USB Interface, USB Hub Controller, USB 2.0, 3 V, 3.6 V, SQFN, 48 Pins

Manufacturers	Microchip Technology, Inc
Package/Case	VQFN-48
Product Type	Interface ICs
RoHS	Rohs
Lifecycle	
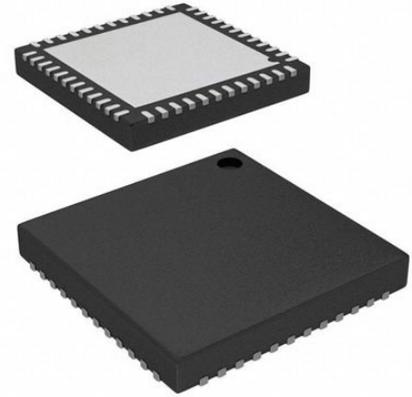
Images are for reference only

Please submit RFQ for USB4604I-1080HN or Email to us: sales@ovaga.com We will contact you in 12 hours.   RFQ

General Description

The Microchip USB4604 is a low-power, OEM configurable, MTT (Multi-Transaction Translator) USB 2.0 hub controller with 4 downstream ports and advanced features for embedded USB applications. The USB4604 is fully compliant with the USB 2.0 Specification, USB 2.0 Link Power Management Addendum, High-Speed Inter-Chip (HSIC) USB Electrical Specification Revision 1.0, and will attach to an upstream port as a Full-Speed hub or as a Full-/Hi-Speed hub. The 4-port hub supports Low-Speed, Full-Speed, and Hi-Speed (if operating as a Hi-Speed hub) downstream devices on all of the enabled downstream (non-HSIC) ports. HSIC ports support only Hi-Speed operation. The USB4604 has been specifically optimized for embedded systems where high performance, and minimal BOM costs are critical design requirements. Standby mode power has been minimized and reference clock inputs can be aligned to the customer's specific application. Flexible power rail options ease integration into energy efficient designs by allowing the USB4604 to be powered in a single-source (VBUS (5V), VBAT, 3.3V) or a dual-source (VBAT + 1.8, 3.3V + 1.8) configuration. Additionally, all required resistors on the USB ports are integrated into the hub, including all series termination and pull-up/pull-down resistors on the D+ and D– pins.

DCP: Dedicated Charging Port (Power brick with no data)

CDP: Charging Downstream Port (1.5A with data)

SDP: Standard Downstream Port (0.5A with data)Custom profiles loaded via

SMBus or OTP

The USB4604 provides an additional USB endpoint dedicated for use as a USB to I2C/SPI interface, allowing external circuits or devices to be monitored, controlled, or configured via the USB interface.

*The USBCheck online design review service is subject to Microchip's Program Terms and Conditions and requires a myMicrochip account.

* Please see our MikroElektronika USB Wizard board at: shop.mikroe.com/usb-wizard

Features

Highlights

Hub Controller IC with 4 downstream ports

High-Speed Inter-Chip (HSIC) support

Upstream port selectable between HSIC or USB 2.0

USB-IF Battery Charger revision 1.2 support on up and downstream ports (DCP, CDP, SDP)

Battery charging support for Apple® devices

FlexConnect: Downstream port 1 able to swap with upstream port, allowing master capable devices to control other devices on the hub

USB to I2C™/SPI bridge endpoint support

USB Link Power Management (LPM) support

SUSPEND pin for remote wakeup indication to host

Start Of Frame (SOF) synchronized clock output pin

Vendor Specific Messaging (VSM) support

Enhanced OEM configuration options available through OTP or SMBus Slave Port

Flexible power rail support

VBUS (5V) or VBAT only operation

3.3V only operation

VBAT + 1.8V operation

3.3V + 1.8V operation

48-pin (7x7mm) SQFN, RoHS compliant package

Target Applications

LCD Monitors and TVs

Multi-function USB Peripherals

PC Motherboards

Set-top Boxes, DVD Players, DVR/PVR

Printers and Scanners

PC Media Drive Bay

Portable Hub Boxes

Mobile PC Docking

Embedded Systems

Related Products

USB2512B-AEZG-TR

Microchip Technology, Inc

VQFN-36

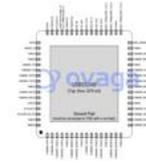**USB5534B-5000JZX**

Microchip Technology, Inc

QFN-64

USB3250-ABZJ

Microchip Technology, Inc

VQFN-56

USB2514B-AEZG

Microchip Technology, Inc

VQFN-36

USB2513B-AEZC

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VQFN-36

USB2512-AEZG

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USB2504A-JT

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LQFP-64

USB2514-HZH

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