PixArt Imaging Inc.

PAW3552DB : USB/PS2 Optical Mouse SoC

General Description

The PAW3552DB is a highly integrated CMOS processed optical mouse single chip with both USB and PS2 interfaces that serves as a non-mechanical motion estimation engine for implementing a computer mouse. With a high performance optical navigation engine, PAW3552 can track smoothly on a wide range of surfaces even when CPI resolution is up to 2400. The PAW3552DB also includes an internal RC oscillator to replace an external resonator for BOM cost reduction. The internal OTPs provides customers with flexibility of different configurations at manufacture side.

Key Features

- USB or PS2 interface (Programmable via OTP)
- Accurate navigation over a wide range of surfaces
- Support up to 2400 CPI resolution with smooth tracking
- High speed motion detection up to 30 inches/sec
- Power saving mode during times of no movement
- Supports three buttons (L, M, R) and three axes (X, Y, Z) output
- Support mechanical input for Z-axis (the scroller)
- Internal RC oscillation without external resonator
- USB spec
  - Compliant to the USB specification version 2.00
  - Complete USB HID specs V1.11 compatibility
  - Integrated USB transceiver and 1.5Mbps USB serial interface engine
- OTP flexible configurations
  - Interface: USB / PS2
  - Sensor orientation: 0, +90, -90, 180
  - USB report format: 8-bit / 16-bit
  - USB P_string: xxxxxxxxxx USB Optical Mouse
  - USB PID/VID: xxxx / xxxx
  - CPI resolution : 800 ~ 2400

Applications

- Wired optical mouse applications
- Optical navigation systems

Key Parameters

Parameter	Value
Power Supply (V)	4.25V ~ 5.5V (From USB VBus) 4.5V ~ 5.5V (From PS/2 VBus)
Interface	USB or PS2
Speed	Up to 30 inches/sec
Acceleration	Up to 8g
Resolution (cpi)	800/1000(default)/1200/1600/2000/2400
Frame Rate (fps)	3300 frames/sec
Operating Current	10mA @Mouse moving (Normal) 5mA @Mouse not moving (Sleep) 480uA @USB suspend (Suspend)
Package	Staggered DIP8 type

Ordering Information

Part Number	Interface
PAW3552DB-VJXT	USB+PS2
PAW3552DB-VJWT	USB Only

Lead (Pb) Free RoHS 6 fully compliant

For any additional inquiries, please contact us at http://www.pixart.com

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