

CYPRESS

WEST BRIDGE® BENICIA™ AND BAY™ PERIPHERAL CONTROLLERS

ADVANCED USB SOLUTIONS FOR MOBILE HANDHELDS



PRODUCT OVERVIEW

INTRODUCTION

Cypress is the market leader in USB and has shipped over 1.2 billion USB controllers. We provide the industry's most comprehensive "whole product" support including software, reference designs and driver suites. With a broad-based USB 3.0 product portfolio, Cypress continues to provide innovative USB technologies.



WEST BRIDGE® BENICIA™

West Bridge Benicia offers a revolutionary architecture for embedded applications. Benicia is the industry's first USB 3.0 solution specifically built for mobile applications. With the support for the latest SD 3.0 (SDXC with UHS-I) and eMMC 4.41 standards, Benicia provides improved storage performance to enhance user experience.

The SLIM® II architecture offloads data transfer from the main processor, providing uninterrupted and simultaneous data flow among processor, storage and USB. To facilitate faster battery charging with increased USB 3.0 power regulation, the built-in EZ-Dtect™ feature provides charger and accessory detection without the need for any external power management device.

Benefits of Benicia:

- SuperSpeed USB 3.0 sideloading
- Higher random IOPS performance
- HD video streaming
- Rapid battery charging

WEST BRIDGE BAY™

West Bridge Bay enhances storage access to USB 2.0 with additional Hi-Speed USB On-The-Go (OTG) capability.

Benefits of Bay:

- Fastest USB 2.0 sideloading
- Higher random IOPS performance
- Storage expansion with dual SD/eMMC
- USB 2.0 OTG for additional host functionality

FEATURES

BENICIA ADDS USB 3.0 CAPABILITY TO ANY MOBILE HANDHELD

SD 3.0 AND eMMC 4.41 SUPPORT

- Supports higher performance, larger capacity, and better security

SLIM II ARCHITECTURE

- Simultaneous data paths among USB, storage, and processors

EZ-DTECT SUPPORT

- Automatic charger and accessory detection

ENABLE POWERFUL DATA PROCESSING AND CUSTOMIZATION

- Fully accessible 32-bit, 200 MHz, ARM9 core with 512 kB of embedded SRAM

USB 2.0 OTG COMPLIANCE

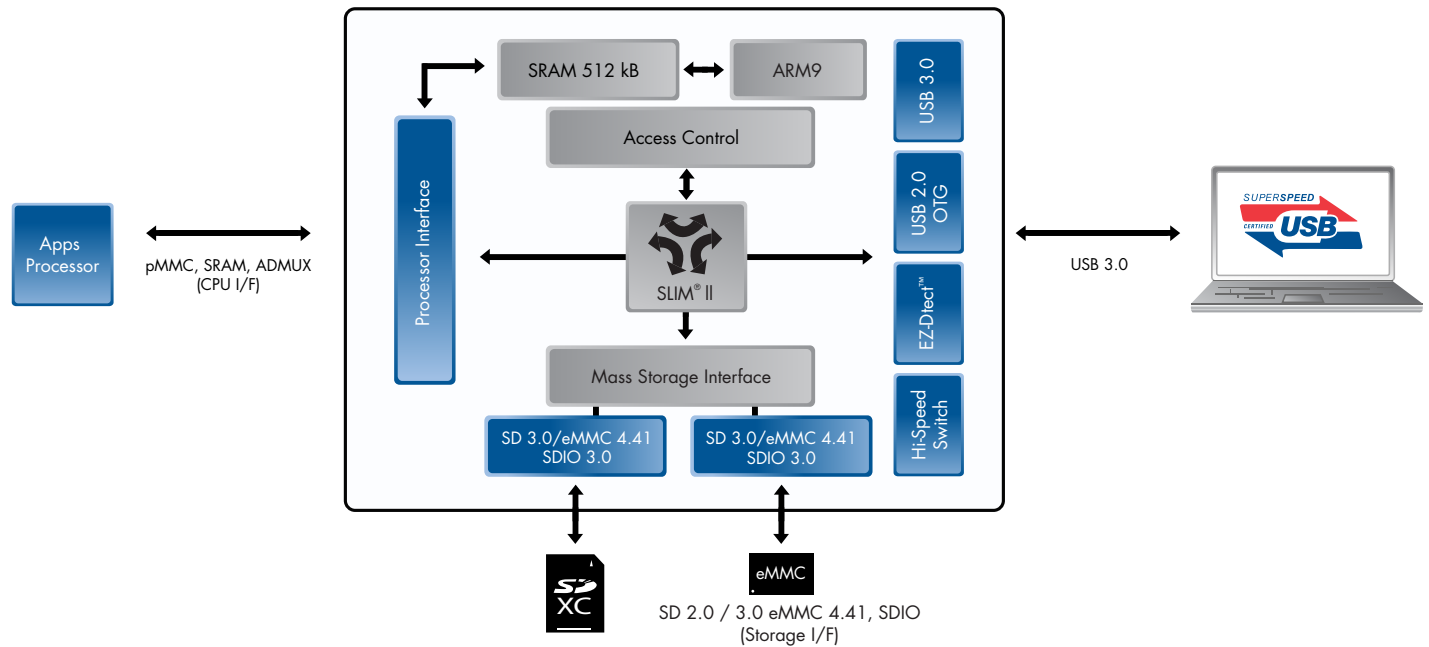
- Hi-Speed On-The-Go (HS-OTG) host and peripheral compliant with OTG Supplement Version 2.0

IMPROVED BATTERY CHARGING CAPABILITIES

- Compliant with USB BC v1.1

EASY CODE DEVELOPMENT AND INTEGRATION





Benicia Block Diagram

APPLICATIONS

- Mobile handhelds (handsets and tablets): Faster sideloading, improved random IOPS performance, SD/eMMC expansion and reduced charging time enhancing the user experience
- Digital still camera, digital video camera, and portable media player: Faster sideloading and HD video streaming
- Servers and others: USB 3.0 connectivity and latest generation mass storage support (SD 3.0 and eMMC 4.41)

PART DETAILS

Product	MPN	USB Technology	Processor	SRAM	OTG Controller	Storage Support	Packaging	Battery Charging
Benicia	CYWB0263BB	USB 3.0	ARM9 core	512 kB	Hi-Speed	SD 3.0, eMMC 4.41	131 ball-WLCSP	USB Battery Charging v1.1 Compliant
Bay	CYWB0163BB	USB 2.0						

For information about the West Bridge Benicia/Bay Development Kits (DVKs), contact your nearest sales representative.

GET STARTED NOW

Go to www.cypress.com/go/usb for more information on Cypress West Bridge Benicia/Bay and all other Cypress USB products.

To purchase Benicia/Bay parts, visit us at www.cypress.com/buyonline. For more information on West Bridge Benicia/Bay Development Kits, contact your local sales representative.

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