

Mobile (MP3, Cell phone, PDA, PMP)

By Jerry Wong

Overview

Nowadays, mobile devices are required to be very small in size, while the push is on to be more feature rich. Features like MP3 offer MP3 player, sound recorder, FM radio player, line in recording, USB interface and more. Because space is extremely limited, Pericom suggests shared pins for size reduction purposes.



Figure 1: MPS Player

Pericom Analog & USB Switch Solution

Pericom's SOTiny packaging is small in size for space restricted application. The Low On-resistance, dual single pole double throw (Dual SPDT) analog switch and Differential USB switch are suitable for this application.

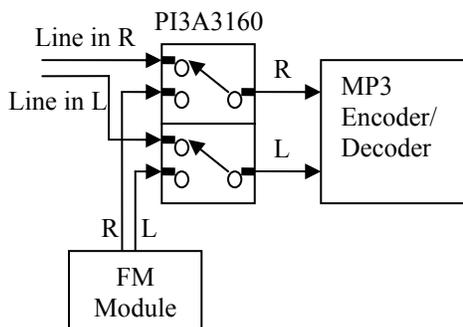


Figure 2: Shared-pin connection between FM Module and Line in Jet

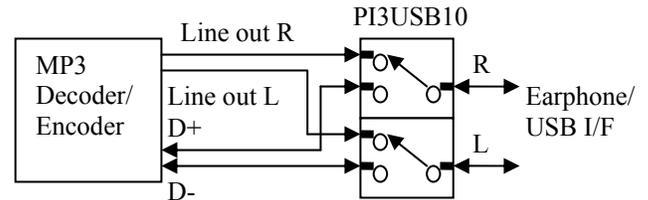


Figure 3: Shared-pin connection between Ear phone and Line in Jet

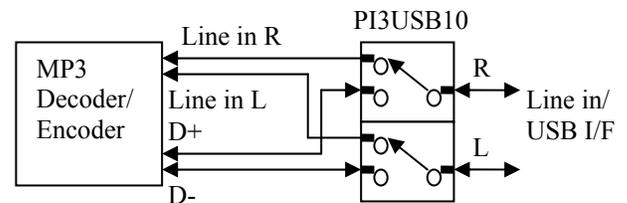


Figure 4: Shared-pin connection between Ear phone and USB Interface

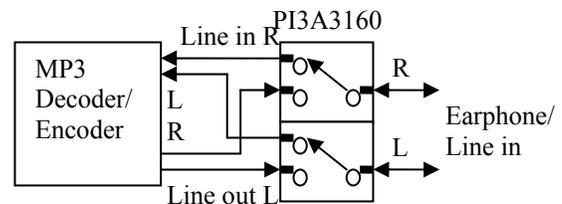


Figure 5: Shared-pin connection between Line in Jet and USB Interface

Both PI3A3160 and PI3USB10 are suggested because of their low On-resistance results in less impact to the output power, and their small packaging supports the small form factor applications. In addition to MP3 player, these devices are also applicable to PMP, PDA and cell phone.

More....

Key Features & Specifications

PI3A3160

- Low On-Resistance: 0.4Ω (+2.7V Supply)
- Wide VCC Range: +1.5V to +3.6V
- Low Power Consumption : 5μW
- Rail-to-Rail switching throughout Signal Range
- Fast Switching Speed: 20ns max. at 3.3V
- High Off Isolation: -27dB at 100 KHz
- -41dB (100 KHz) Crosstalk Rejection Reduces Signal Distortion
- Extended Industrial Temperature Range: -40°C to 85°C
- Packaging: Pb-free & Green, 12-pin TDFN (ZG); Pb-free & Green, 12-pin TDFN (ZE)
- Datasheet:
<http://www.pericom.com/pdf/datasheets/PI3A3160.pdf>

PI3USB10

- RON is 4Ω typical
- Low bit-to-bit skew: 200ps
- Low Crosstalk: -22dB @ 250MHz
- Near-Zero propagation delay: 250ps
- Switching speed: 9ns
- Channel On Capacitance: 6pF (typical)
- VCC Operating Range: +3.0V to +3.6V
- ESD>2000V . . . Human Body Model
- >500 MHz bandwidth (or data frequency)
- Packaging: Pb-free & Green, 12-contact TDFN (ZE)
- Datasheet:
<http://www.pericom.com/pdf/datasheets/PI3USB10.pdf>

Key Benefits

- High Performance
- Product size reduction
- Cost saving

Additional Information

On the Website you will find Datasheets, Product Presentation, IBIS models, Application Notes, Technical contacts, Samples, and much more...

Analog Switches: <http://www.pericom.com/analog>

USB Switches: <http://www.pericom.com/usb>