USB2504-JT

Low Speed/Full Speed/High Speed Compatible 4 Port Hub USB 2.0
1.8V/3.3V Tray 64-Pin TQFP

Manufacturer:	Microchip Technology, Inc
Package/Case:	QFP64
Product Type:	Interface ICs
RoHS:	RoHS Compliant/Lead free
Lifecycle:	NRND

Images are for reference only

Inquiry

General Description

The USB2504 4-port hub controller is fully compliant with the USB 2.0 Specification and does not require firmware development. When connected to a USB high-speed host, the four downstream ports can operate at low-speed (1.5Mb/s), full-speed (12Mb/s), or high-speed (480Mb/s). As required by the USB 2.0 Specification, the USB2504 is fully backward compatible with legacy USB full-speed hosts.

A default configuration is available in the USB2504 following a reset. This configuration may be sufficient for some applications when it is desired to save the expense of an EEPROM. The controller may be configured from a microcontroller or an external EEPROM. When using the microcontroller interface, the USB2504 appears as a SMBus slave device. The EEPROM interface supports a 2-wire I2C device.

All required resistors on the USB ports are integrated into the USB2504. This includes all series termination resistors on D+ and D- pins and all required pull-down and pull-up resistors on D+ and D- pins. The over-current sense inputs for the downstream ports have internal pull-up resistors.

Key Features

Compliant with USB 2.0 Specification

Hub Controller IC with Four Downstream Ports

MultiTRAK Technology Provides One Transaction Translator Per Port

Default Configuration with Pin Selectable Options

Flexible OEM Configuration Options

64-Pin TQFP RoHS compliant package

Integrated 1.8V regulator

Integrated Termination and Pull-Up/Pull-Down Resistors

Internal Short Circuit Protection of DP and DM Lines

On-Chip Oscillator Uses Low Cost 24MHz Crystal

Supports Ganged or Individual Over-Current Protection and Power Control

3.3V I/O with 5V tolerance

Pin-to-pin Compatible with USB20H04

Customize Vendor ID, Product ID, and Device ID

Select whether the hub is part of a compound device(When any downstream port is permanently hardwired to a USB peripheral device, the hub is part of a compound device)

Select the presence of a permanently hardwired USB peripheral device on a port by port basis

Configure the delay time for filtering the over-current sense inputs

Configure the delay time for turning on downstream port power

Configure the polarity of down stream port power control signals

Indicate the maximum current that the 4-port hub consumes from the USB upstream port

Indicate the maximum current required for the hub controller

Select Downstream Ports as Non-Removable Ports

Select Downstream Ports as Disabled Ports

Enable/Disable Downstream Port LED Indicators

Select Downstream Port Power Control and Over-Current Detection on a Ganged or Individual Basis

Select Downstream Port Power Control Polarity

Compliant with USB 2.0 Specification

Hub Controller IC with Four Downstream Ports

MultiTRAK Technology Provides One Transaction Translator Per Port

Default Configuration with Pin Selectable Options

Flexible OEM Configuration Options

64-Pin TQFP RoHS compliant package

Integrated 1.8V regulator

Integrated Termination and Pull-Up/Pull-Down Resistors

Internal Short Circuit Protection of DP and DM Lines

On-Chip Oscillator Uses Low Cost 24MHz Crystal

Supports Ganged or Individual Over-Current Protection and Power Control

3.3V I/O with 5V tolerance

Pin-to-pin Compatible with USB20H04

Customize Vendor ID, Product ID, and Device ID

Select whether the hub is part of a compound device(When any downstream port is permanently hardwired to a USB peripheral device, the hub is part of a compound device)

Select the presence of a permanently hardwired USB peripheral device on a port by port basis

Configure the delay time for filtering the over-current sense inputs

Configure the delay time for turning on downstream port power

Configure the polarity of down stream port power control signals

Indicate the maximum current that the 4-port hub consumes from the USB upstream port

Indicate the maximum current required for the hub controller

Select Downstream Ports as Non-Removable Ports

Select Downstream Ports as Disabled Ports

Enable/Disable Downstream Port LED Indicators

Select Downstream Port Power Control and Over-Current Detection on a Ganged or Individual Basis

Select Downstream Port Power Control Polarity

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

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

USB3370B-EZK-TR

Microchip Technology, Inc

32-VFQFN