



USB-Over-WiFi Bridge

Product Data Sheet

Introduction

A wireless USB bridge converts a wired USB device and provides a capability for it to become Wireless Device and make use of available wireless computer network at offices, homes. Wireless Ethernet bridges and USB adapters are both sometimes called wireless media adapters as they enable devices for WiFi utilizing Ethernet or USB physical media. Wireless USB bridges support game consoles, digital video recorders and other USB-based consumer devices as well as ordinary computers.



Description

GlobalEdge's USB-Over-WiFi Stack implements a Wi-Fi to USB HUB that allows multiple USB devices to connect to a host PC wirelessly using the existing Wi-Fi module on the host. Due to its modular design this stack can be implemented as a standalone Wi-Fi to USB HUB or it can be integrated into USB consumer devices making them wireless enabled

Key Features

- Allows remote access to USB devices over an IP network
- Plug and Play USB Cable Replacement
- Low Footprint & Time to Market Advantage
- Enables wireless connectivity to existing USB Devices
- No additional device drivers required on the host for standard USB class devices
- Stack is portable across Host Processors and Operating Systems
- Provides accessibility to any device as a virtual USB device

Specifications

- No additional device drivers required on the host for standard USB class devices
- Stack is portable across Host Processors and Operating Systems
- Provides accessibility to any device as a virtual USB device
- All USB 1.0/2.0 compliant USB devices can be connected to USB-Over-WiFi Bridge
- USB-over-WiFi devices will appear on the host as directly connected USB devices Security

Specifications Contd.

Specific to the Product

- Specification
 - Defines the USB-Over-WiFi Protocol used to interface a USB Device with a USB Host using Wi-Fi as the medium
- Host Stack
 - Host side implementation of the USB-Over-WiFi protocol stack
 - Integrates USB-Over-WiFi devices with the Operating System's USB Subsystem
 - Provides USB Plug-n-Play interface to USB-Over-WiFi USB Devices
- Device Stack
 - Reference device implementation of the USB-Over-WiFi Protocol Stack that provides an interface to off-the-shelf USB Devices to a Host PC over Wi-Fi
- Reference Design
 - USB-Over-WiFi Host Stack is implemented as a Device Driver running on Windows XP
 - USB-Over-WiFi Device Stack is implemented on Luminary Micro's ARM Cortex-M3 Processor and Murata Wi-Fi Module

Code Size

- Code Size: 50KB
- Data Size: 40KB

Applications

- USB Keyboards, USB Mice & USB Drives
- Mobile Phones & Digital Cameras
- Portable Media Players & Video Cameras
- Printers & Point-of-sale (POS)
- Industrial control & Medical devices

Use Cases

1. USB-Over-WiFi Bridge

GlobalEdge's USB-Over-WiFi Bridge solution is a 802.11 a/b/g based solution that works as a USB HUB allowing multiple USB devices to connect to the host using a Wi-Fi interface.

Features

- Existing USB Devices can be easily Wi-Fi Enabled
- Easily portable to customers target hardware
- Host Driver supports multiple USB-Over-WiFi Devices
- No additional drivers required when enabling an existing USB device to work over Wi-Fi
- Plug-n-Play USB Cable Replacement
- Support for both High Speed and Full Speed USB Devices
- Operating Range up to 10 meters
- Infrastructure or Ad-hoc modes supported

2. USB-Over-Wi-Fi Integrated into USB Device

In this case the USB-Over-Wi-Fi protocol is integrated into the USB devices firmware and the hardware integrates an interface to a Wi-Fi module.

Features

- No additional processor is required
- Protocol Stack is implemented as part of the Device
- Device directly interfaces to Wi-Fi chip

Applications

- Wireless Access to Mass Storage in:
 - Mobile Phones
 - Portable Media Players
 - Cameras and other devices that have an USB interface
 - Video Cameras