

USB3803 In Production

As mobile devices continue to add more features and the complexity of connectivity increases, it has become necessary to have a flexible hub which can be used in multiple ways as USB port expansion in portable applications like tablets, or as a purely embedded device to seamlessly bridge complex mobile architectures. Microchip's extremely small size USB3803 USB 2.0 hub controller offers three downstream ports with highly integrated portable features specifically designed for mobile embedded applications where more than one USB port is required. The USB3803 can easily attach to an upstream port as a Full-Speed or Full/Hi-Speed USB hub, while supporting Low, Full and Hi-Speed (if operating as a Hi-Speed hub) downstream devices on all enabled downstream ports. Additionally, extremely low current standby and bypass mode features make the device well-suited for mobile, battery-powered embedded systems where power consumption, small package size, minimal BOM and Battery Charger (BC) detection capabilities are critical design requirements.

The USB3803 integrates BC detection circuitry and supports both USB-IF 1.1 and legacy charger specifications, while 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 USB3803 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.

Features

Highlights

- Integrated USB 2.0-compatible 3-port hub
- Advanced power saving features including 1µA standby current
- Bypass Switch for low power, single port operation
- USB-IF BC 1.1 detection
- Supports Single 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[®]



Parameter	
Name	
Upstream Port	USB 2.0

Upstream Port	USB 2.0			
USB Speed	USB 2.0			
Downstream Ports	3			
MGMT I/F	12C			
Op Voltage (V)	3.3			
MultiTRAK Tech	Yes			
PortMap	Yes			
PortSwap	Yes			
PHYBoost	Yes			
Temp. Range Min.	-40			
Temp. Range Max.	85			

• External 12, 19.2, 26 or 38.4MHz 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, RoHS-compliant package

Target Applications

- Mobile Phones
- Tablet Computers
- Ultra-mobile PCs
- e-Readers
- Digital Still Cameras
- Digital Video Camcorders
- Gaming Consoles
- Mobile Accessory Docks
- Portable Media Players
- GPS Personal Navigation Devices
- Media Players/Viewers

USB3803C-1-GL-TR

USB3803CI-1-GL-TR

25

25

WLCSP

WLCSP

• Wireless Modem Dongles/Cards

🔻 Documentation										Downl	oad Al	I	
USB3803 - USB 2.0 Hi	gh-Spe	ed Hub Conti	roller	Data Shee	ts		03/25/2	015940)KB				
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Microchip's USB 2.0 a	ind USE	3.0 Hub Dev	vices										
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1.82 1.80

2.43

** Device not available to purchase online. Please contact a sales office for pricing information.

0C to +70C

-40C to +85C

T/R

T/R

2.48 2.07 1.88

3.35 2.80 2.54 2.45

🔻 Development Tools

Demo & Eval Boards

USB3803 USB 2.0 Mobile Hub Evaluation Board (EVB-USB3803)



The USB3803 USB 2.0 hub controller offers three downstream ports with highly integrated portable features specifically designed for mobile embedded applications where more than one USB port is required. The USB3803 can easily attach to an upstream port as Full-Speed or Full/Hi-Speed USB hub, while supporting Low, Full and Hi-Speed downstream devices on all enabled downstream ports. Additionally,...

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	USB5906	\$5.16
USB5926 \$5.76	USB5916	\$5.40
	USB5926	\$5.76

🔻 RoHS Information

Part Number	Device Weight	Shipping Weight	Lead Count	Package Type	Package Width	Solder Composition	JEDEC Indicator	RoHS	China EFUP
USB3803C-1-GL- TR	0.009450	0.040000	25	WLCSP	1.97x1.97x0.57	SAC	e1	Rons	Ø
USB3803CI-1- GL-TR	0.009450	0.040000	25	WLCSP	1.97x1.97x0.57	SAC	e1	Rons	Ø
USB3803BI-1- GL-TR	0.009450	0.040000	25	WLCSP	1.97x1.97x0.57	SAC	e1	Rons	Ø
USB3803B-1-GL- TR	0.009450	0.040000	25	WLCSP	1.97x1.97x0.57	SAC	e1	Rons	Ø

To see a complete listing of RoHS data for this device, please Click here

Shipping Weight = Device Weight + Packing Material weight. Please contact Sales office if device weight is not available.

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