

Application: Multimedia Endpoint Adapter Pericom Device: PI5V33x Video Switches / PI6C24xx Zero-Delay Clock Buffer / PI6CX100-027 or S2496-27.000 VCXO

Overview

As we are moving to the entertainment era, a VOD (Video-On-Demand) capability is an emerging demand for Home Appliance.

Many chip vendors are making high performance and multi-featured silicon solution chip. These SOC mostly take a long time to come out and the time it comes out, the interface may not meet the system requirement.

Extensive feature should be able to be added upon user preference such as Wired or Wireless Link, USB2.0 host, support different video format input, etc.

System request

1. The System need to support multiple video output while only one is used to fit different monitors.
2. The System supporting features such as Card bus / Ethernet / WLAN should be expandable easily without affecting the system build complexity.
3. IDE HDD can be optional, but when required, it should be Hot-Pluggable.
4. The System should easily process MPEG decoding while offering in the same time a high-quality video source for different kind of monitors.
5. The System build cost should be low but with many features.
6. Support multiple input video sources.

Pericom's Solution

Pericom Complete Interface solution will allow system design to focus on the time to market development of a low-cost video system build.

The Application Description: (Fig 1)

The ICs:

- As a concern for meeting different video standard for the system, (YPrPb/S-Video/Composite) **PI5V33x** allow the best compromise for cost and performance requirement by simply multiplexing different video format.
- For allow application utilization flexibility with existing technologies working on PCI interface, (USB2.0 Host / mini-PCI WLAN / Ethernet / Cardbus...), **PI6C24xx & PI6C25xx** series will allow flexible PCI Clock expansion. (1 to multiple clock output), thus increasing on demand the applications.
- MPEG stream decoding will require a reference "Compensable" Clock source to take in account the timing variations in the MPEG stream. For this purpose, a VCXO is being used, Pericom propose a low cost **PI6CX100-27** with good jitter performance vs package dimension.
- Removable Storage element such as HDD will require an isolation switch such as **PI5C16210** to prevent damages caused by removing the storage device.

The Oscillator:

- Low Jitter is a primary request for **S2496-27.0000MHZ** VCXO to help the MPEG-2 decoder to come out an excellent and high-quality / high-definition image.

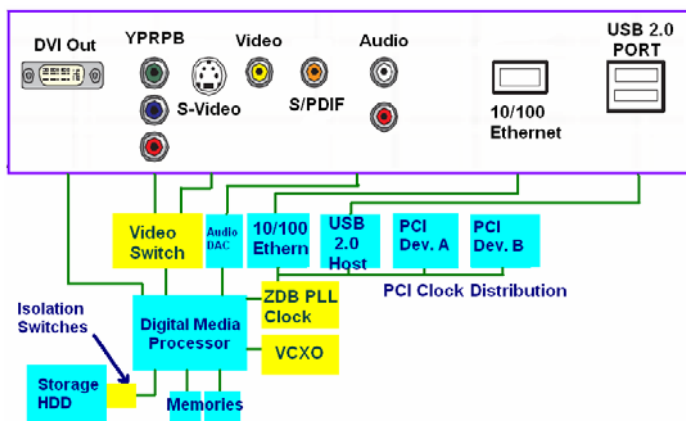


Fig 1 Typical Video Media Adapter Block Diagram

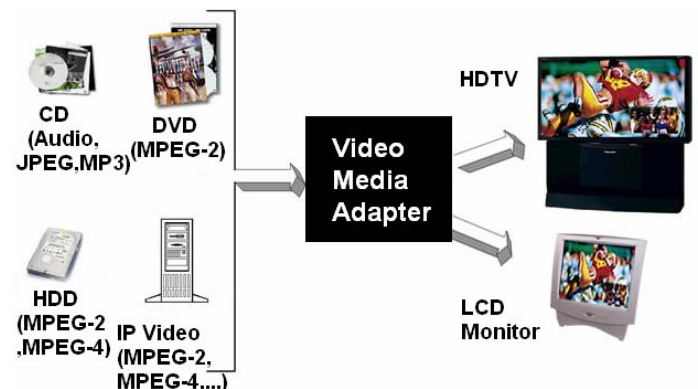


Fig 2 Typical Video Media Adapter in the real world.

Key Features & Specifications

- PI5V33x
 - High BW video switches
 - Multi video standards support
 - Different configuration available
- PI6C24xx or PI6C25xx
 - Zero-Delay buffer with Low jitter,
 - Low Cost
 - Flexible choice for # of Outputs.
- PI6CX100-27
 - Low Cost VCXO, require external crystal.
 - Low Jitter (50ps pk-pk Typ.)
- S2496-27.0000
 - Integrated VCO + Crystal
 - Low Profile package
 - Very Low Jitter (20ps pk-pk Max.)
- PI5Cxxx
 - Low cost bus switch.
 - Hot-plug supporting.
 - Bus Isolation.

Key Benefits

- Complete Interface Solution
- High Availability
- High Performance

Additional Information

- Public Website - Datasheets, IBIS models, Package Data, Order Literature
<http://www.pericom.com/>

Contact Information

Please contact your local Pericom Sales Representative or franchised distributor. Contact list provided on the web:

<http://www.pericom.com/contact/>

Application Support

<http://www.pericom.com/applications/>