

USB Restrictor Core – UT-USB-RES-IP

The UT-USB-RES-IP core implements a complete USB high-speed/full-speed restriction function that can be included in any position in a USB system. It enables specific devices or functions to be restricted while permitting all other USB devices to operate normally. Most notably, the core is completely transparent to the installed USB drivers and requires no additional drivers to be loaded.

Deployment options include tight integration with host controller and hub silicon or complete stand-alone systems. A variety of configuration and control interfaces are also available.

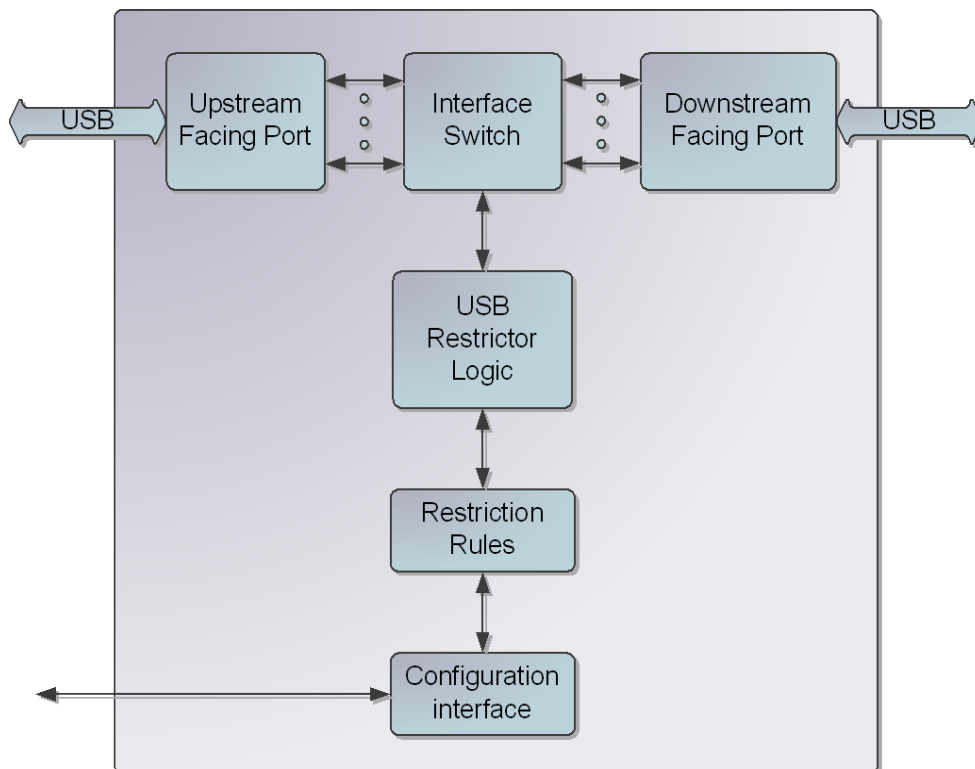
The IP core is designed for easy utilization in ASIC and FPGA implementations. The fully synchronous design enables straight-forward integration in a variety of geometries.

Applications

The UT-USB-RES-IP can be useful in a variety of applications:

- Secure laptop design for military/government use
- Secure server farms for financial applications
- Secure smartphones/tablets for medical/business applications

Block Diagram





Protecting What Matters

Features

Restrict USB operation based on:

- USB Device Class (e.g. Mass Storage Interface Class)
- Vendor ID
- Product ID
- Serial Number
- USB Transfer Type (e.g. Isochronous Transfers)
- Direction (e.g. OUT Transactions)

Configure restriction rules through a variety of interfaces:

- API
- Serial Interface (e.g. SPI, I²C)
- Parallel Interface (e.g. processor bus)
- BIOS, UEFI

USB Operating Modes:

- High-speed (480 Mbps)
- Full-speed (12 Mbps)
- Low-speed (1.5 Mbps)

Customization

The following customization options are available on request:

- USB Interface
- Configuration Interface

Deliverables

To be arranged with customer.

Contact

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