



**THE DATASHEET OF  
CP2501-B01-GM**



### Programmable Touch-Screen Interface

- Adds Windows-compatible USB HID touchscreen interface to touch-screen modules
- Supports multiple touch points and pen inputs
- Supports basic mouse functions
- Includes a programmable 8051-based controller that is pre-programmed with USB interface
- Supports most common touch-screen module interfaces: UART, SPI and I<sup>2</sup>C.

### UART Interface

- Data Bits: 5, 6, 7, and 8
- Stop Bits: 1, 1.5, and 2
- Parity: Odd, Even, Mark, Space, and None
- Baud Rates: 9600 bps to 500 kbps

### SPI Master Interface

- 4-wire SPI Master with Chip Select
- Configurable Clock Polarity and Phase
- Clock speeds up to 4 MHz

### SMBus / I<sup>2</sup>C Master Interface

- Operates at configurable clock rates up to 400 kHz
- Supports configurable slave address

### GPIO Capability

- CP2501 supports 16 GPIO pins
- Configurable as inputs, open-drain outputs or push-pull outputs

### High-Speed 8051 $\mu$ C Core

- 48 MHz or 24 MHz system clock
- Pipelined instruction architecture; executes 70% of instructions in 1 or 2 system clocks

### User Memory Space

- 53 kB Flash
- 3.5 kB RAM

### USB Peripheral Function Controller

- HID Touch Screen class device
- USB Specification 2.0 compliant (full-speed)
- Built-in oscillator
- Configurable USB parameters such as VID, PID, and strings
- Supports remote wakeup

### Programming Options

- Obtain pre-programmed parts from the factory
- Program memory in-system
- Program over USB using bootloader

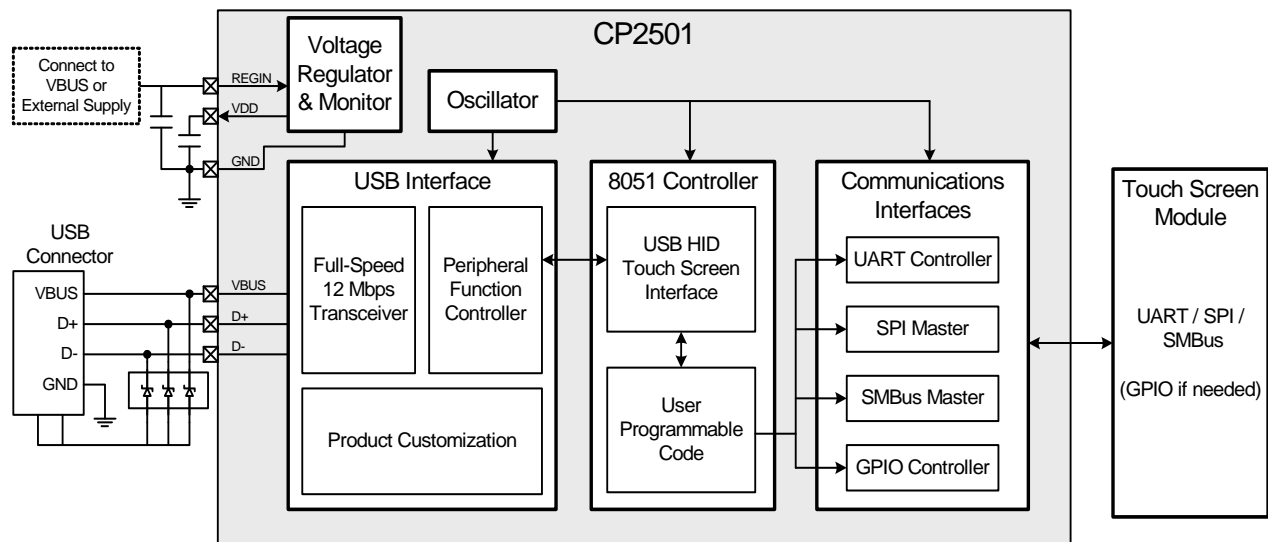
### Supply Voltage 3.0 to 3.6 V

- Built-in voltage supply monitor
- Built-in 3 V regulator

### Ordering Information

- CP2501-B01-GM (QFN-32, 5x5 mm)

### Temperature Range: -40 to +85 °C




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## Looking for pricing, stock, or lifecycle information?

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