



SMSC[®]
SUCCESS BY DESIGN

USB3450



Hi-Speed USB Host or Device PHY With UTMI+ Interface

PRODUCT FEATURES

Data Brief

- USB-IF “Hi-Speed” certified to the Universal Serial Bus Specification Rev 2.0
- Interface compliant with the UTMI+ Specification, Revision 1.0.
- Functional as a host or device PHY.
- Supports HS, FS, and LS data rates.
- Supports FS pre-amble for FS hubs with a LS device attached (UTMI+ Level 3)
- Supports HS SOF and LS keep alive pulse.
- Low Latency Hi-Speed Receiver (43 Hi-Speed clocks Max)
- Internal 1.8 volt regulators allow operation from a single 3.3 volt supply
- Internal short circuit protection of DP and DM lines to VBUS or ground.
- Integrated 24MHz Crystal Oscillator supports either crystal operation or 24MHz external clock input.
- Internal PLL for 480MHz Hi-Speed USB operation.
- Supports Hi-Speed USB and legacy USB 1.1 devices
- 55mA Unconfigured Current (typical) - ideal for bus powered applications.
- 83uA suspend current (typical) - ideal for battery powered applications.
- Full Commercial operating temperature range from 0°C to +70°C
- 40 pin QFN lead-free RoHS compliant package (6 x 6 x 0.9mm height)

ORDER NUMBER:

USB3450-FZG FOR 40 PIN, QFN LEAD-FREE ROHS COMPLIANT PACKAGE



80 ARKAY DRIVE, HAUPPAUGE, NY 11788 (631) 435-6000, FAX (631) 273-3123

Copyright © 2008 SMSC or its subsidiaries. All rights reserved.

Circuit diagrams and other information relating to SMSC products are included as a means of illustrating typical applications. Consequently, complete information sufficient for construction purposes is not necessarily given. Although the information has been checked and is believed to be accurate, no responsibility is assumed for inaccuracies. SMSC reserves the right to make changes to specifications and product descriptions at any time without notice. Contact your local SMSC sales office to obtain the latest specifications before placing your product order. The provision of this information does not convey to the purchaser of the described semiconductor devices any licenses under any patent rights or other intellectual property rights of SMSC or others. All sales are expressly conditional on your agreement to the terms and conditions of the most recently dated version of SMSC's standard Terms of Sale Agreement dated before the date of your order (the "Terms of Sale Agreement"). The product may contain design defects or errors known as anomalies which may cause the product's functions to deviate from published specifications. Anomaly sheets are available upon request. SMSC products are not designed, intended, authorized or warranted for use in any life support or other application where product failure could cause or contribute to personal injury or severe property damage. Any and all such uses without prior written approval of an Officer of SMSC and further testing and/or modification will be fully at the risk of the customer. Copies of this document or other SMSC literature, as well as the Terms of Sale Agreement, may be obtained by visiting SMSC's website at <http://www.smssc.com>. SMSC is a registered trademark of Standard Microsystems Corporation ("SMSC"). Product names and company names are the trademarks of their respective holders.

SMSC DISCLAIMS AND EXCLUDES ANY AND ALL WARRANTIES, INCLUDING WITHOUT LIMITATION ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND AGAINST INFRINGEMENT AND THE LIKE, AND ANY AND ALL WARRANTIES ARISING FROM ANY COURSE OF DEALING OR USAGE OF TRADE. IN NO EVENT SHALL SMSC BE LIABLE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES; OR FOR LOST DATA, PROFITS, SAVINGS OR REVENUES OF ANY KIND; REGARDLESS OF THE FORM OF ACTION, WHETHER BASED ON CONTRACT; TORT; NEGLIGENCE OF SMSC OR OTHERS; STRICT LIABILITY; BREACH OF WARRANTY; OR OTHERWISE; WHETHER OR NOT ANY REMEDY OF BUYER IS HELD TO HAVE FAILED OF ITS ESSENTIAL PURPOSE, AND WHETHER OR NOT SMSC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

General Description

The USB3450 is a stand-alone Hi-Speed USB Physical Layer Transceiver (PHY). The USB3450 uses a UTMI+ interface to connect to an SOC or ASIC or FPGA. SMSC's advanced proprietary technology minimizes power dissipation, resulting in maximum battery life for portable applications. The USB3450 is a flexible solution for adding USB to new designs without integrating the analog PHY block.

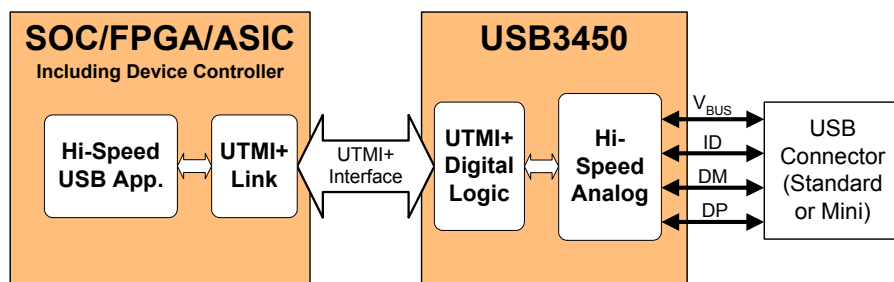


Figure 1 Basic UTMI+ USB Device Block Diagram

The USB3450 provides a fully compliant Hi-Speed interface, and supports Hi-Speed (HS), Full-Speed (FS), and Low-Speed (LS) USB. The USB3450 supports all levels of the UTMI+ specification as shown in Figure 2, "UTMI+ Level 3 Support".

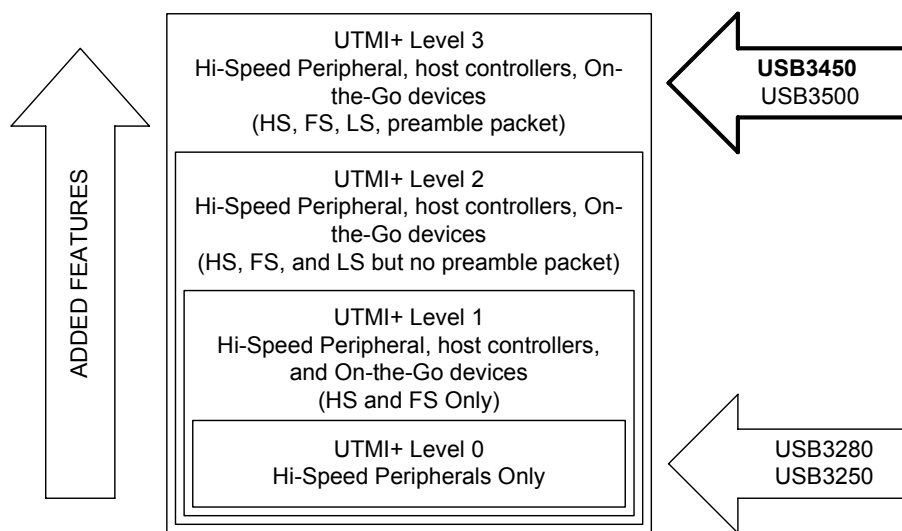


Figure 2 UTMI+ Level 3 Support

2.1 Applications

The USB3450 is targeted for any application where a high speed USB connection is desired.

The USB3450 is well suited for:

- Cell Phones
- MP3 Players
- Scanners
- Set Top Boxes
- Printers
- External Hard Drives
- Still and Video Cameras
- Portable Media Players
- Entertainment Devices

Package Outline

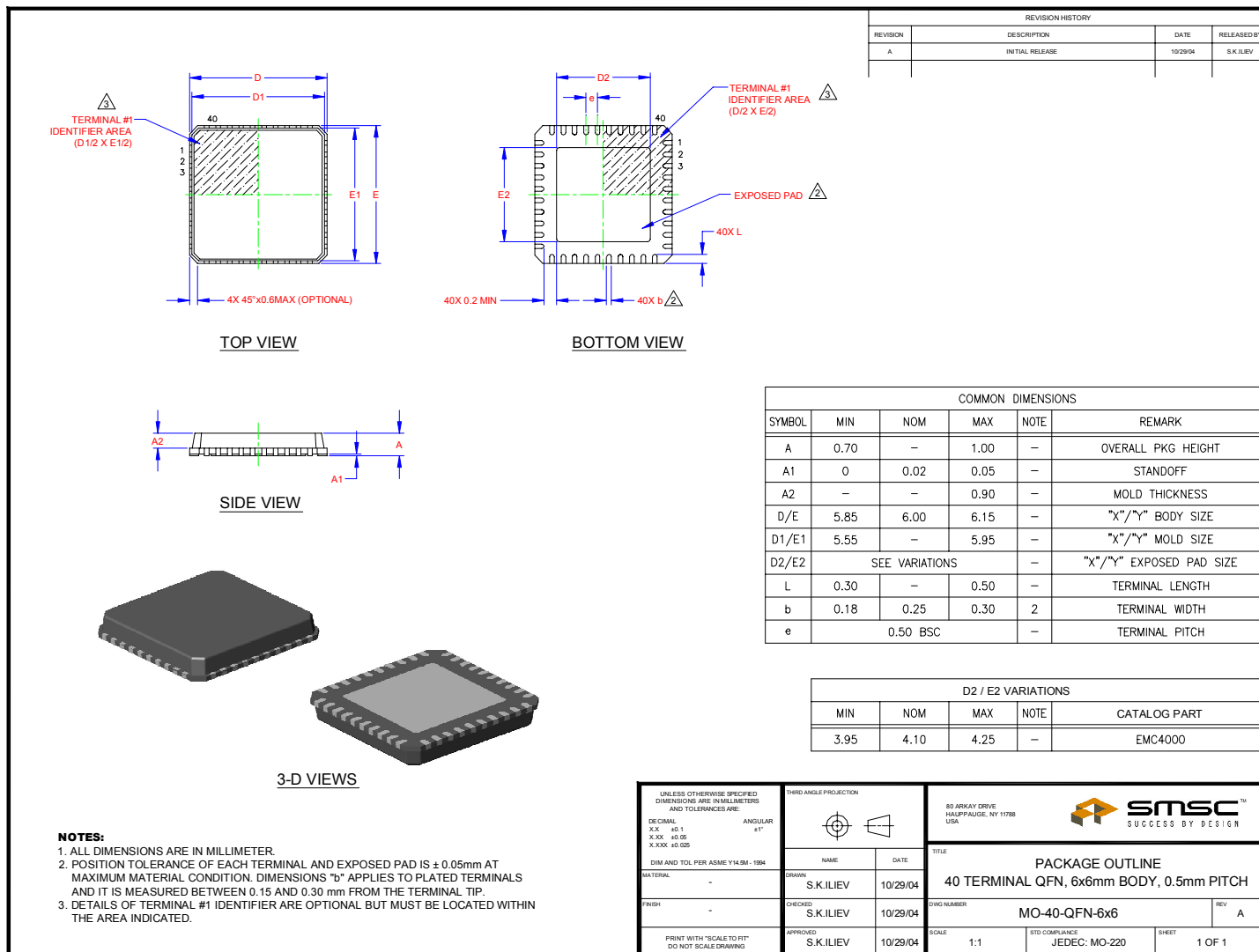


Figure 3 USB3450-FZG 40 Pin QFN Package Outline, 6 x 6 x 0.9 mm Body (Lead Free)

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Microchip:](#)

[USB3450-FZG](#)