



WinDriver™ USB

Version 14.6.0

General Description

WinDriver is a driver development toolkit that simplifies the creation of monolithic device drivers. WinDriver includes a graphical development environment, APIs, diagnostic and debug utilities and samples, which enable you to quickly develop a high performance driver without being a “driver guru”.



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Product Features

Immediate hardware access: Access USB hardware through a graphical user-mode application, without writing a single line of code.

Generation of hardware-specific code: WinDriver's DriverWizard generates skeletal driver code, customized to your hardware.

- **Easy addition of functionality and logics to the generated skeletal code:** In the user mode and within your favorite development environment.

Graphical tools: DriverWizard, an intuitive user-mode application, simplifies hardware access and driver code generation.

Debugging: Graphical Debug Monitor to monitor kernel- and user-mode activity.

Multi operating system support: Supports Windows 10 / Windows 10 IoT / Server 2016/ Server 2019/ 8.1 / 8 (x32 & x64)/MacOS 10.12-10.15 and Linux (x86 32-bit/64-bit/ARM/ARM64).

- **Samples and code generation for common development environments:** MS Visual Studio (including .NET code in C# and VB.NET), GCC, Java, Python, etc.

Cross operating system compatibility: The developed is source-code compatible between all supported operating systems without any code modifications.

Hardware independent: Supports any USB based hardware.

Microsoft certifiable driver (Windows): Digitally sign your driver and certify it by submitting it to Microsoft's Windows Certification Program (previously known as WHQL).

WinDriver is also available for **PCI / PCI Express / CompactPCI** based hardware. For further details, refer to www.jungo.com.

Product Benefits

Shorter development cycle; easier learning curve; faster time to market

- Isolates hardware bugs from driver developer
- No kernel-mode programming.
- No need to master the operating system internals, the Microsoft WDK or the USB protocol.
- Write and support one driver code base.
- Includes diagnostics files and samples for jump-starting your development.
- Free, full featured, 30-days evaluation version: The code created with the evaluation version will be ready for commercial distribution upon purchase of a registered product.
- Free, expert technical support, for the duration of the evaluation period.

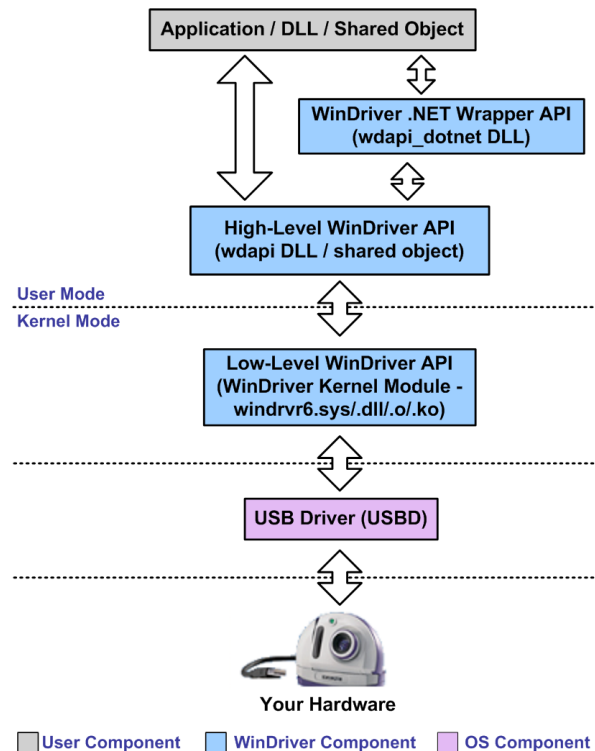
Technical Specifications

- Detection of USB devices, including devices residing beyond a USB hub.
- Provision of information about each detected device: physical location; vendor ID and product ID; configuration, interface, alternate settings and endpoint data.
- Hardware verification and debugging via an intuitive wizard:
 - Transfer of data packets through USB pipes (read / write).
 - Continuous read from pipes ("Listen").
 - Pipe reset operations.

Windows WDM compliant. Supports Plug-and-Play and power management notification handling.

- Generation and installation of *.inf files.
- Supports low-/full-/high-speed devices.
- Supports Control, Bulk, Interrupt and Isochronous data transfers.
- Multiple-interfaces devices support.

Architecture Diagram



The device driver developed with WinDriver (yourapp.exe/dll/so) accesses hardware through the WinDriver kernel module (windrvr1460.sys/ko) using WinDriver's API functions.

System Requirements

Supported Operating Systems

- Windows 10/ Windows 10 IoT / Server 2019/ Server 2016 / 8.1/8 (x32 & x64)
 - Linux and Embedded Linux 2.6.x-5.x (x86 32-bit & 64-bit)/MacOS 10.12-10.15
- Note: OS-specific support is provided only for operating systems with official vendor support.

Compiler

- Any appropriate C, Java, C#, or VB.NET compiler (e.g. MS Visual Studio or GCC).
- Any appropriate Python interpreter

Supported Industry Standards

Designed to comply with

- Universal Serial Bus specification 1.1
- Universal Serial Bus specification 2.0
- Universal Serial Bus specification 3.0

About Jungo

Jungo Connectivity Ltd. is a divestiture of the Connectivity Division of Jungo Ltd.

Jungo Connectivity is a provider of connectivity and multimedia software solutions. Jungo Connectivity's products enable semiconductor companies, device manufacturers, and original equipment manufacturers (OEMs) to easily develop products that intelligently connect with any portable device over various protocols for any application. Jungo Connectivity solutions have been deployed in global markets throughout various industries including the automotive industry, mobile communications, digital TV, point-of-sale, medical equipment, and defense industries.