

PI3DDR4212

1.8V/ 2.5V/ 3.3V 12 bit 2:1 DDR3/DDR4 Switch

Description

This 12-bit DDR3/DDR4 switch is designed for 1.8V/ 2.5V/ 3.3V supply voltage, POD_12, SSTL_12 and SSTL_15 signaling and CMOS select input signals. It is designed for DDR3 or DDR4 memory bus with speed up to 5Gbps. It supports DDR4 1600~4266 Mbps transfer rate.

PI3DDR4212 has a 1:2 demux or 2:1 mux topology. All 2-bit channels can be switched to one of the two ports simultaneously with the SEL input. This device also allows all ports to be disconnected.

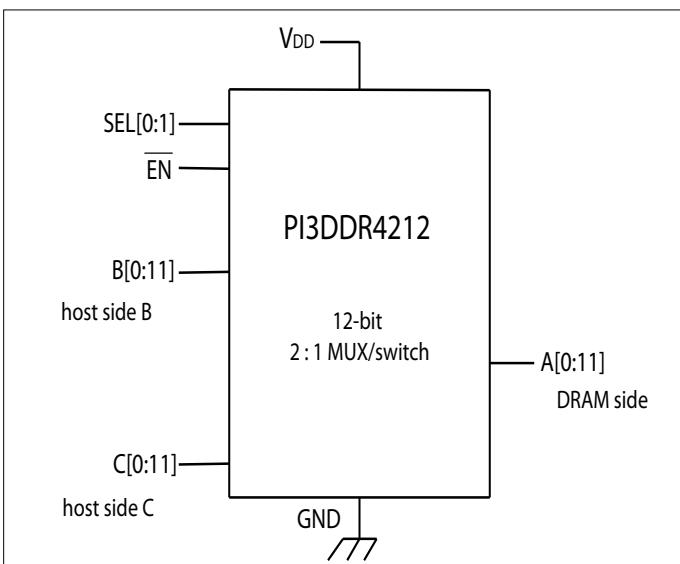
PI3DDR4212 uses Pericom's proprietary high speed switch technology providing consistent high bandwidth across all channels, with very little insertion loss, cross-talk, and bit to bit skew.

It is available in 48-pin TFBGA 3x8x1mm package. The 48-pin version is pin compatible with CBTU24DD2/CBTV24DD2.

Applications

- DDR4 Memory Bus System
- NVDIMM Module
- Flash Memory Array sub system
- High Speed multiplexing

Block Diagram



Features

- 12 bit 2:1 switch that supports DDR3 800 2133Mbps, DDR4 1600~4266 Mbps
- VDD 1.8V/ 2.5V/ 3.3V
- Flow through pinout option for easy layout
- SEL and Global Enable
- High impedance and low Coff channel output when disabled or deselected
- Low RON: 7Ω typical
- 3dB Bandwidth: 6GHz (typical)
- Low insertion loss: -1db @ 2GHz typical
- Low return loss: -24db @ 2GHz typical
- Low cross-talk for high speed channels: -19db @ 2GHz typical
- Low off-isolation: -20db @ 2GHz typical
- Low Propagation Delay: 70ps Typ
- Low bit-to-bit skew 8ps Max across 6 Bits
- ESD: 2KV HBM
- POD_12, SSTL_12 & SSTL_15 signaling
- Packaging (Pb-free and Green)
- 48 pin TFBGA (3x8x1mm)pin compatible with CBTV24DD12

Application Diagram

