



**SMSC**<sup>®</sup>  
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**



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## 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.

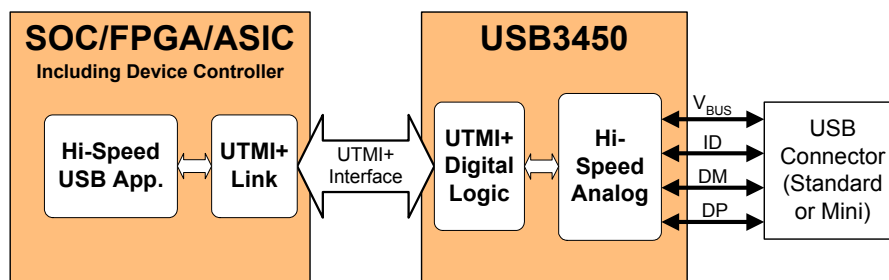


Figure 1 Basic UTMI+ USB Device Block Diagram

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".

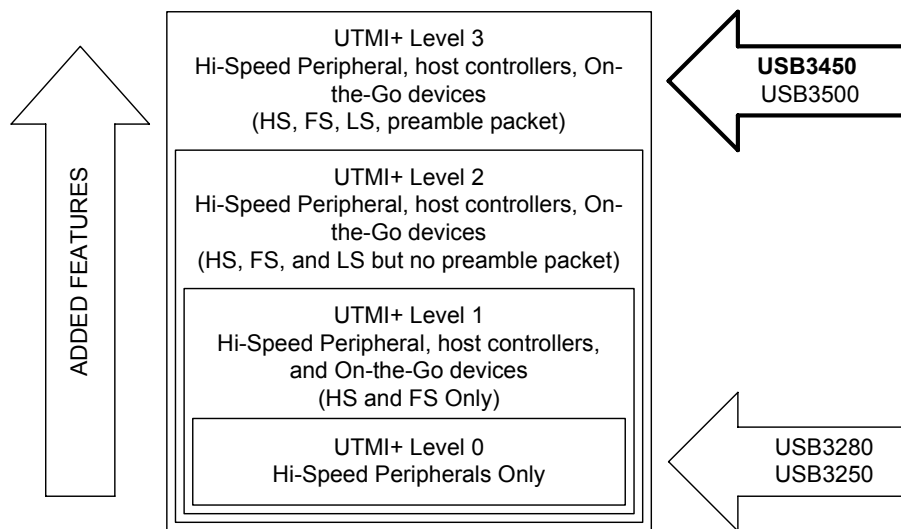


Figure 2 UTMI+ Level 3 Support

## 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

Revision 0.1 (06-06-08)

PRODUCT PREVIEW 4

SMSC USB3450

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

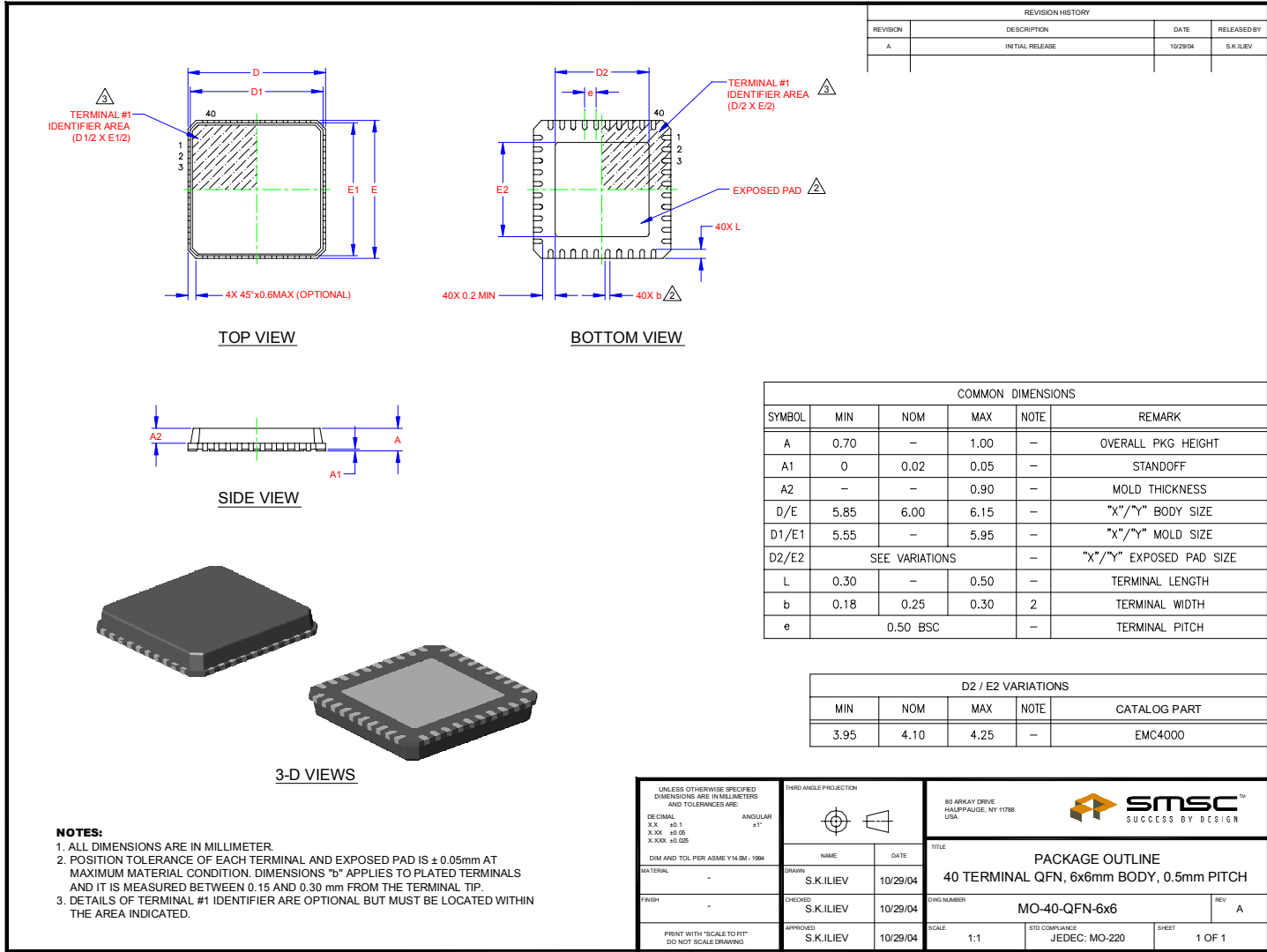


Figure 3 USB3450-FZG 40 Pin QFN Package Outline, 6 x 6 x 0.9 mm Body (Lead Free)