STACCATO
COMMUNICATIONS®

Wireless USB
Dongle
Reference Design
'User Manual'

Revision History

WUSB Dongle Reference Design			
Version	**Publish Date**	**Author & Department**	**Description**
1.0	22-Feb-10	Dennis Laudick/Marketing	Created initial version

1 Introduction

The document is a high level user guide for the Staccato Wireless USB Dongle Electrical Reference Design.

The reference design consists of all hardware/electrical information necessary for an ODM to create a standard compliant Wireless USB dongle.

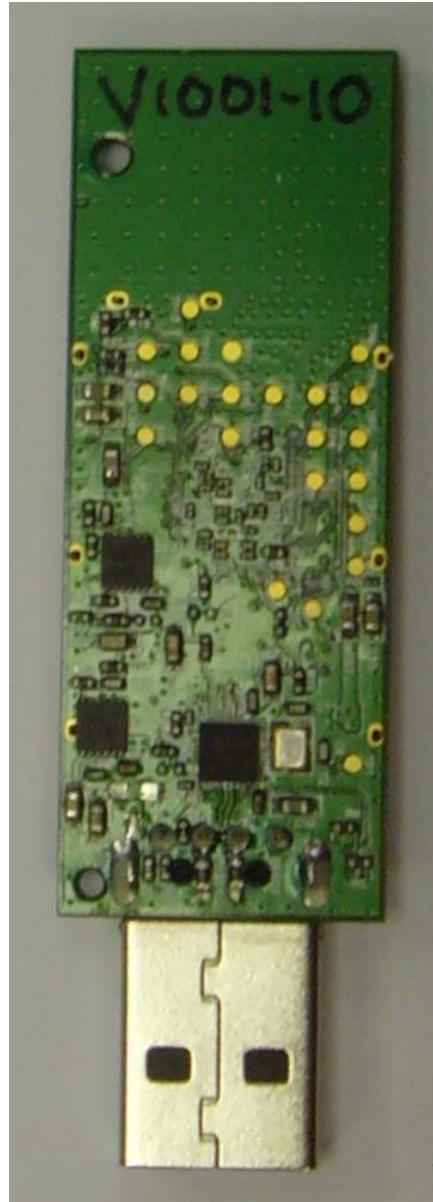The design itself looks as follows:

Figure 1 - Dongle Top

Figure 2 - Dongle Bottom

1.1 Reference Design Usage

The dongle reference design is based on the Staccato Ripcord2© Ultra-Wideband RF transceiver IC.

The dongle reference design contains all electrical information necessary for an electrical manufacturer to recreate an exact duplicate of the original design as developed by Staccato.

The dongle reference design provides a generic Ultra-Wideband and Wireless USB receiver/transmitter working in WiMedia bandgroup 1 and supporting both FFI (fixed frequency operation) and TFI (three frequency hopping) channels. By putting different firmware images and configurations in the dongle, the OEM can then use this generic 'platform' or 'module' in a variety of end product applications such as Mass Storage Class cable replacement, audio/video equipment and cable replacement for any standard USB cable.

1.2 Environmental Performance

Feature	Requirement (SD & HD)
Operating Environment	Operating Temperature: 0°C to 40°C Humidity: 90% non-condensing
Storage Environment	Storage Temperature: -20°C to 85°C Humidity: 90% non-condensing
Shock/drop	There are no specific requirements for shock/drop (noted for future reference)
MTBF/FIT	There are no specific requirements for MTBF/FIT (noted for future reference)

1.3 Reference Design Contents

The dongle reference design consists of the following information:

- o Electrical schematics

- o PADS PCB layout information

- o Electrical Bill Of Materials

1.4 FCC Statement

The following FCC statements/requirements apply to this design as provided. For use under FCC regulations, this text is also required in any subsequent end product documentation for which this reference design is used:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device complies is authorised under 47 CFR 15.519(a)(1) of the FCC Rules and Regulations. The operation of this device is subject to the following restrictions:

- **This UWB device shall transmit only when it is sending information to an associated receiver.**

- **This UWB device shall cease transmission within 10 seconds unless it receives an acknowledgment from the associated receiver that its transmission is being received. An acknowledgement of reception must continue to be received by the UWB transmitter at least every 10 seconds or the UWB device must cease transmitting.**

Warning: Changes or modifications to this device not expressly approved by Staccato could void the users authority to operate the device under the FCC Equipment Authorization.

1.4.1 FCC Attestation Statement

The following attestation statement applies to this reference design and any derived products/designs:

Attestation Statement

> This device complied with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

1.4.2 Labelling

Labelling of any end product is required to prominently display the any associated FCC ID. The following is a suggested, example label for an end product:

Wireless USB Dongle
P/N: xxxxxxxxx
S/N: yymmddnnnnnn
MAC: 112233445566

Contains FCC ID: UQL-RC2-SC4404R

1.5 Summary

The Staccato Wireless USB Dongle Reference Design provides ODMs and OEMs with an complete, easy to implement design for producing a generic Wireless USB dongle complying to FCC, WiMedia and Wireless USB RF requirements. Used in conjunction with suitable application firmware, it provides a safe, fast time-to-market strategy for a variety of Wireless USB products and application. By adhering to the dongle reference design, ODMs/OEMs can ensure the highest level of conformance, minimum risk and rapid product realisation.