CY7C63722/23
CY7C63742/43
enCoRe™ USB
Combination Low-Speed USB & PS/2
Peripheral Controller

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1.0 Features

- **enCoRe™ USB - enhanced Component Reduction**
  - **Internal oscillator eliminates the need for an external crystal or resonator**
  - **Interface can auto-configure to operate as PS/2 or USB without the need for external components to switch between modes (no GPIO pins needed to manage dual mode capability)**
  - **Internal 3.3V regulator for USB pull-up resistor**
  - **Configurable GPIO for real-world interface without external components**
- **Flexible, cost-effective solution for applications that combine PS/2 and low-speed USB, such as mice, gamepads, joysticks, and many others.**
- **USB Specification Compliance**
  - **Conforms to USB Specification, Version 1.1**
  - **Conforms to USB HID Specification, Version 1.1**
  - **Supports 1 Low-Speed USB device address and 3 data endpoints**
  - **Integrated USB transceiver**
  - **3.3V regulated output for USB pull-up resistor**
- **8-bit RISC microcontroller**
  - **Harvard architecture**
  - **6-MHz external ceramic resonator or internal clock mode**
  - **12-MHz internal CPU clock**
  - **Internal memory**
  - **256 bytes of RAM**
  - **6 Kbytes of EPROM (CY7C63722, CY7C63742)**
  - **8 Kbytes of EPROM (CY7C63723, CY7C63743)**
  - **Interface can auto-configure to operate as PS/2 or USB**
  - **No external components for switching between PS/2 and USB modes**
  - **No GPIO pins needed to manage dual mode capability**
- **I/O ports**
  - **Up to 16 versatile General Purpose I/O (GPIO) pins, individually configurable**
  - **High current drive on any GPIO pin: 50 mA/pin current sink**
  - **Each GPIO pin supports high-impedance inputs, internal pull-ups, open drain outputs or traditional CMOS outputs**
  - **Maskable interrupts on all I/O pins**
- **SPI serial communication block**
  - **Master or slave operation**
  - **2 Mbit/s transfers**
- **Four 8-bit Input Capture registers**
  - **Two registers each for two input pins**
  - **Capture timer setting with 5 pre-scaler settings**
  - **Separate registers for rising and falling edge capture**
  - **Simplifies interface to RF inputs for wireless applications**
- **Internal low-power wake-up timer during suspend mode**
  - **Periodic wake-up with no external components**
- **Optional 6-MHz internal oscillator mode**
  - **Allows fast start-up from suspend mode**
- **Watch dog timer (WDT)**
- **Low Voltage Reset at 3.75V**
- **Internal brown-out reset for suspend mode**
- **Improved output drivers to reduce EMI**
- **Operating voltage from 4.0V to 5.5VDC**

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