms, and processors.

FLEXIUSB FOR HOST APPLICATIONS

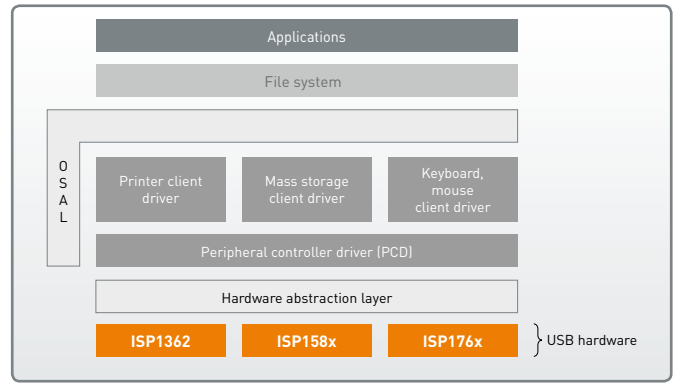
The protocol stack for USB host applications lets embedded products function as a host to support a wide range of USB peripherals. The host stack consists of four layers. The hardware abstraction layer (HAL) handles all platform-related activities such as memory and interrupt mapping. The host controller driver (HCD) layer handles host initialization and drives the controllers. The USB protocol layer (also known as the USB driver or USBD) performs protocol handling, and the class driver layer controls devices such as printers, cameras, and mass storage.

FLEXIUSB FOR PERIPHERAL APPLICATIONS

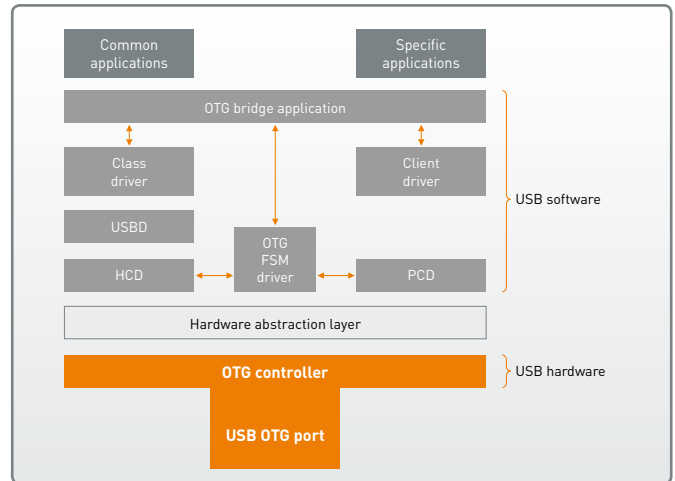
The protocol stack for USB peripheral applications lets USB products function as peripherals when they are connected to a USB host system. The peripheral stack uses a HAL, a peripheral class driver layer, a client class driver layer, and an OS abstraction layer.

FLEXIUSB FOR OTG APPLICATIONS

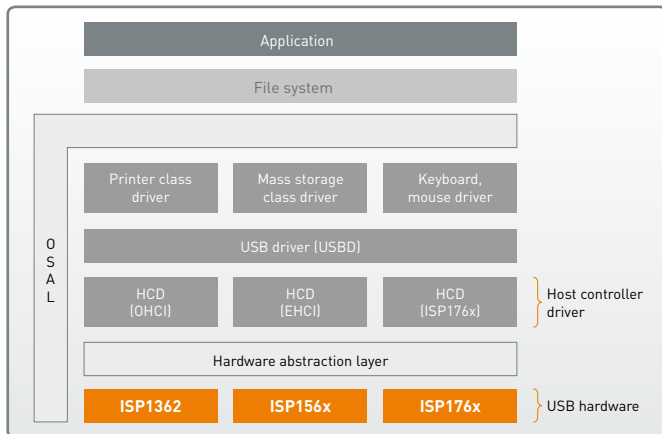
The protocol stack for On-The-Go (OTG) applications has a host stack, a peripheral stack, and an OTG Finite State Machine (FSM) driver, which maintains the OTG state machine and switches the device between host and peripheral roles.



FlexiUSB stack for USB peripheral architecture



FlexiUSB stack for USB OTG architecture



FlexiUSB stack for USB host architecture

Broad selection	
Processor support	Intel x86, ARM, StrongARM, MIPS, Nexperia, PXA25x, PXA27x, Freescale, and more
OS support	VxWorks, pSOS, Nucleus, C EXECUTIVE, ThreadX, WinCE, Linux, OSless, and more
Host class drivers	Audio class, HID class, hub class, keyboard and mouse drivers, mass storage class, printer class, Picture Transfer Protocol (PTP) class, and more
Client drivers	Media Transfer Protocol (MTP) client driver, mass storage client drivers, PTP client driver, serial client driver, and more

Proven performance	
Specification	USB Specification Rev. 2.0
Speeds	High-speed (480 Mbit/s), full-speed (12 Mbit/s), low-speed (1.5 Mbit/s)
Transfer modes	Control, isochronous, bulk, interrupt transport
USB functions	USB and Hi-Speed USB solutions for transceiver, peripheral, host, hub, and OTG
Processor types	16- and 32-bit operation, big- and little-endian formats

LET'S CREATE IT

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