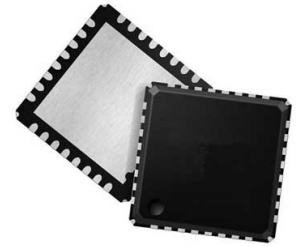**Low Speed/Full Speed/High Speed Hub Controller USB 2.0 3.3V/5V T/R 32-Pin SQFN EP**

Manufacturer:	Microchip Technology, Inc
Package/Case:	QFN32
Product Type:	Interface ICs
RoHS:	RoHS Compliant/Lead free RoHS
Lifecycle:	Active

Images are for reference only

Inquiry

General Description

As portable devices continue to add more features and the system architecture becomes more complex, it is necessary to have more than one USB port to manage communications with internal and external peripheral devices. Microchip's low-power USB3503 offers three downstream ports and is specifically designed for portable embedded applications where more than one USB port is required. The USB3503 attaches to an upstream port via HSIC and supports Low, Full and Hi-Speed downstream devices on all enabled downstream ports. The package size has been minimized to save valuable PCB space, making the device well-suited for portable, battery-powered embedded systems where power consumption, reduced BOM cost and Battery Charger (BC) detection capabilities are critical design requirements.

The USB3503 is the industry's first HSIC-based USB 2.0 hub controller designed specifically for portable consumer electronics products such as smartphones, tablets and e-readers. Designed to deliver the low-power and ultra-small footprint that portable product designers demand, the USB3503 also delivers robust USB performance proven through multiple generations of Microchip USB 2.0 hub controller products.

The USB3503 integrates the latest USB-IF Battery Charging 1.1 specification with Microchip's RapidCharge Anywhere™ functionality that dramatically reduces the time required for battery charging, while its flexible power regulators facilitate simple design into battery-powered devices. Microchip's complimentary and confidential USBCheck™ online design review service is available for customers who select the USB3503 for their application design-in.*
*The USBCheck online design review service is subject to Microchip's Program Terms and Conditions and requires a myMicrochip account.

Key Features

Highlights

Integrated USB 2.0-compatible 3-port hub

HSIC upstream port

Advanced power saving features including 1μA standby current

USB-IF BC 1.1 detection

Supports Single-TT or Multi-TT configurations for Full and Low-Speed connections

Enhanced configuration options available through serial I2C slave port

Internal default configuration option when serial I2C host is not available

Incorporates proprietary Microchip technologies: MultiTRAK™, PortMap, PortSwap, PHYBoost, VariSense™ and flexPWR®

External 12, 19.2, 24, 25, 26, 27, 38.4 or 52MHz clock inputs

Internal 3.3V and 1.2V voltage regulators for single supply operation

USB Port ESD Protection (DP/DM) up to ±15kV (IEC 61000-4-2)

Commercial (0° to 70°C) and industrial (-40° to 85°C) temperature range options

25-ball WLCSP, (1.97mm x 1.97mm) - 0.4mm ball pitch RoHS-compliant package

32-pin SQFN (5.0 mm x 5.0 mm) Package

Target Applications

Mobile Phones

Tablet Computers

Ultra-mobile PCs

e-Readers

Digital Still Cameras

Digital Video Camcorders

Gaming Consoles

PDAs

Portable Media Players

GPS Personal Navigation Devices

Media Players/Viewers

Recommended For You

USB3320C-EZK-TR

Microchip Technology, Inc

QFN32

USB3343-CP-TR

Microchip Technology, Inc

QFN24

USB3318-CP-TR

Microchip Technology, Inc

QFN24

USB2513B-I/M2

Microchip Technology, Inc

QFN36

USB3315

Microchip Technology, Inc

QFN

USB2504-JT

Microchip Technology, Inc

QFP64

USB3318

Microchip Technology, Inc

QFN

USB3318C-CP-TR

Microchip Technology, Inc

QFN24

USB3340-EZK-TR

Microchip Technology, Inc

QFN32

USB2422T-I/MJ

Microchip Technology, Inc

SQFN24

USB3503AI-1-GL-TR

Microchip Technology, Inc

WLCSP25

USB2660I-JZX-03

Microchip Technology, Inc

QFN

USB2507-ADT

Microchip Technology, Inc

QFP

USB2641-HZH-02

Microchip Technology, Inc

QFN

USB3317C-CP-TR

Microchip Technology, Inc

QFN24