



Connectivity Solutions from Pericom

Electronics today are fast – the signals that drive them run at increasingly higher speeds. Most commonly this is done using a serial bus, or high-speed circuit board, which connects components in computers and consumer devices. The bus uses serial signals, such as PCI Express® or USB, to quickly send data in a single stream from one point to another.

To address the specific design challenges posed by high-speed connectivity in electronic design - like digital video, wireless and ultra-mobility applications - Pericom offers a broad portfolio of ICs, crystals and crystal oscillators for high-speed standards including PCI Express, HDMI/DVI, DisplayPort, USB, Gigabit Ethernet, 10 Gigabit Ethernet, EPON, GPON, SATA/SAS and Fibre Channel. Refer to the following pages to find the right function for your design.

In this section:

Bridge and Packet Switch

- PCIe 1.0, 2.0 and 3.0 Bridge
- PCIe 1.0 and 2.0 Packet Switch
- PCI Bridge
- PCI™ & PCI-X™ Bridge

Signal Switch

- Analog HDMI/DVI & Video Switch
- Analog LAN, USB Switch & other Analog Switch
- Digital Bus Switch 2-port, Bus Exchanger, Translator & Mux/Demux

Logic & Interface ICs

- Buffer/Driver, Flip-flop, Gate, Latch & Register
- Transceiver
- Voltage Translator
- SerDes
- LVDS

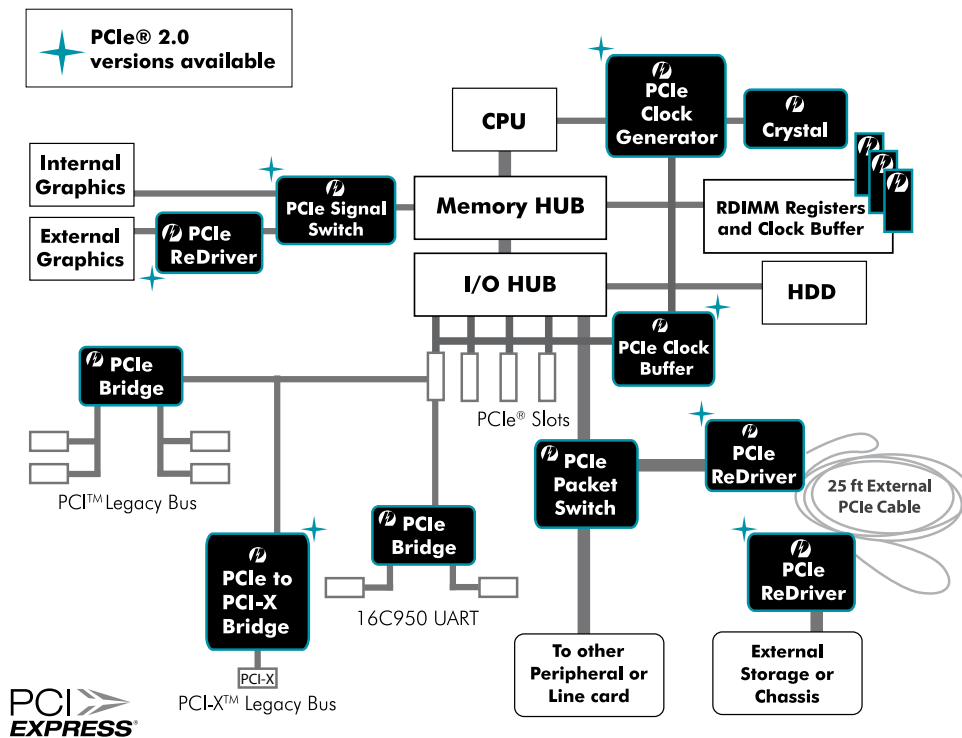
PCIe Connectivity Solutions



Pericom's PCI Express products enables for signal quality, system performance, flexibility, reliability, system timing, EMI, express cable, and much more. Uniquely, we offer the industry's broadest portfolio of interface solutions for these high-performance protocols.

These high-performance devices are designed for next generation markets that include switches and routers, servers, HBAs, data storage systems, PCs, mobile electronics like PDA and laptops, telecom equipment, multi-function printers, test equipment, embedded systems, and data acquisition systems.

- PCI Express is a point-to-point serial differential low-voltage interconnect
- Consolidates application requirements for use by multiple market segments
- A highly flexible, scalable, reliable, and stable high-performance protocol
- Cost-effective general purpose I/P Architecture
- Allows for use of new topologies in system and communication design



PCI Express®, PCIe®, PCI™, PCI-X™, and PCI-SIG® are registered trademarks of the PCI-SIG® (www.pcisig.org).

Pericom Bridge Family



Pericom's Bridges are designed into a variety of products including Compact PCI and PCIe systems, PCI add-in cards, network routers, network switches, industrial PC's, and video surveillance systems for a customer base worldwide. Pericom is a member of PCI-SIG®, PICMG®, and ASI SIG.

Pericom offers the following bridge solutions:

- PCI to PCI
- PCI-X to PCI-X
- PCIe to PCI
- PCIe to PCI-X
- PCIe to UART
- PCIe to USB 2.0

PCI & PCI-X Bridges allow add-on devices in a system

- Creates a separate secondary bus
- Permits more devices or "loads" to be added to the system
- Allows for more slots for adapter cards in a system
- Allows for multiple devices on a line card or add-in card

Intel Compatible PCI-to-PCI Bridges

- Drop-in replacements for popular Intel 2-port devices
- Extended commercial temperature range (0°C to 85°C)

Enhanced PCI-to-PCI Bridges

- 3-port products feature one primary and two secondary buses
 - + Ideal for redundant applications
 - + Used for traffic isolation and offer unique peer-to-peer mode.

PCI Express® to PCI & PCI-X Reversible Bridge

- Non-transparent mode for both PCI and PCI-X; dual priority modes
 - + Supports isochronous data streaming in small footprint, low powerReverse mode option for outstanding reverse mode performance high-output drivers can drive eight PCI devices across connectors or multiple PCI-X loads
- Industrial temperature range (-40°C to 85°C)

PCI Express® to UART

- Industry first for key apps such as POS systems and multiport RS cards
- Supports 2, 4, or 8 high-performance 16C950 UART in a single chip
- Configurable using non-volatile configuration memory (EEPROM)
- PCI Express® Base Specification, Revision 1.1
- Industrial temperature range (-40°C to 85°C)

PCIe to USB 2.0 | PCIe Swidge

- Industry first one-chip PCIe to USB2.0 + PCIe controller

Bridges



PCI Express Bridges

Part No.	Description	PCI Bus Masters	PCI Speed	PCI Bus Width	Ports	Lanes	Package
PI7C9X111SL	PCIe-to-PCI Reversible with PowerSave™	4	66 MHz	32-bit	1 PCI	1	LQFP (FD128)
PI7C9X112SL	PCIe-to-PCI Reversible with PowerSave™	8	66 MHz	32-bit	1 PCI	1	LQFP (FD128)
PI7C9X1135SL	Legacy subtractive decode with PowerSave™	4	66MHz	32-bit	1 PCI	1	LQFP (FD128)
PI7C9X130	PCIe-to-PCI-X Reversible Bridge	-	133 MHz	64-bit	1 PCI-X	4	PBGA (ND256)
PI7C9X7952	PCIe-to-Dual UART I/O Bridge	-	-	-	2 UART	1	LQFP (FD128)
PI7C9X7954	PCIe-to-Quad UART I/O Bridge	-	-	-	4 UART	1	LQFP (FD128)
PI7C9X7958	PCIe-to-Octal UART I/O Bridge	-	-	-	8 UART	1	LFBGA (NB160)
PI73C9X440	PCIe-to-USB Host Controller	-	-	-	4 USB	1	LQFP(FD128)
PI3C9X442SL	Swidge™ PCIe-to-USB 2.0/PCIe	-	-	-	4 USB, 2 PCIe	1	LQFP(FD128)

PCI-X™ Bridges (available in Pb-free & Green)

Part No.	Description	PCI Speed	PCI Bus Width	Ports	Lanes	Package
PI7C9X130	PCIe to PCI-X Reversible Bridge	133 MHz	64-bit	1 PCI-X	4	PBGA (ND256)
PI7C21P100	2-Port PCI-X to PCI-X Bridge	133 MHz	64-bit	2	n/a	CSBGA (NH304)
PI7C21P100B	2-Port PCI-X to PCI-X Bridge	133 MHz	64-bit	2	n/a	CSBGA (NH304)

PCI™ Bridges (available in Pb-free & Green)

Part No.	Description	PCI Speed	PCI Bus Width	Package
PI7C7300D	3-Port PCI to PCI Bridge	66 MHz	32-bit	PBGA (NA272)
PI7C8140A	2-Port PCI to PCI Bridge	66 MHz	32-bit	QFP (MA128)
PI7C8148A	2-Port PCI to PCI Bridge	66 MHz	32-bit	PBGA (NJ160), PBGA (NB160)
PI7C8148B	Asynchronous 2-Port PCI Bridge	66 MHz	32-bit	PBGA (NJ160), PBGA (NB160)
PI7C8150A	2-Port PCI to PCI Bridge	66 MHz	32-bit	PBGA (ND256)
PI7C8150B	Asynchronous 2-Port PCI Bridge	66 MHz	32-bit	FQFP (MA208), PBGA (ND256)
PI7C8152A	2-Port PCI to PCI Bridge	66 MHz	32-bit	MQFP (MA160)
PI7C8152B	Asynchronous 2-Port PCI Bridge	66 MHz	32-bit	MQFP (MA160)
PI7C8154A	2-Port PCI-to-PCI Bridge	66 MHz	64-bit	PBGA (NA304)
PI7C8154B	Asynchronous 2-Port PCI Bridge	66 MHz	64-bit	PBGA (NA304)

PCIe Packet Switch



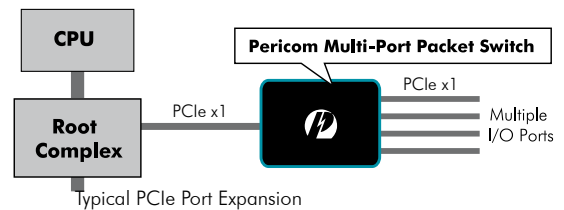
PCI Express Packet Switch

→ GreenPacket™

- ✦ Up to 5-ports, 8-lanes; most cost effective switch family in the market
- ✦ Supports isochronous data streaming: real-time/live video
- ✦ 8 traffic classes and 2 virtual channels per port
- ✦ Customer programmable switching and EEPROM configurable
- ✦ Customer programmable PHY and switching parameters (cut through or store/forward mode)
- ✦ Very low-power shut-off features

→ SlimLine™

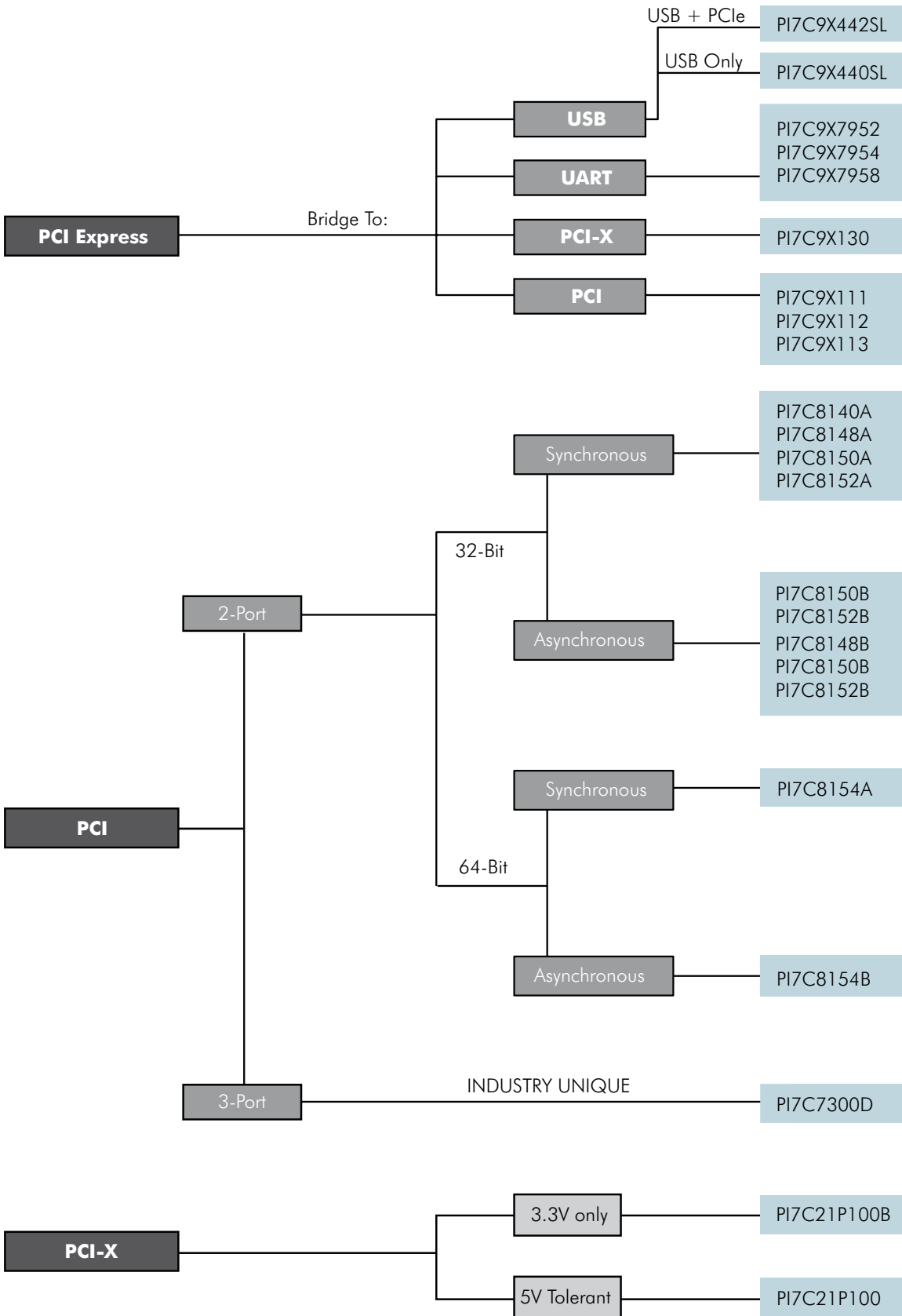
- ✦ Supports isochronous data streaming: real-time/live video
- ✦ Customer programmable switching and EEPROM configurable
- ✦ Customer programmable PHY and switching parameters
- ✦ Compliant to PCIe specification revision 1.1 or 2.0
- ✦ Advanced design/process for lowest latency/Pd in market
- ✦ Unique packaging features to reduce PCB and overall system cost
- ✦ I2C and SM buses for versatile register access
- ✦ EEPROM configurable, many power management features
- ✦ Specifically designed for lowest power consumption in the market



PCI Express® Packet Switches (available in Pb-free & Green)

Part Number	Description	Ports	Lanes	Package
PI7C9X20303SL	3-port, 3-lane, SlimLine™ PCIe Packet Switch	3	3	LQFP (FD128)
PI7C9X20303UL	3-port, 3-lane, Ultra-lo™ PCIe Packet Switch	3	3	TQFN (ZP132)
PI7C9X20404SL	4-port, 4-lane, SlimLine™ PCIe Packet Switch	4	4	LQFP (FD128)
PI7C9X20505GP	5-port, 5-lane, PCIe Packet Switch with GreenPacket™ Technology	5	5	PBGA (ND256)
PI7C9X20508GP	5-port, 8-lane, PCIe Packet Switch with GreenPacket™ Technology	5	8	PBGA (ND256)
PI7C2G304SL	3-port, 4-lane SlimLine™ PCIe 2.0 Packet Switch	3	4	LQFP (FD128)
PI7C2G404SL	4--port 4 lane SlimLine™ PCIe 2.0 Packet Switch	4	4	LQFP(FD128)

PCI, PCI-X & PCI Express Decision Tree



Pericom Signal Switch Solutions

High-speed signal routing is Pericom’s focus within the Silicon Switch™ product family. Our patented Charge Pump technology provides the highest signal integrity and achieves the most efficient and clear signal routing for data rates up to 5.0 Gbps.

Pericom is a member of PCI-SIG®, HDMI™, USB.org, and VESA®. Pericom’s PCI-Express® 1.0 & 2.0, HDMI, DVI, DisplayPort™, LVDS, USB 2.0 + SuperSpeed 3.0, and SATA2/SAS switches have all been designed with the application clearly in mind. Customers that design for digital television, set-top box, notebook PC and desktop PC applications benefit from our breadth of knowledge and design technology in routing high-speed signals across PCB or cables.

Application Specific Switches

- PCI Express® signal switches to 5.0Gbps
- Video multiplexing for high-speed video systems (HDMI, DVI, DP, VGA, S-Video, CVBS)
- Differential switches for wide-bandwidth USB 2.0 + SuperSpeed 3.0 applications (High-speed & Full-speed)
- LAN multiplexing 10/100 and gigabit Ethernet
- Differential Boardband switches for SATA2, SAS, XAUI to 3.2Gbps

Analog Switch Features

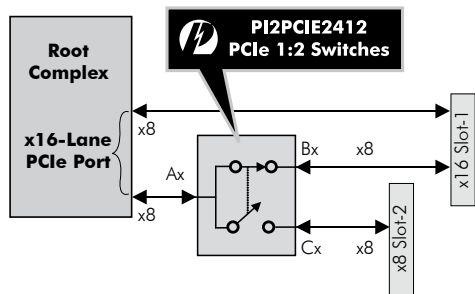
- Low noise in 1.8V - 17V
- 50 functions offered in SPST, SPDT, and Mux
- Low voltage & low on-resistance combinations

Digital Bus Switch Features

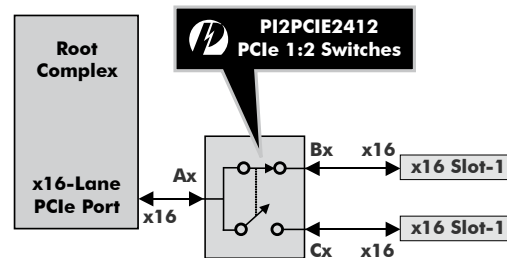
- Offering a combination of mux ratios & wide buses
- 5V/3V or 3V/2.5V translation
- Hot-docking/hot-plugging
- Bus and load isolation
- Resistor termination switches
- Motherboard memory expansion and DDR isolation

PCI Express® Signal Switch in Extreme Performance Video Graphics Card

Port Bifurcation: Either one 16-lane slot, or two 8-lane slots



System redundancy: Failover switched PCIe HBA slots



Application Specific Switch

PCI Express Signal Switch Features

- 1.8V and 3.3V, 2 and 4-differential channel, 2:1 mux/demux signal switches
- Available in PCIe 1.0 (2.5 Gbps) and PCIe 2.0 (5.0 Gbps)
- 3.3V PCIe 2.0/DisplayPort™ signal switches

PCI Express Signal Switch (PCIe 1.0 and 2.0)

Part No.	Description	Lanes	Data Rate Gbps	Configuration	Package
PI2PCIE212	1.8V PCIe bi-directional signal switch	1	2.5	2:1 Mux/Demux, 2-Differential Channels	28-TQFN (ZH28)
PI2PCIE2212	1.8V PCIe 2.0, 1-lane bi-directional differential 2:1 signal switch, with single control	1	5	Mux: 2-Differential Channel	28-TQFN (ZH28)
PI2PCIE2214	1.8V PCIe 2.0, 1-lane bi-directional differential 4:1 signal switch	1	5	Mux, 2-Differential Channel	42-TQFN (ZH42)
PI2PCIE2412	1.8V PCIe 2.0, bi-directional signal switch with single enable	2	5	2:1 Mux/Demux, 4-Differential Channels	42-TQFN (ZH42)
PI2PCIE2422	1.8V PCIe 2.0 bi-directional signal switch with single enable and Bypass mode	2	5	2:1 Mux/Demux with bypass, 4-Differential Channels	42-TQFN (ZH42)
PI2PCIE2442	1.8V PCIe 2.0, 2-lane bi-directional differential 2:2 exchange switch, with single control	2	5	Exchange, 4-Differential Channel	42-TQFN (ZH42)
PI2PCIE412-D	1.8V PCIe, bi-directional signal switch with single enable and enhanced ESD	2	2.5	2:1 Mux/Demux, 4-Differential Channels	42-TQFN (ZH42)
PI3PCIE2215	3.3V PCIe 2.0, 1-lane bi-directional differential 2:1, with single control	1	5	Mux: 2-Differential Channel	28-TQFN (ZH28)
PI3PCIE2415	3.3V PCIe 2.0, dual graphics Mux, single enable	2	5	Mux, 2:1: 4-Differential Channel	28-TQFN (ZH28)
PI3PCIE2612-A	3.3V PCIe 2.0 / DisplayPort (6-channel), ATX pinout	-	5	Mux, 6-Differential Channels, ATX pinout	56-TQFN (ZF56)
PI3PCIE2612-B	3.3V PCIe 2.0 / DisplayPort (6-channel), BTX pinout	-	5	Mux, 6-Differential Channels, BTX pinout	56-TQFN (ZF56)
PI3PCIE2415-A	3.3V PCIe 2.0, 2:1 Mux/DeMux Switch	4	5	Mux, 2:1: 4-Differential Channel	28-TQFN (ZH28)
PI3PCIE2615	3.3V HDMI/PCIe 2.0 / Level-shifting 1:2 display mux, with inverted HPD	-	5	Mux, 6-Differential Channels	56-TQFN (ZF56)
PI3PCIE2635	3.3V HDMI/PCIe 2.0 / Level-shifting 1:2 display mux, with non-inverted HPD	-	5	Mux, 6-Differential Channels	56-TQFN (ZF56)

PCI Express® Signal Switch Evaluation Boards (PCIe 1.0 & PCIe 2.0)

Part Number ⁽¹⁾	Description	Lanes	Data Rate Gbps	Configuration	Voltage ⁽²⁾
PI3PCIE2612B-EVB1	PCIe® 2.0 DisplayPort Switch Eval Board	16	5.0	1:2 mux/demux, 16:32-channels with DP connector plugs into PCIe Slot	3.3
PI3PCIE2415-EVB1	PCIe® 1.0 Signal Switch Eval Board	16	2.5	2:1 mux/demux, 16:32-differential channels plugs into 16-lane PCIe slot	3.3
PI2PCIE2412-EVBx	PCIe® 2.0 Signal Switch Eval Board	16	5.0	1:2 mux/demux, 16:32-differential channels plugs into 16-lane PCIe slot	1.8
PI2PCIE412-EVBx	PCIe® 1.0 Signal Switch Eval Board	16	2.5	2:1 mux/demux, 16:32-differential channels plugs into 16-lane PCIe slot	1.8

Notes

1. Contact Pericom Sales for the exact Evaluation Board part number, and for the correct product for your application since multiple versions may exist
2. Power is supplied via the host connector

Application Specific Switch

HDMI/DVI Video Switches

Part No.	Description	Configuration	Package
PI3HDMI101	HDMI/DVI buffer + I2C buffer for source applications	4-differential channel 1:1 with DDC 1:1 path	TQFN (ZH42)
PI3HDMI101-A	HDMI/DVI buffer + I2C buffer w/ Rx Term support for receiver applications	4-differential channel 1:1 with DDC 1:1 path	TQFN (ZH42)
PI3HDMI101-B	HDMI/DVI buffer + I2C buffer w/ auto-Rx Term support for receiver applications	4-differential channel 1:1 with DDC 1:1 path	TQFN (ZH42)
PI3HDMI1210-A	Non-Equalized 2:1 switch w/ advanced technology (5.4Gbps BW) & Rx Term Support	Mux: 4 Differential Channel, 2:1 + 2single channel 2:1 switch	BQSOP (B48)
PI3HDMI1212-A	Non-Equalized 2:1 switch w/ advanced technology (5.4Gbps BW) & Rx Term Support	Mux: 4 Differential Channel, 2:1 + 4single channel 2:1 switch	BQSOP (B80)
PI3HDMI201	2:1 HDMI/DVI switch with ActiveEye™	4-differential channel 2:1 + DDC/HPD 2:1	TQFN (ZF56)
PI3HDMI231-A	3:1 HDMI/DVI switch with ActiveEye™ and squelch	4-differential channel 3:1 + DDC/HPD 3:1	TQFN (ZF56)
PI3HDMI301	3:1 HDMI/DVI switch with ActiveEye™	4-differential channel 3:1 + DDC/HPD 3:1	TQFN (ZL64), LQFP(FF80)
PI3HDMI412AD	1:2 Active HDMI switch for source w/equalization, pre-emphasis, de-emphasis with 10KV ESD, up to 2.5Gbps	Mux: 4 Differential Channel, 1:2	TQFN (ZB56)
PI3HDMI412-B	4 Differential Channel 2:1, 3.3V DVI/HDMI Mux/DeMux	Mux: 4 Differential Channel, 2:1	TSSOP (A48)
PI3HDMI412FT-A	Non-Equalized 2:1 switch w/ advanced technology & integrated 200 Ω pullups + integrated 8kV contact ESD	Mux: 4 Differential Channel, 2:1	TQFN (ZH42)
PI3HDMI412FT-B	1:2 HDMI demux for source applications with 5.4Gbps BW	4-differential 1:2	TQFN (ZH42)
PI3HDMI1310-A	3:1 non-EQ blocking HDMI switch	4-differential 3:1 + 3 side band	TQFN (ZL72)
PI3HDMI245-A	4:1 HDMI switch with ActiveEye™	4-differential 3:1 + 3 side band	TQFN (ZL72)
PI3HDMI221-A	HDMI Revision 1.3 Switch with Dual SEL for Source Applications	4-differential channel 2:1 + DDC	TQFN(ZF56)
PI3HDMI2310	Enhanced 3:1 non-EQ Blocking HDMI Switch with I2C programmable register setting	4-differential channel 3:1 with DDC/HPD active buffer, 5V detection	LQFP(FF80)
PI3HDMI2410	Enhanced 4:1 non-EQ Blocking HDMI Switch with I2C programmable register setting	4-differential channel 4:1 with DDC/HPD active buffer, 5V detection	LQFP(FF80)
PI3HDMI2410-A	Enhanced 4:1 non-EQ Blocking HDMI Switch with I2C programmable register setting	4-differential channel 3:1 with DDC/HPD active buffer, 5V detection, Interrupt pin	LQFP(FF80)
PI3HDMI541	FastSwap 4:1 active switch with adaptive EQ	4-differential channel 4:1 with DDC/HPD active buffer, 5V detection, wake-up on HDMI	LQFP(FF80)

SATA, SAS, XAUI Differential Broadband Switch

Part No.	Description	Channels	Data Rate Gbps	Configuration	Volt.	Package
PI2DBS212	Differential Broadband Switch	2	3.2	2:1 mux/demux	1.8	28-TQFN (ZH28), 20-QSOP (Q20)
PI2DBS412	Differential Broadband Switch	4	3.2	2:1 mux/demux	1.8	TQFN (ZH42)

Application Specific Switch

DisplayPort Video Switches

Part No.	Description	Configuration	Package
PI3VDP101LS	Dual Mode DisplayPort to HDMI Level Shifter with Integrated I2C ID for HDMI detection	4-Differential channel 1:1	TQFN (ZH42), TQFN (ZD48)
PI3VDP411LS	Dual Mode DisplayPort to DVI/HDMI Translator	4-Differential channel 1:1 with DDC/HPD 1:1 path	TQFN (ZD48), TQFN (ZB48)
PI3VDP411LSA	Dual Mode DisplayPort to DVI/HDMI Translator with DDC buffer & Output Squelch	4-Differential channel 1:1 with DDC/HPD 1:1 path	TQFN (ZB48)
PI3VDP411LSR	Dual Mode DisplayPort to DVI/HDMI Translator	4-Differential channel 1:1 with DDC/HPD 1:1 path	TQFN (ZB48)
PI3VDP411LST	Dual Mode DisplayPort to DVI/HDMI Translator with HPD inverting Buffer	4-Differential channel 1:1 with DDC/HPD 1:1 path	TQFN (ZD48)
PI3VDP411LSTR	Dual Mode DisplayPort to DVI/HDMI Translator with HPD inverter	4-Differential channel 1:1 with DDC/HPD 1:1 path	TQFN (ZB48)
PI3VDP505	Dual Mode DisplayPort to VGA Bridge	4-Differential channel to RGB	TQFN (ZL64)
PI3VDP612	DisplayPort Signal Switch (1:2 or 2:1)	2:1/1:2 for main link, AUX, and HPD	TQFN (ZH42), TQFN (ZF56)
PI2EQXDP101	DisplayPort ReDriver with Link Training Listener	4-Differential channel 1:1	TQFN (ZF36)
PI3VDP612-A	x4 lane DisplayPort 1.1a switch with triple control logic	6-differential channel 2:1	TQFN (ZF56), TQFN (ZH42)
PI3VEDP212	x2 lane DisplayPort 1.1a switch with triple control logic	4-differential channel 2:1	TQFN (ZL32)

Other Video Switches

Part No.	Description	Configuration	Package
PI2LVD412	4-Differential Channel for LVDS	Mux: 4 Differential Channel, 2:1	TQFN (ZH42)
PI2LVD512	5-Differential Channel 2:1 Mux/DeMux for LVDS	Mux: 5 Differential Channel, 2:1	TSSOP (A56)
PI3DBV40	3.3V Wide Bandwidth, 4-Channel w/ Single Enable	Mux: 4-Channel, 2:1	TSSOP (A48)
PI5V330	Wideband Video Mux/Demux	Mux: Quad 2-Channel	QSOP (Q16)
PI5V330A	Wideband Video Mux/Demux (400 MHz)	Mux: Quad 2-Channel	QSOP (Q16)
PI5V330S	Wideband Mux/Demux w/ Enhanced ESD protection	Mux: Quad 2-Channel	QSOP (Q16)
PI5V331	Wideband Video Mux/Demux	Mux: Dual 4-Channel	QSOP (Q16), SOIC (W16)
PI3LVD1012	10-Differential Channel 2:1 Mux/DeMux for LVDS	Mux: 10 Differential Channel, 2:1	BQSOP (B80)
PI3LVD412	4-Differential Channel 2:1 Mux/DeMux for LVDS	Mux: 4 Differential Channel, 2:1	TQFN (ZH42)
PI3LVD512	5-Differential Channel 2:1 Mux/DeMux for LVDS	Mux: 5 Differential Channel, 2:1	TQFN (ZF56)
PI3LVD812	8-Differential Channel 2:1 Mux/DeMux for LVDS	Mux: 8 Differential Channel, 2:1	DR TQFN
PI3V312	3-Channel, 3.3V Video Switch	4-port 2:1	TSSOP (L16)
PI3V512	5-Channel, 3.3V Video Switch	5-Channel, 2:1	QSOP (Q24)
PI3V514	5-Channel, 3.3V, 4:1 Video Switch	5-Channel, 4:1	BQSOP (B48)
PI3V520	10-channel Analog Video Signal Switch	10-channel 2:1	TQFN (ZF56)

Application Specific Switch

LAN Switch

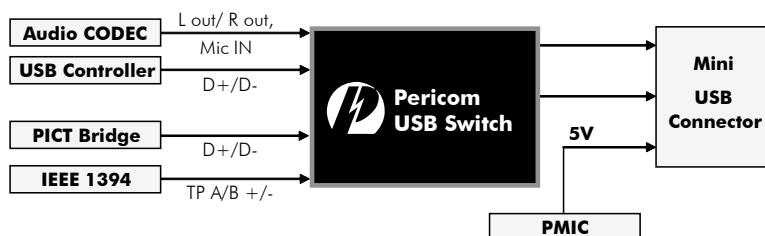
Part No.	Description	Data Rate	Mux/demux	LED Switch	Enable	Voltage	ESD	Package
PI3L110	Ethernet LAN switch	10/100	4:8	0	Yes	3.3	2KV	16-QSOP (Q16), 16-TSSOP (L16)
PI3L500-A	GbE LAN switch	10/100/1G	8:16	3	No	3.3	12KV	56-TQFN (ZF56)
PI3L510	GbE LAN switch	10/100	4:8	3	No	3.3	3KV	36-TQFN (ZF36)
PI3L720	GbE LAN switch with Power Down Mode	10/100/1G	8:16	3	Yes	3.3	8KV	56-TQFN (ZF56), 42-TQFN (ZH42), 42-TQFN (ZL42)
PI5L100	Ethernet LAN switch	10/100	4:8	0	Yes	6.2	2KV	16-QSOP (Q16)

USB Switch

Part No.	Description	Configuration	Package
PI3USB221*	USB2.0 1:2 Multiplexer/DeMultiplexer with Signal Enable	Dual SPDT for USB 2.0	TDFN (ZE10), TLLGA (XA10)
PI3USB32	Dual SPST USB 2.0 Switch with back drive support	2 channel SPST	TLLGA (XA8)
PI3USBA201	Dual SPDT for -2V Audio and USB High-speed Support	Mux: 2 Channel, 2:1	TQFN (ZL10 and ZM10)
PI3USBA201	Dual SPDT for -2V Audio and USB High-speed Support	Mux: 2 Channel, 2:1	TQFN (ZL10), UQFN (ZM10)
PI3USB10	3.3V, Wide Bandwidth, 2-Channel, 2:1 Mux/Demux USB 2.0	Mux: 2-Channel, 2:1	TDFN (ZE12)
PI3USB102	Dual SPDT for USB 2.0 HS compliance	1-differential channel 2:1	TQFN (ZL10 and ZM10)
PI3USB10LP-A	Dual SPDT for USB 2.0 with 8kV ESD protection	1-differential channel 2:1	TQFN (ZL10 and ZM10)
PI3USB10M	Dual SPDT for USB 2.0 with charge-pump	1-differential channel 2:1	TQFN (ZK12 and ZE12)
PI3USB14	3.3V, 4-Channel, 4:1 Mux USB 2.0 Switch	Mux: 4-Channel, 4:1	TSSOP (L16), QSOP (Q16), TQFN (ZH20)
PI3USB20	3.3V, Wide Bandwidth, 4-Channel, 2:1 Mux/Demux USB 2.0	Mux: 4-Channel, 2:1	TSSOP (L16)
PI3USB2117	Dual SPST for USB High Speed signals NC	Dual SPST	TQFN (ZL10)
PI3USB40	3.3V, Wide Bandwidth, 8-Channel, 2:1 Mux/Demux USB 2.0	Mux: 8-Channel, 2:1	TSSOP (A48)
PI3USB11	Dual SPST USB 2.0	2 channel SPST	TQFN (ZL10), UQFN (ZM10)
PI3USB32	Dual SPST USB 2.0 with back drive support	2 channel SPST	TLLGA (XA8)
PI3USB103*	Dual SPST USB 2.0, back drive + MHL switching support	2 channel SPDT	TQFN (ZL10), UQFN (ZM10)
PI5USB56*	USB Sleep and Charge for Single USB Port, Auto Switching	Dual SP4T	QSOP (Q24), TQFN (ZK24)

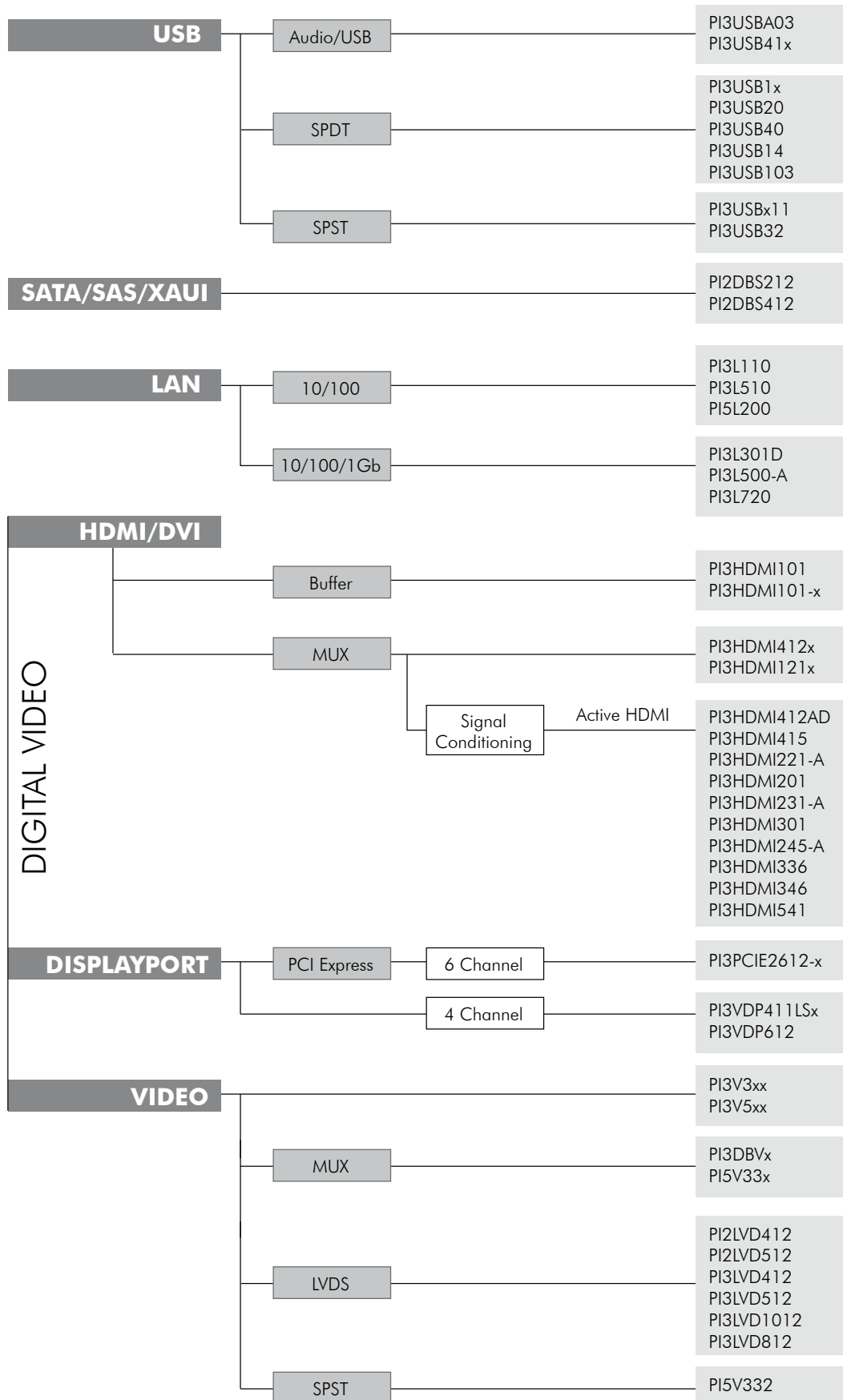
*USB PowerNap products support Sleep-and-charge functionality.

Pericom USB Switches Add Value



- Handles data, audio, battery charging with one common port
- Save BOM cost with fewer connectors, fewer ESD circuits and smaller footprint

Application Specific Switch Decision Tree



Analog Switch - 3V, 5V & 7V

3V Analog Switch

Part No.	Description	Single Supply Op.	Package
PI3A114-A	1:4 Mux/Demux with Low Threshold Control Inputs	Yes: 1.8 to 3.3V +/-5%	TQFN (ZL10), TQFN(ZH12)
PI3A125	SOTiny Low-Voltage, 8-Ω Single Analog / Bus Switch	Yes: 3V	SC70 (C5), SOT23 (T5)
PI3A212	Dual SPDT	Yes: 2.7V to 4.2V +/-10%	TQFN (ZL10)
PI3A3159	3.0V, SOTiny, 0.4-Ω SPDT Analog Switch	Yes: 3V	SOT23 (T6)
PI3A3160	3.0V, SOTiny, 0.4-Ω Dual SPDT Analog Switch	Yes: 3V	TDFN (ZE12)
PI3A268C	Dual SPDT with 0.6-Ohm Ron and -1.5V Support	Yes: 2.7V to 4.2V +/-10%	TQFN (ZL10)
PI3A268SC	Dual SPDT with 0.6-Ohm Ron, -1.5V Support & Shunt Switch	Yes: 2.7V to 4.2V +/-10%	TQFN (ZL10)
PI3A412	Quad SPDT	Yes: 2.7V to 4.2V +/-10%	TQFN (ZH16)
PI3A4626	3.0V, SOTiny, 0.4-Ω, SPST Analog Switch	Yes: 3V	SOT23 (T5), TDFN (ZC6)

5V Analog Switch

Part No.	Description	Single Supply Op.	Package
PI5A3157	SOTiny Single SPDT Mux/DeMux Switch	Yes: 1.65 to 5.5V	SC70 (C6), TDFN (ZA6)
PI5A3158	SOTiny Dual SPDT Mux/DeMux Switch	Yes: 1.65 to 5.5V	TDFN (ZA12)
PI5A4594A	SOTiny Low-Voltage, Single-Supply, 8-Ω SPST CMOS Analog Switches	Yes: 1.65 to 5.5V	SC70 (C5)
PI5A4595A	SOTiny Low-Voltage, Single-Supply, 8-Ω SPST CMOS Analog Switches	Yes: 1.65 to 5.5V	SC70 (C5)
PI5A4596A	SOTiny Single 8-Ω SPST Switch (high isolation / flow through pinout)	Yes: 1.65 to 5.5V	SC70 (C5)
PI5A4599A	SOTiny Single SPDT Mux/DeMux Switch	Yes: 2V to 5.5V	SC70 (C6), SOT23 (T6)
PI5A4624	SOTiny 1-Ω, Low-Voltage, Single-Supply SPDT Switch (Break-Before-Make)	Yes: 1.8 to 5.5V	SOT23 (T6)
PI5A4626	SOTiny 1-Ω, Low-Voltage, Single-Supply SPST Switch	Yes: 1.8 to 5.5V	SOT23 (T5)

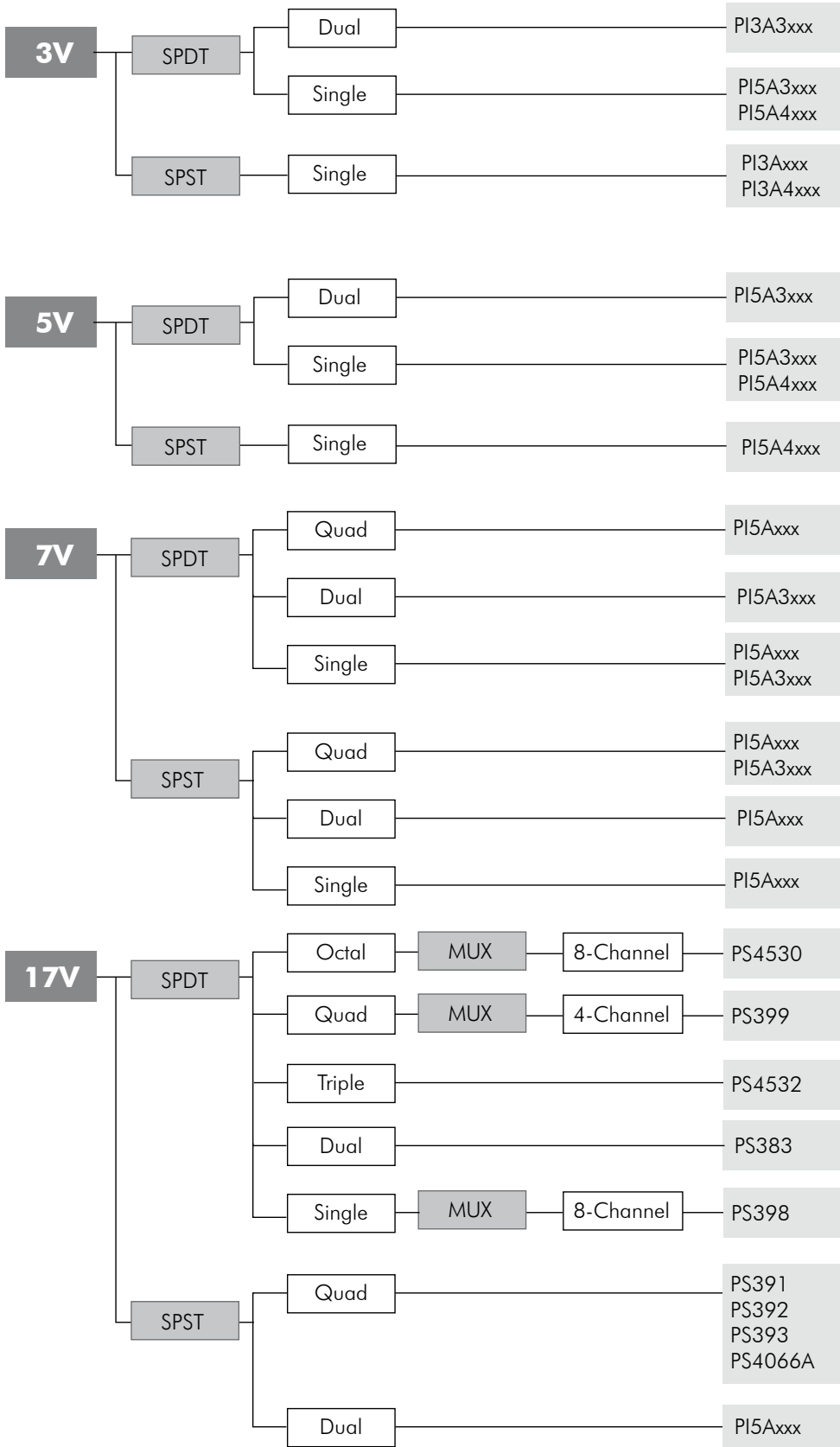
7V Analog Switch

Part No.	Description	Single Supply Op.	Package
PI5A100	Single Supply, High Speed, Quad SPDT CMOS w/Master Enable	Yes: 2V to 6V	QSOP (Q16), SOIC (W16)
PI5A121/122	High Speed SPST Analog Switch w/Compact Packages	Yes: 2V to 6V	SC70 (C5), SOT23 (T5)
PI5A124	High Speed SPDT Analog Switch w/Compact Packages	Yes: 2V to 6V	SOT23 (T6)
PI5A127	High Speed Dual SPST Analog Switch	Yes: 2V to 6V	MSOP (U8)
PI5A383A	High Speed, Single Supply Dual SPDT Switch	Yes: 2V to 6V	QSOP (Q16)
PI5A392A	7V Quad SPST	Yes: 2V to 6V	QSOP (Q16)

17V Analog Switch

Part No.	Description	Single Supply Op.	Package
PS323	Single Supply, Dual SPST Switch	Yes: 2.5V to 16V	SOIC (W8)
PS383	Single/Dual Supply, Dual SPDT Switch	Yes: 3V to 15V	SOIC (W16)
PS391/392	Single/Dual Supply, Quad SPST Switch	Yes: 3V to 15V	QSOP (Q16), SOIC (W16)
PS393	Single/Dual Supply, Quad SPST Switch	Yes: 3V to 15V	SOIC (W16)
PS399	4-Channel Differential Mux	Yes: 3V to 15V	SOIC (W16)
PS4066A	Low Cost, Precision Quad SPST Switch	Yes: 3V to 16V	SOIC (W14)
PS4530	17V Latched 8-Ch., Mux	Yes: 3V to 12V	SOIC (S20)
PS4532	17V Latched Triple SPDT	Yes: 3V to 12V	SOIC (S20)

Analog Switch



Digital Bus Switch

Pericom's digital bus switch family has a wide selection of functions with feature rich options and offers a combination of mux ratios and wide buses with 5V/3V or 3V/2.5V translation, hot-docking/hot-plugging, bus and load isolation and other features ideal for a variety of applications.

Family	5C	3B	3C	3CH
Voltage, V	5	3.3	2.5 / 3.3	2.5 / 3.3
Switch technology	NMOS	CMOS	NMOS (1)	NMOS (1)
Hot-swap	Yes	No	Yes	Yes
Full I/O voltage swing, 0V to Vdd	No	Yes	Yes	Yes
Bandwidth-typical, MHz (3)	100	100	400	500
2-Port Bus Switch	5C	3B	3C	3CH
1-bit, with active low enable	PI5C3301			
2-bit, with individual active high enables	PI5C3305		PI3C3305	
2-bit, with individual active low enables	PI5C3306		PI3C3306	PI3CH200
4-bit, with individual active low enables	PI5C3125	PI3B3125	PI3C3125	
4-bit, with individual active high enables	PI5C3126	PI3B3126	PI3C3126	
8-bit (8x1)	PI5C3245	PI3B3245		PI3CH800
8-bit (4x2)				
10-bit (10x1)	PI5C3861	PI3B3861	PI3C3861-A	
10-bit (5x2)	PI5C3384			PI3CH1000
16-bit, (4x4), FCT pinout		PI3B16244		
16-bit (8x2), FCT pinout	PI5C16245	PI3B16245		
16 Bit (8x2)	PI5C32X245	PI3B32X245		
20-bit (10x2)	PI5C16210			
20-bit (10x2) with flow-through pinout	PI5C16861			
20-bit (10x2), with 25-Ω series resistor				
20-bit (10x2) with -1V undershoot protection				
20-bit (5x4)	PI5C32X384	PI3B32X384		
24-bit (12x2)	PI5C16211			
32 Bit (8x4)	PI5C34X245	PI3B34X245		
Exchange Switch	5C	3B	3C	3CH
18-bit bus exchange switch		PI3B16209		
Multiplexer / Demultiplexer	5C	3B	3C	3CH
2:1 mux/demux, single	PI5C3303			
2:1 mux/demux, triple				
2:1 mux/demux, quad	PI5C3257	PI3B3257		PI3CH480
3:1 mux/demux, single	PI5C3309			
4:1 mux/demux, dual	PI5C3253	PI3B3253		PI3CH281
8:1 mux/demux	PI5C3251	PI3B3251		
8:16 mux/demux	PI5C3390			
12:24 mux/demux, low-capacitance and precharged		PI3B16226		
12:24 mux w. 500-Ω pulldown		PI3B16292		
12:24 mux/demux (3x 4:8)	PI5C33X257	PI3B33X257		
16:32 mux/demux, synchronous		PI3B16232		
16:32 mux/demux (2x 8:16)		PI3B16233		
16:32 mux/demux, with pull-down		PI3B16234		
16:32 mux/demux, PCI hot-plug w/ pullups -1.5V undershoot protection	PI5C32160C			
24:48 mux/demux (2x 12:24) w. pulldown				

Digital Bus Switch

2-Port Bus Switch

Part No.	Description	Voltage	Package
PI3B16244	16-Bit Bus Switch (FCT16244 pinout)	3.3V	TSSOP (A48)
PI3B16245	16-Bit Bus Switch (FCT16245 pinout)	3.3V	TSSOP (A48)
PI3B3125	4-Bit Bus Switch with individual enable (active low)	3.3V	QSOP (Q16), SOIC (W14), TSSOP (L14), TDFN (ZJ16)
PI3B3126	4-Bit Bus Switch with individual enable (active high)	3.3V	QSOP (Q16), SOIC (W14), TSSOP (L14)
PI3B3244	8-Bit Bus Switch (FCT244 pinout)	3.3V	TSSOP (L20)
PI3B3245	8-Bit Bus Switch (FCT245 pinout)	3.3V	QSOP (Q20), SOIC (S20), TSSOP (L20)
PI3B32X245	16-Bit Bus Switch	3.3V	BQSOP (B40)
PI3B32X384	20-Bit Bus Switch	3.3V	BQSOP (B48)
PI3B34X245	32-Bit Bus Switch	3.3V	BQSOP (B80)
PI3B3861	10-Bit Bus Switch (FCT861)	3.3V	QSOP (Q24)
PI3C3125	High-Bandwidth, 4-Bit, w/Individual Enables	2.5V / 3.3V	TSSOP (L14), SOIC (W14), TDFN (Z16)
PI3C3126	High-Bandwidth, 4-Bit, w/High Enables	2.5V / 3.3V	QSOP (Q16)
PI3CH3126	Low-voltage, 4-channel, 5-Ohm, 2-Port NanoSwitch	2.5V / 3.3V	QSOP (Q16), TSSOP (L16), TQFN (ZH20)
PI3CH3306	Low Voltage, 5-Ohm, 2-Channel, 2-Port NanoSwitch	2.5V / 3.3V	TSSOP (L8)
PI3C3305	High-Bandwidth, 2-Bit, w/ Individual High Enables	2.5V / 3.3V	MSOP (U8), TSSOP (L8)
PI3C3306	High-Bandwidth, 2-Bit, w/ Individual Low Enables	2.5V / 3.3V	MSOP (U8), TSSOP (L8)
PI3C3861-A	High-Bandwidth, 10-Bit (FCT861 pinout)	2.5V / 3.3V	QSOP (Q24)
PI3CH1000	Low Voltage, 5-Ω, 10-Channel, 2-Port NanoSwitch	2.5V / 3.3V	TSSOP (L24)
PI3CH200	Low Voltage, 5-Ω, 2-Channel, 2-Port NanoSwitch	2.5V / 3.3V	TSSOP (L8)
PI3CH800	Low Voltage, 5-Ω, 8-Channel, 2-Port NanoSwitch	2.5V / 3.3V	QSOP (Q20), TSSOP (L20)
PI5C16210	20-Bit Bus Switch	5V	BQSOP (B48), SSOP (V48), TSSOP (A48)
PI5C16211	24-Bit Bus Switch	5V	TSSOP (A56)
PI5C16245	16-Bit Bus Switch (FCT16245 pinout)	5V	TSSOP (A48)
PI5C16861	20-Bit Flow-through Bus Switch (2 Enables)	5V	SSOP (V48), TSSOP (A48)
PI5C3125	4-Bit Bus Switch w/Individual Low Enables	5V	QSOP(Q16)
PI5C3126	4-Bit Bus Switch w/Individual high enables	5V	QSOP (Q16), SOIC (W14), TSSOP (L14)
PI5C3245	8-Bit, Bus Switch Buffers (FCT245 pinout)	5V	QSOP (Q20), SOIC (S20), TSSOP (L20)
PI5C32X245	16-Bit Bus Switch	5V	BQSOP (B40)
PI5C32X384	20-Bit Bus Switch	5V	BQSOP (B48)
PI5C32X384C	20-Bit Bus Switch w/undershoot protection	5V	BQSOP (B48)
PI5C3301	1-Bit Bus Switch	5V	SC70 (C5), SOT23 (T5)
PI5C3305	2-Bit Bus Switch w/individual high enables	5V	MSOP (U8), TSSOP (L8)
PI5C3306	2-Bit Bus Switch w/individual low enables	5V	TSSOP (L8)
PI5C3384	10-Bit, Bus Switch	5V	QSOP (Q24), SOIC (S24), TSSOP (L24)
PI5C3384C	10-Bit, Bus Switch w/undershoot protection	5V	QSOP (Q24)
PI5C34X2245	32-Bit Bus Switch w/25 Ω resistor	5V	BQSOP (B80)
PI5C34X245	32-Bit Bus Switch	5V	BQSOP (B80)
PI5C3861	10-Bit Bus Switch	5V	QSOP (Q24)
PI5C6800	10-Bit Bus Switch w/pre-charged o/p (PCI Hot-Plug)	5V	QSOP (Q24), TSSOP (L24)

Digital Bus Switch

Bus Exchange Switch

Part No.	Description	Voltage	Package
PI3B16209	3.3V 18-Bit Bus Exchange Switch	3.3V	TSSOP (A48)
PI5C3401	6-Bit, 3-Port Bus Switch	5V	QSOP (Q24)

Low Voltage Translator

Part No.	Description	Voltage	Package
PI3VT3306	2-bit, 2-port, Low Voltage Translator Bus Switch	2.5V / 3.3V	MSOP (U8), TSSOP (L8)
PI3VT3245	8-bit, 2-port, Low Voltage Translator Bus Switch	2.5V / 3.3V	QSOP (Q20), TSSOP (L20)
PI3VT32X245	16-bit, 2-port, Low Voltage Translator Bus Switch	2.5V / 3.3V	BQSOP (B40)
PI3VT34X245	32-bit, 2-port, Low Voltage Translator Bus Switch	2.5V / 3.3V	BQSOP (B80)

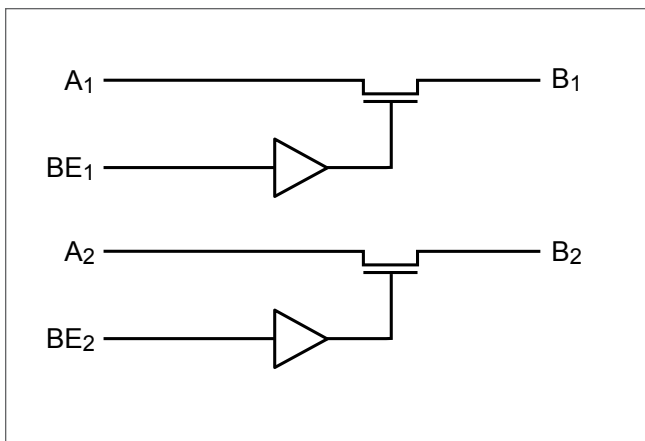
Mux/DeMux Bus Switch

Part No.	Description	Voltage	Package
PI3B16226	3.3V 12:24 Low Capacitance Mux/Demux Bus Switch	3.3V	BQSOP (B40)
PI3B16232	3.3V 16:32 Synch Mux/Demux Bus Switch	3.3V	TSSOP (A56)
PI3B16233	3.3V 16:32 Mux/Demux Bus Switch	3.3V	TSSOP (A56)
PI3B16234	3.3V 32:16 Mux/Demux Low Capacitance Bus Switch	3.3V	TSSOP (A56)
PI3B16292	3.3V 24:12 Mux/Demux Bus Switch	3.3V	TSSOP (A56)
PI3B3251	3.3V 8:1 Multiplexer/Demultiplexer	3.3V	QSOP (Q16), TSSOP (L16)
PI3B3253	3.3V Dual 4:1 Multiplexer/Demultiplexer	3.3V	QSOP (Q16), SOIC (W16), TSSOP (L16)
PI3B3257	3.3V Quad 2:1 Multiplexer/Demultiplexer	3.3V	QSOP (Q16), SOIC (W16), TSSOP (L16)
PI3B3257A	3.3V Quad 2:1 Multiplexer/Demultiplexer	3.3V	QSOP (Q16),
PI3B33X257	3.3V 24:12 Mux/Demux Bus Switch	3.3V	BQSOP (B48)
PI3CH281	Low Volt., High-Bandwidth, 2-Channel, 4:1	2.5V / 3.3V	QSOP (Q16), TSSOP (L16)
PI3CH3253	Low Voltage, High Bandwidth, 2-Channel, 4:1 Mux/DeMux	2.5V / 3.3V	QSOP (Q16), TSSOP (L16), TQFN (ZH)
PI3CH3257	Low Voltage, High-Bandwidth, 4-Channel, 2:1 Mux/DeMux	2.5V / 3.3V	QSOP (Q16), TSSOP (L16)
PI3CH480	Low Voltage, High-Bandwidth, 4-Channel, 2:1 Mux/Demux	2.5V / 3.3V	QSOP (Q16), TSSOP (L16)
PI5C32160C	32:16 Mux/Demux Bus Switch (PCI Hot Plug)	5V	TSSOP (A56)
PI5C3251	8:1 Multiplexer/Demultiplexer	5V	QSOP (Q16), TSSOP (L16), SOIC (S16)
PI5C3253	Dual 4:1, Multiplexer/Demultiplexer Bus Switch	5V	QSOP (Q16), SOIC (W16), TSSOP (L16), SOIC (S16)
PI5C3257	Quad 2:1, Multiplexer/Demultiplexer Bus Switch	5V	QSOP (Q16), SOIC (W16), TSSOP (L16)
PI5C3303	2:1 Mux/Demux Bus Switch	5V	SOT23 (T6)
PI5C3309	3:1 Mux/Demux Bus Switch	5V	TSSOP (L8)
PI5C3390	16:8, Multiplexer/Demultiplexer	5V	QSOP (Q28)
PI5C33X257	24:12 Multiplexer/Demultiplexer Bus Switch	5V	BQSOP (B48)

Digital Bus Switch Block Diagrams

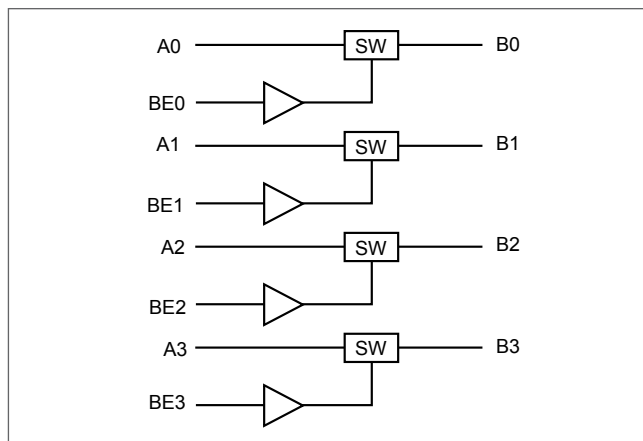
PI5C3305, PI3C3305

2-Bit Bus Switch with Individual Enables



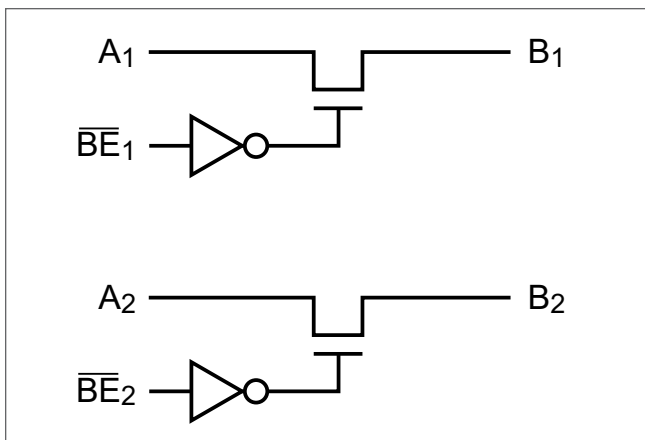
PI5C3126, PI3B3126, PI3C3126

4-Bit Nanoswitch™ w/Individual Enables



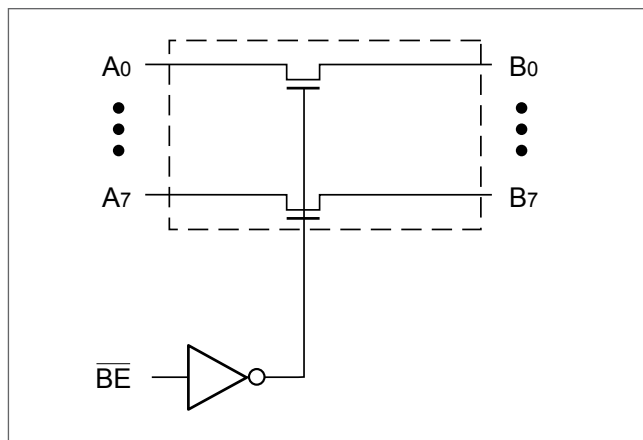
PI5C3306, PI3C3306, PI3CH200

2-Bit Bus Switch with Active Low Enables



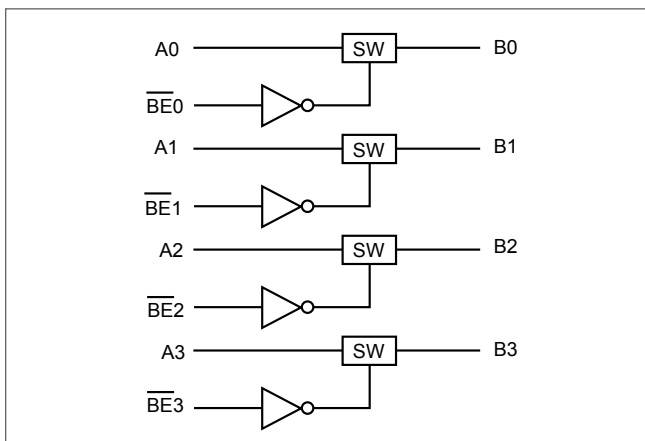
PI5C3245, PI3B3245, PI3CH800

8-Bit 2-Port Bus Switch



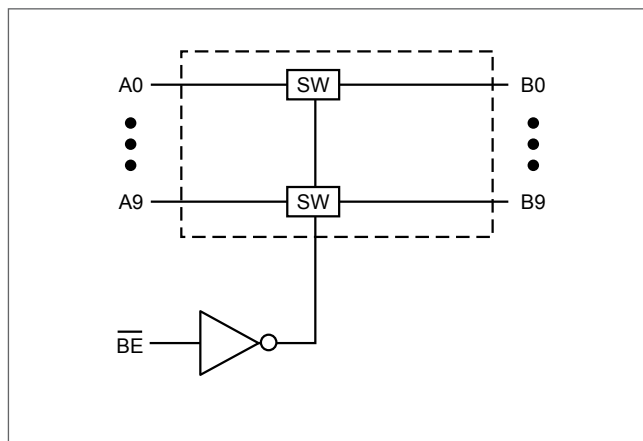
PI3B3125

4-Bit Bus Switch w/Individual Enables



PI5C3861, PI3B3861, PI3C3861-A

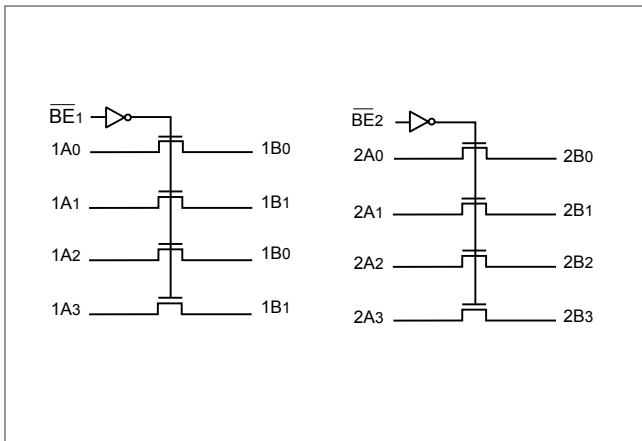
10-Bit 2-Port Bus Switch



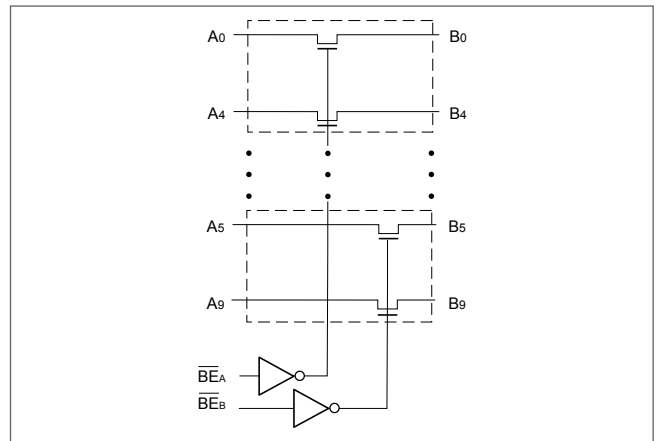
CONNECTIVITY

Digital Bus Switch Block Diagrams

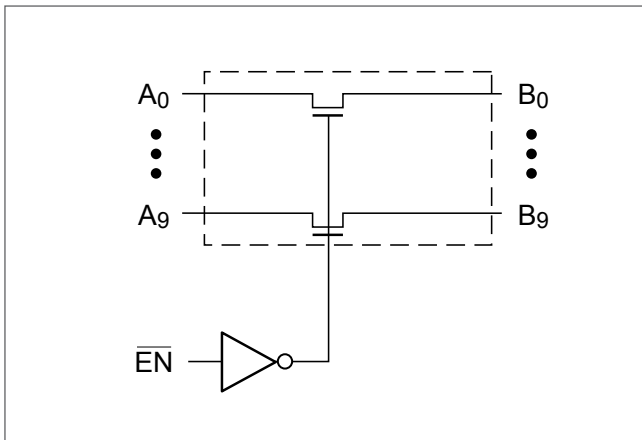
PI3C3244
2.5V/3.3V 8-Bit 2-Port Bus Switch



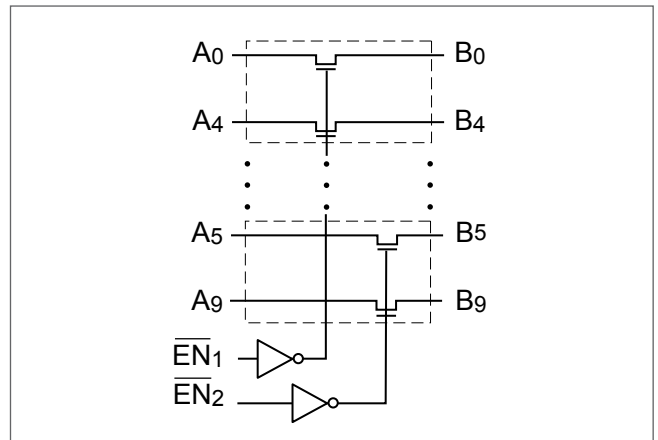
PI5C3384, PI3C3384
2.5V/3.3V 10-Bit 2-Port Bus Switch



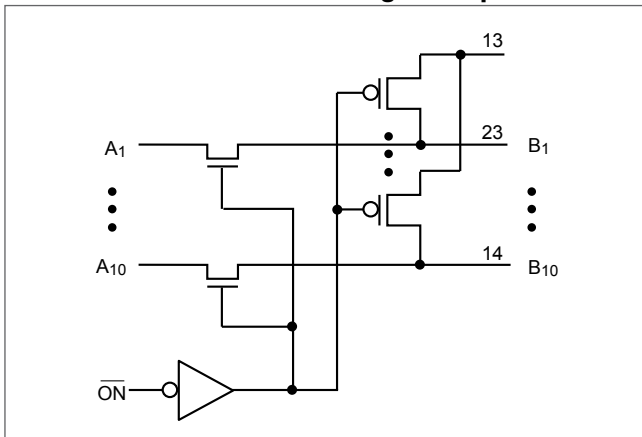
PI3CH1010
Low Volt. 5Ω 10-Channel 2-Port NanoSwitch™



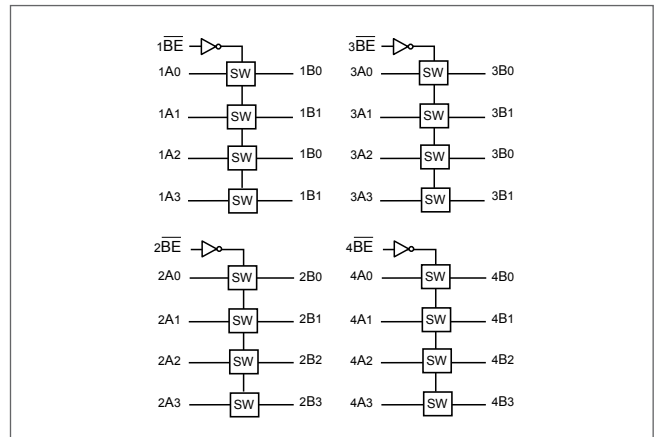
PI3CH1000
Low Volt. 5Ω 10-Channel 2-Port NanoSwitch™



PI5C6800C
10-Bit Bus Switch with Precharged Outputs

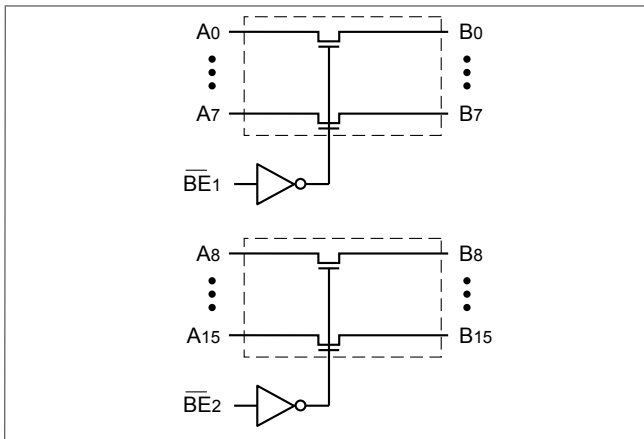


PI3B16244
16-Bit, 4-Port NanoSwitch™

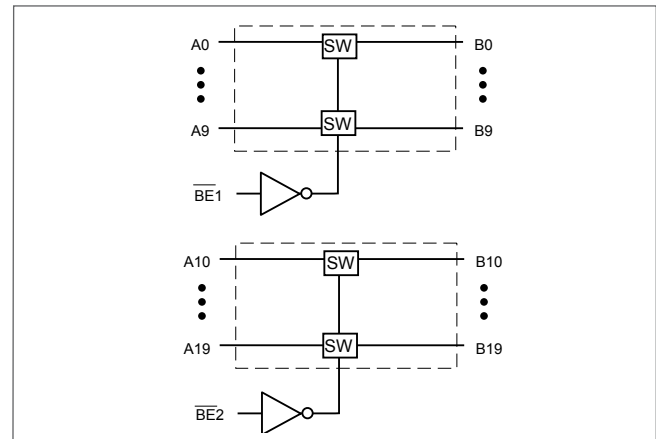


Digital Bus Switch Block Diagrams

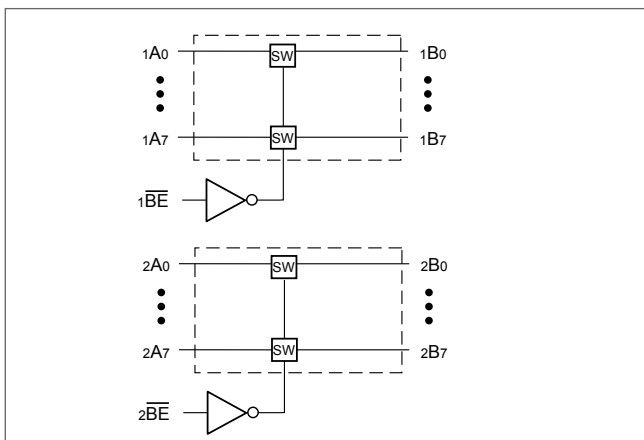
PI5C32X245, PI3B32X245
16-Bit 2-Port Bus Switch



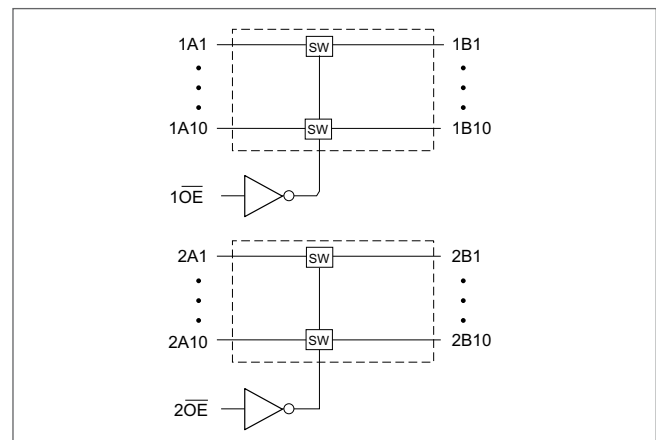
PI5C16861
20-Bit, 2-Port NanoSwitch™



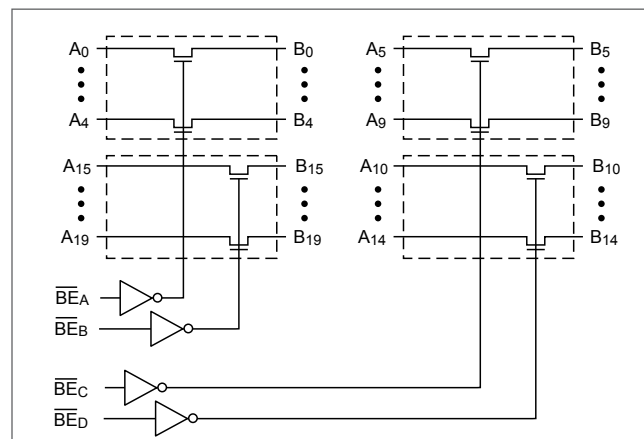
PI5C1625, PI3B16245
16-Bit, 2-Port NanoSwitch™



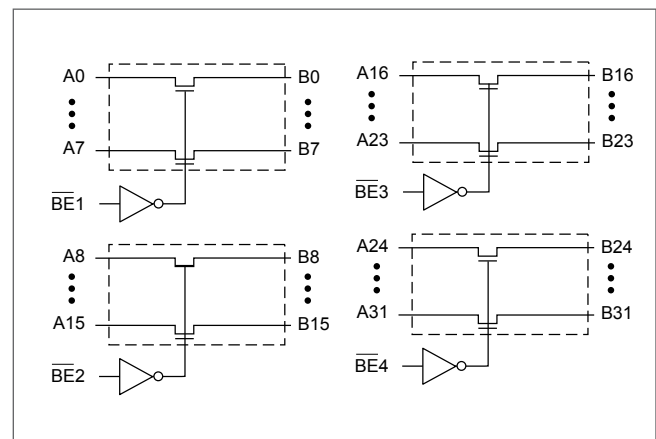
PI5C16210
20-Bit 2-Port NanoSwitch™



PI5C32X384 / PI3B32X384
20-Bit 2-Port Bus Switch

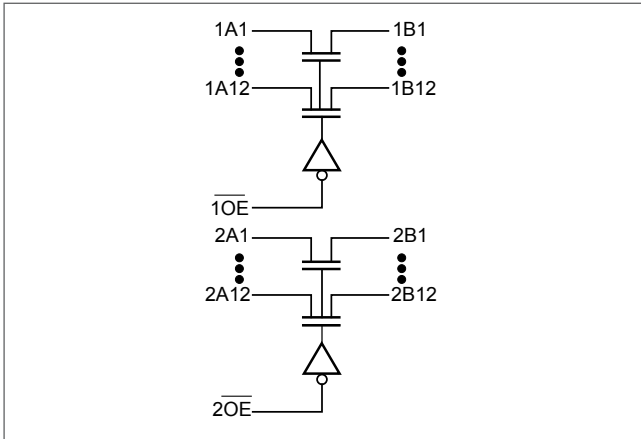


PI3C34X245
32-Bit 2-Port Bus Switch

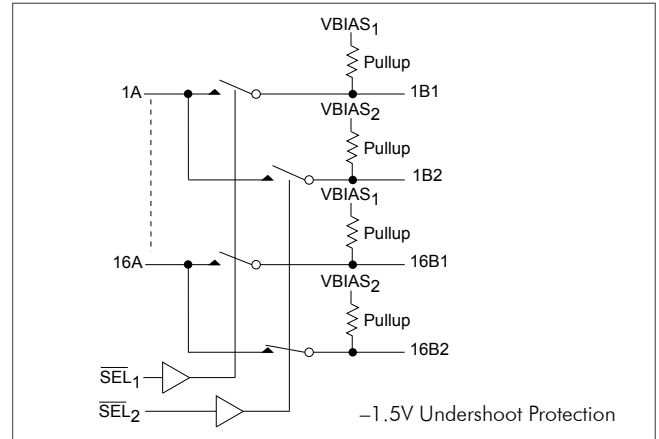


Digital Bus Switch Block Diagrams

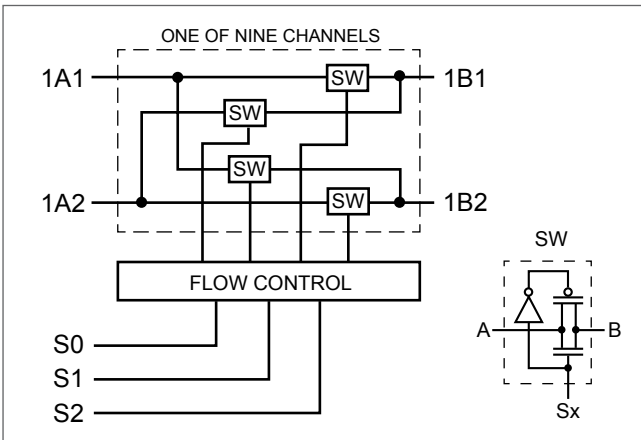
PI5C16211
24-Bit Bus Switch



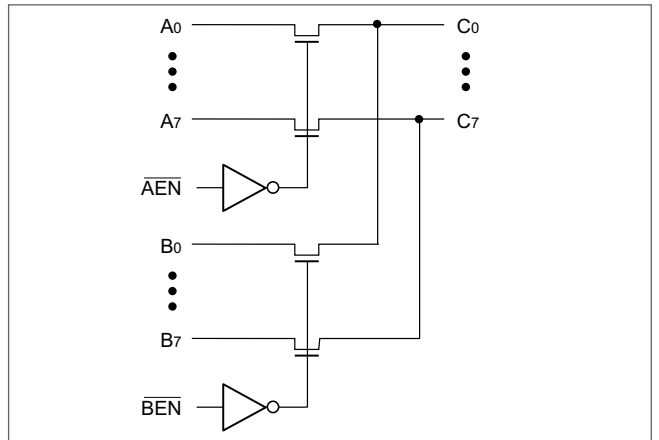
PI5C32160C
16:32 Mux/DeMux PCI Hot-Plug Bus Switch



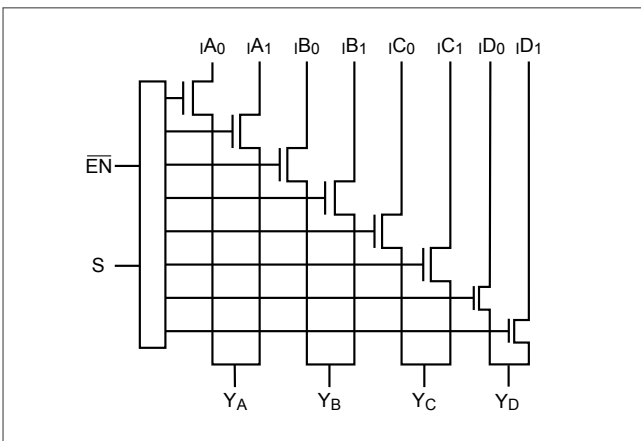
PI3B16209
18-Bit Bus Exchange NanoSwitch™



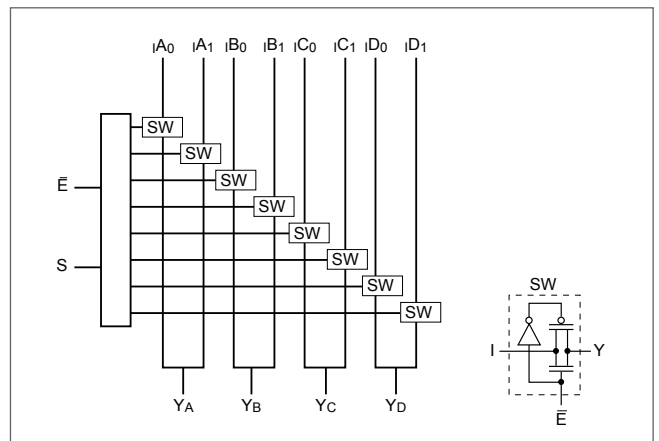
PI5C3390
8:16 Mux/DeMux 5V Bus Switch



PI3CH480
2.5/3.3V Quad 2:1 Mux/DeMux NanoSwitch™

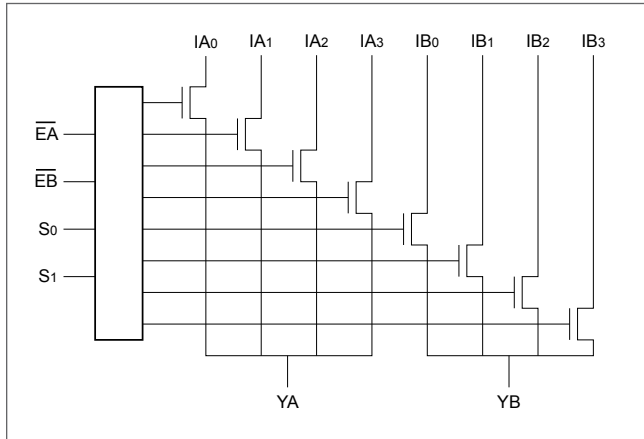


PI5C3257, PI3B3257
3.3V Quad 2:1 Mux/DeMux NanoSwitch™

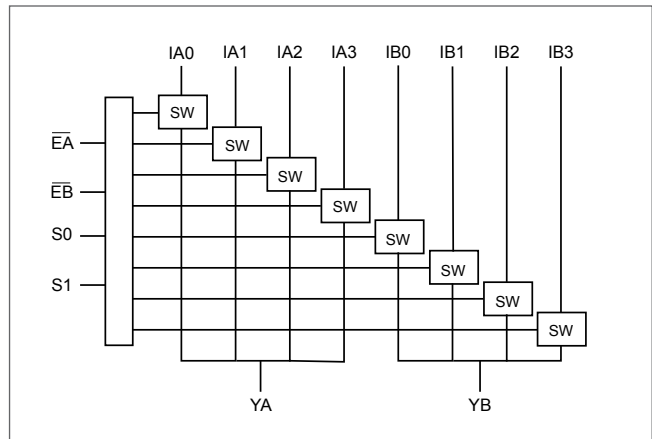


Digital Bus Switch Block Diagrams

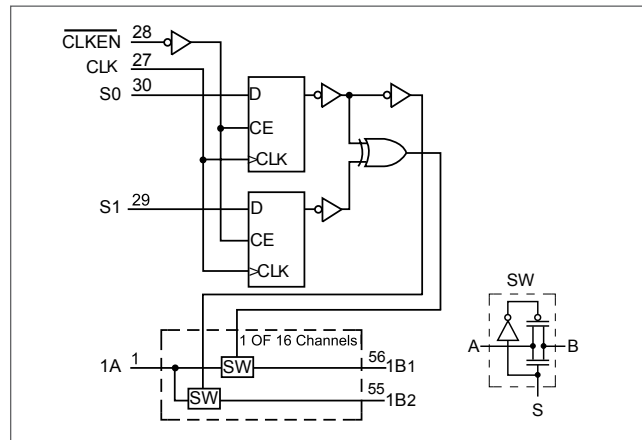
PI5C3309
5V Single 3:1 Mux/DeMux Bus Switch



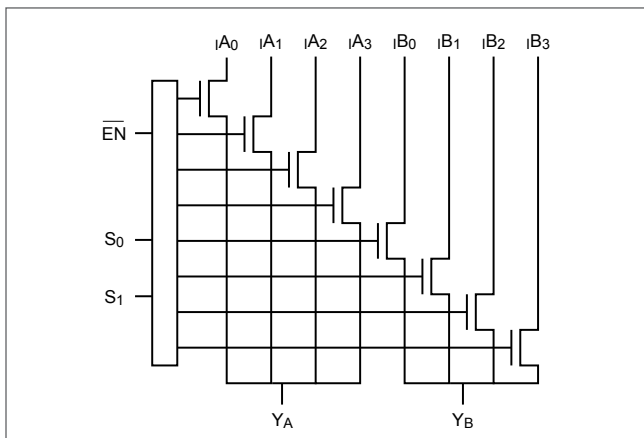
PI5C3253, PI3B3253
3.3V Dual 4:1 Mux/DeMux NanoSwitch™



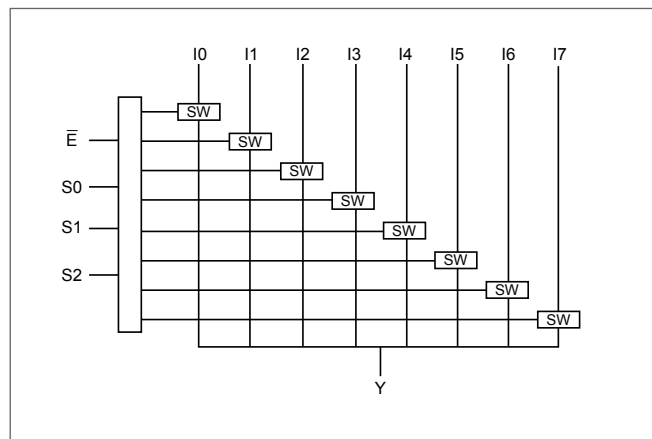
PI3B16232
16:32 FET Mux/DeMux NanoSwitch™



PI3CH281
2.5/3.3V Dual 4:1 Mux/DeMux NanoSwitch™

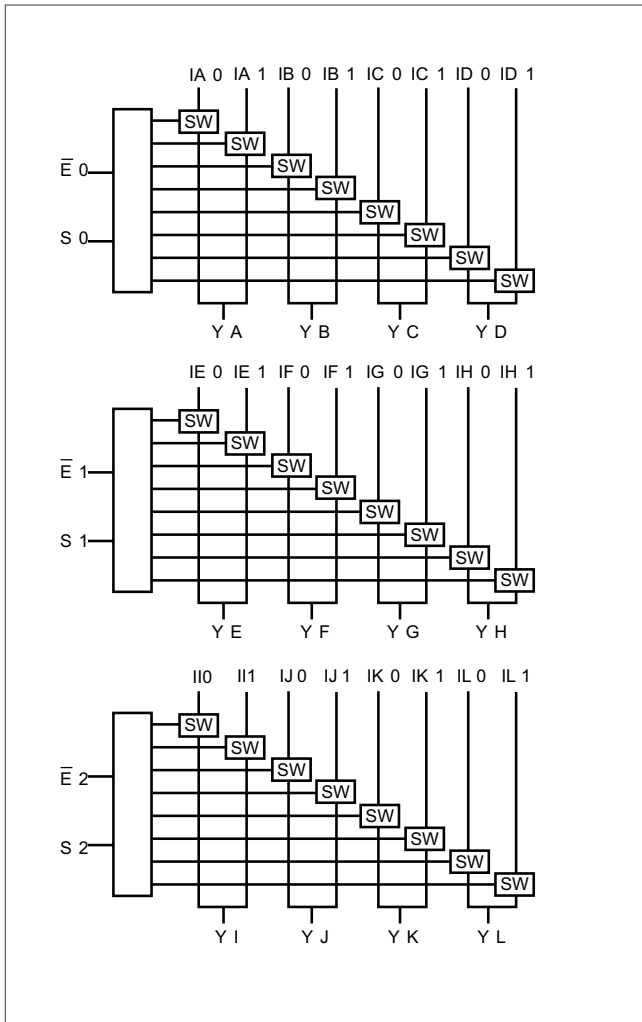


PI5C3251, PI3B3251
8:1 Mux/DeMux Bus Switch

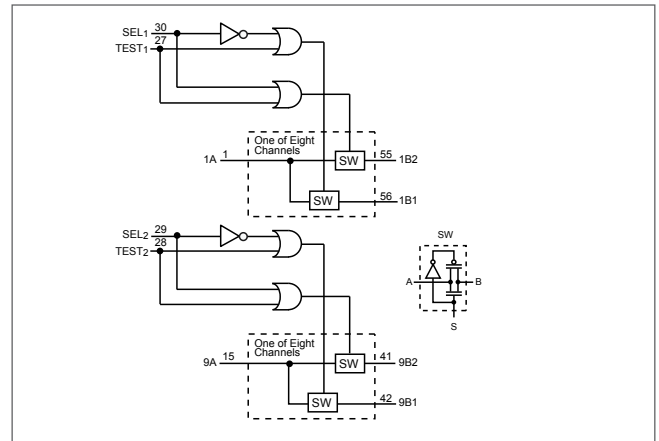


Digital Bus Switch Block Diagrams

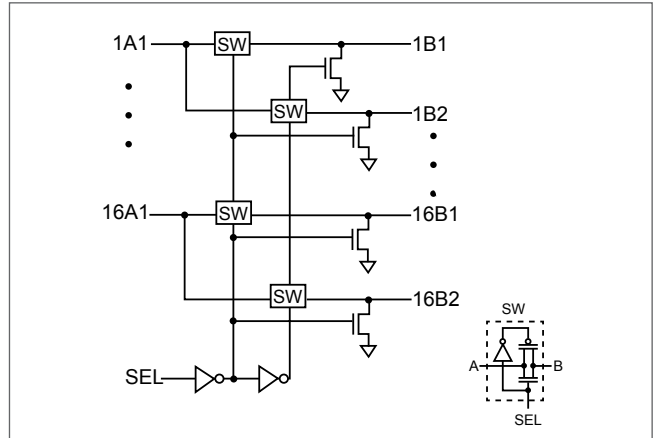
PI5C33X257, PI3B33X257
24:12 Mux/DeMux Bus Switch



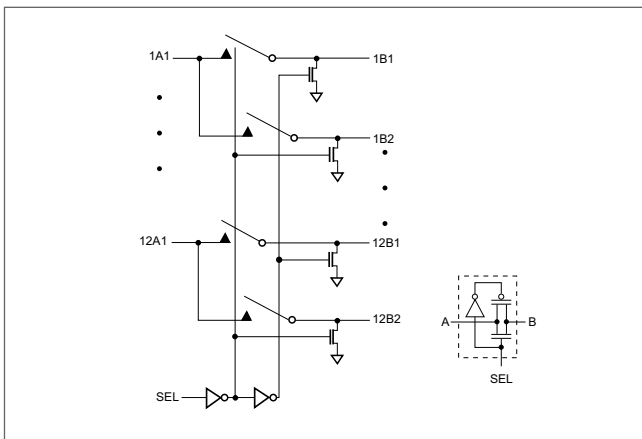
PI3B16233
16:32 FET Mux/DeMux NanoSwitch™



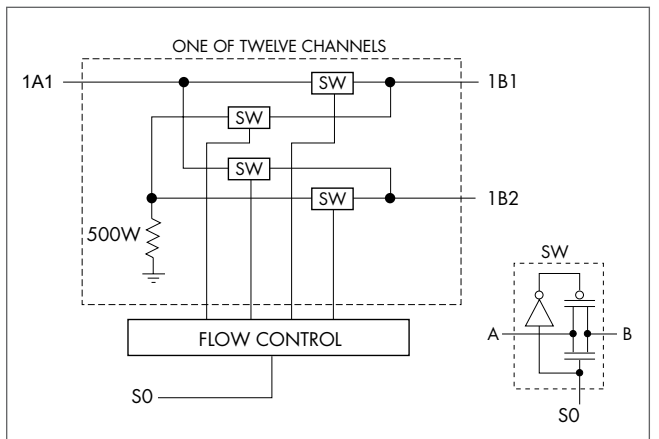
PI3B16234
16:32 Mux/DeMux NanoSwitch™



PI3B16226
12:24 Mux/DeMux 3.3V Bus Switch



PI3B16292
12:24 Mux 3.3V Bus Switch w/ 500Ω Pulldown



Logic Interface Products

Logic Interface Products

Pericom offers high-speed voltage translators, performance logic and other specialty Interface IC solutions for memory modules (see page 52 for memory module solutions).

These products offer high performance 5V, 3.3V, 2.5V and 1.8V with propagation delays down to < 2.0ns. They support 8-bit, 16-bit, 18-bit and 32-bit functions.

The Logic interface family gives high-performance at 5V, 3.3V, 2.5V, & 1.8V with propagation delays down to < 2.0ns. The family supports 8-bit, 16-bit, 18-bit, 24-bit, and 32-bit functions with a performance mix of voltage translators (see also page 53 for all translators and level shifters).

High-Performance & Low-Voltage Solutions

- 5V FCT5 logic
- 3.3 volt LCX, LVC, ALVC, LPT, FCT3, LVTC, logic
- 2.5 volt AVC+, SSTV, ALVTC, VCX logic
- SOTiny Gate ST, STX families
- Voltage and Level Translators
- Popular Functions
 - + Double density (16 to 32-bit)
 - + Gate & Octals (4 to 8-bit)
 - + SOTiny Gate (1 to 4-bit) functions
- Competitive industry features
- Input/Output
 - + Tolerant I/O's
 - + Edge rate control
 - + Bus hold speed/noise optimization
 - + Live insertion
 - + Three state I/O's
- Packaging Technology includes standard to advanced SC70, QFN, LFBGA
- Pericom has a complete interface solution for memory modules including a full line of advanced PLL (Phase-locked loop) Zero-Delay Clock Drivers to supplement the Registers.

Logic Interface Products

Buffer/Driver

Part No.	Description	Voltage (nom)	Drive	Prop Delay	Bus Hold	Package
PI74FCT162244T	16-Bit Buffer/Line Driver	5V	-24/24mA	4.8	NO	SSOP (V48)
PI74LPT16244	16-Bit Non-Inverting Buffer/Line Driver	3.3V	-24/24mA	4.1	NO	TSSOP (A48)
PI74ALVTC16244	16-Bit Buffer/Line Driver, OE Active Low	2.5V	-32/64mA	2.8	YES	TSSOP (A48)
PI74AVC+16836	20-Bit Universal Bus Driver, LE/ PC133 Compliant	2.5V	-24/24mA	3	NO	TSSOP (A56)
PI74AVC16834	18-Bit Universal Bus Driver, LE/	2.5V	-12/12mA	3	NO	TSSOP (A56)
PI74FCT16244T	16-Bit Non-Inverting Buffer/Line Driver	5V	-32/64mA	4.8	NO	SSOP (V48), TSSOP (A48)
PI74FCT2244T	Octal Buffer/Line Driver, OE Active Low	5V	-15/12mA	6.5	NO	QSOP (Q20), SOIC (S20), TSSOP (L20)
PI74FCT244T	Octal Buffer/Line Driver, OE Active Low	5V	-15/64mA	4.8	NO	SSOP (H20), TSSOP (L20)
PI74FCT2541T	Non-Inverting Octal Buffer/Line Driver	5V	-15/12mA	6	NO	QSOP (Q20), SOIC (S20)
PI74FCT3244	Octal Buffer/Line Driver	3.3V	-24/24mA	4.1	NO	QSOP (Q20), SOIC (S20), TSSOP (L20)
PI74LCX16244	16-Bit Non-Inverting Buffer/Line Driver	3.3V	-24/24mA	4.5	NO	TSSOP (A48)
PI74VCX16244	16-Bit Buffer/Line Driver, OE Active Low	2.5V	-24/24mA	3	NO	TSSOP (A48)

Flip-flop

Part Number	Description	Voltage (nom)	Drive	Prop Delay	Bus Hold	Package
PI74ALVTC16374	16-Bit Transparent D-Type flip-flop	2.5V	-32/64mA	4.2	YES	TSSOP (A48)

Gate

Part Number	Description	Voltage (nom)	Drive	Prop Delay	Bus Hold	Package
PI74ST1G08	2-Input AND Gate	3.3V	-24/24mA	1.8	NO	SC70 (C5), SOT23 (T5)
PI74ST1G125	Buffer with 3-State Output	3.3V	-24/24mA	1.8	NO	SC70 (C5), SOT23 (T5)
PI74ST1G126	Buffer with 3-State Output	3.3V	-24/24mA	1.8	NO	SC70 (C5)
PI74ST1G32	2-Input OR Gate	3.3V	-24/24mA	1.8	NO	SC70 (C5), SOT23 (T5)
PI74STX1G02	2-Input NOR Gate	3.3V	-24/24mA	2.5	NO	SC70 (C5)
PI74STX1G08	2-Input AND Gate	3.3V	-24/24mA	2.4	NO	SC70 (C5), SOT23 (T5)
PI74STX1G126	Buffer with 3-State Output	3.3V	-24/24mA	2.3	NO	SOT23 (T5)
PI74STX1GU04	Unbuffered Inverter	3.3V	-24/24mA	2.6	NO	SOT23 (T5)

Logic Interface Products

Register

Part No.	Description	Voltage (nom)	Driver	Prop Delay	Bus Hold	Package
PI74SSTV16857	DDR-I, 14-Bit Registered Buffer	2.5V	20mA	2.8	NO	TSSOP (A48)
PI74SSTV16859	DDR-I, 13/26-Bit Registered Buffer	2.5V	20mA	2.8	NO	QFN (ZB56), TSSOP (A64)
PI74SSTVF16857	DDR-I, 14-Bit Registered Buffer	2.5V	16mA	2.2	NO	TSSOP (A48)
PI74SSTVF16859	DDR-I, 13/26-Bit Registered Buffer	2.5V	16mA	2.2	NO	TSSOP (A64)
PI74SSTVF16859A	DDR-I, 13/26-Bit Registered Buffer	2.5V	16mA	1.8	NO	QFN (ZB56)
PI74SSTVF32852	DDR-I, 24/48-Bit Registered Buffer	2.5V	16mA	2.8	NO	LFBGA (NB114)
PI74SSTVF32852A	DDR-I, 24/48-Bit Registered Buffer	2.5V	16mA	2.1	NO	LFBGA (NB114)

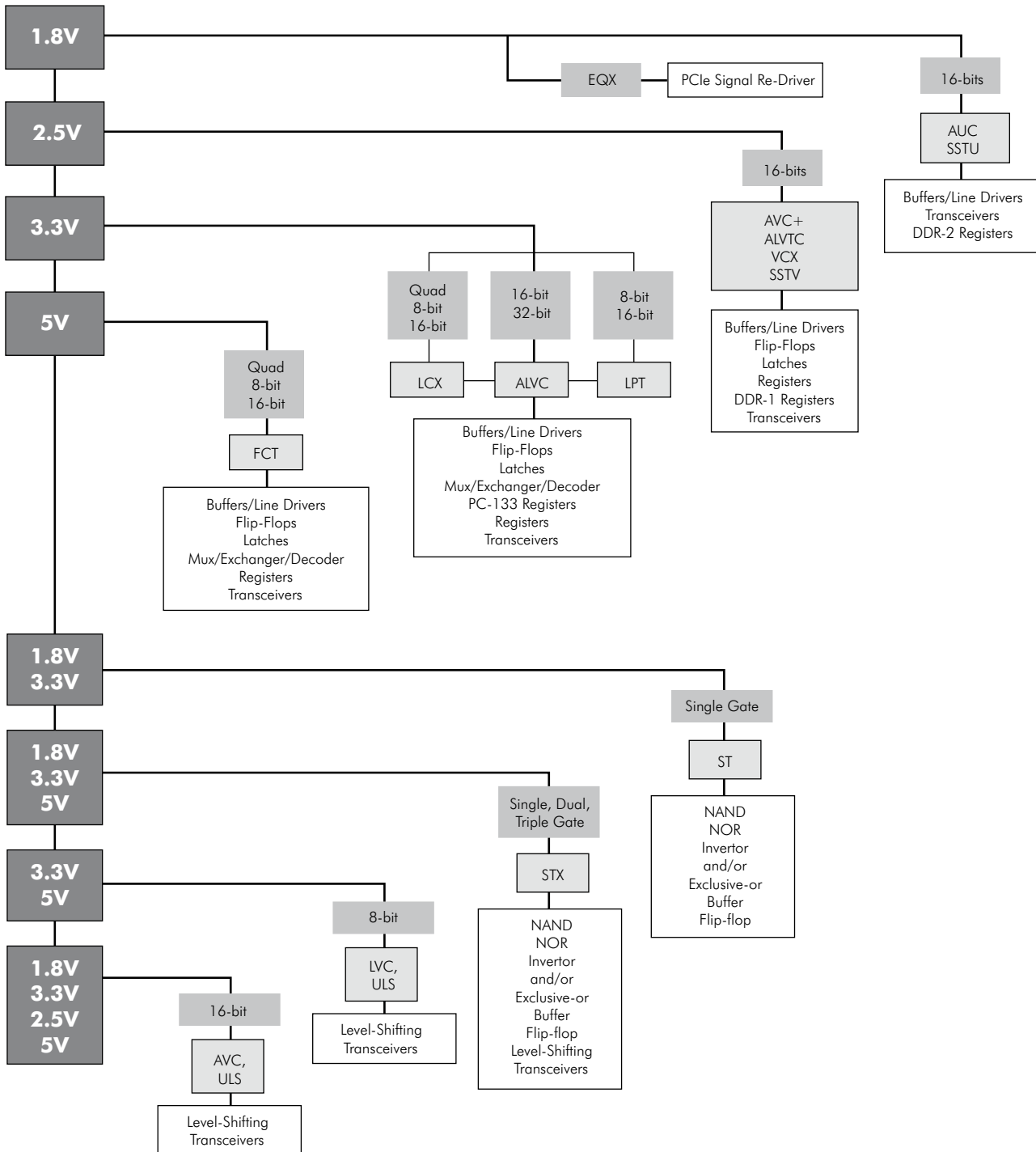
Serializer/Deserializer (SerDes)

Part No.	Description	Speed	Bus Width	Power Supply	Package
PI90SD1636C	SerDes Gigabit Ethernet Transceiver, 1 Channel, 5V I/O tolerant	1.25Gbps	10-bits	3.3V	LQFP (FC64), LQFP (FG64)

Transceiver

Part No.	Description	Voltage (nom)	Drive	Prop Delay	Bus Hold	Package
PI74ALVCHR162245	16-Bit Bidirectional Transceiver w/ Dual Resistors	3.3V	-12/12mA	4.2	YES	TSSOP (A48)
PI74ALVTC16245	16-Bit Bi-directional Bus Transceiver	2.5V	-32/64mA	2.8	YES	SSOP (V48), TSSOP (A48)
PI74AVC164245	16-Bit Level Shifting Transceiver	1.8V to 3.3V	-12/12mA	3	NO	TSSOP (A48), TVSOP (K48)
PI74AVC164245A	16-Bit Level Shifting Transceiver	1.8V to 3.3V	-12/12mA	3	NO	SSOP (V48), TSSOP (A48)
PI74AVC164245LA	16-Bit Level Shifting Transceiver	1.5V to 3.3V	-6/6mA	3.5	NO	TVSOP (K48), TSSOP (A48)
PI74FCT162245T	16-Bit, Bidirectional Transceiver	5V	-24/24mA	4.6	NO	SSOP (V48), TSSOP (A48)
PI74FCT16245T	16-Bit Bidirectional Transceiver	5V	-32/64mA	7	NO	SSOP (V48)
PI74FCT245T	Octal Bidirectional Transceiver	5V	-15/64mA	4.6	NO	QSOP (Q20), SOIC (S20),
PI74HSTL1212	24-Bit HSTL Bi-Directional Level Shifting Transceiver	1.8V to 3.3V	-8/8mA	3	NO	TSSOP (A64)
PI74LCX16245	16-Bit Bidirectional Transceiver	3.3V	-24/24mA	4.5	NO	SSOP (V48), TSSOP (A48)
PI74LPT16245	16-Bit Bidirectional Transceiver	3.3V	-24/24mA	4.1	NO	SSOP (V48), TSSOP (A48)
PI74LVC3245A	8-Bit Dual Supply Bidirectional w/3-State Outputs	3.3V to 5V	-24/24mA	6.3	NO	QSOP (Q24), SOIC (S24), TSSOP (L24)
PI74STX2G4245	2-Bit Level Shifter w/Dual Supply Voltage	1.5V to 5V	-12/12mA	5	NO	MSOP (U8), TDFN (ZE12)
PI74VCX16245	16-Bit Bidirectional Transceiver w/3-State	2.5V	-24/24mA	3.2	NO	TSSOP (A48)

Logic Interface Decision Tree



LVDS Products

LVDS is an acronym for Low Voltage Differential Signaling. As the name implies, it is a differential standard using two signal lines to communicate data or clock signals over PCB traces or balanced cables. LVDS is widely used in applications requiring high-speed, low power, or low EMI. Pericom LVDS is commonly found in printers and copiers, OC-3 and OC-12 DSLAM, datacom, base stations, routers, various multi-media, and tester applications.

The LVDS product line offers line drivers, receivers, transceivers, crosspoints, clock/data distribution and repeaters that solve today's high speed I/O interface translation requirements.

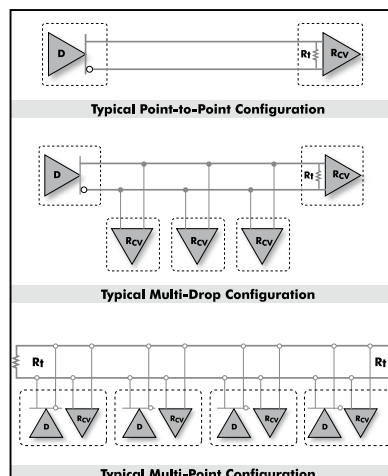
Low Voltage Differential Signaling Technology

- Differential transmission using two wires with opposite current/voltage swings
 - + Low-voltage swing
 - + Low-noise generation
 - + High-noise rejection
- Supports 100's of Mbps
- Excellent signal quality
- Low power consumption

Pericom LVDS Features:

- Distribution High-performance: 660 Mbps
- Supply voltage: 3.3 Volts
- Drive: 4mA-8mA
- Packages: 8 to 64 pins including SOTiny™ small footprint
- Fail-safe circuit
- Standard & bus drive
- Integrated termination

By exploiting the benefits of LVDS in clock distribution, control buses, backplanes, and other areas of high-speed signal distribution, 3G base stations will be able to deliver higher bandwidth wireless services without requiring proportionately greater cost, size, and power.

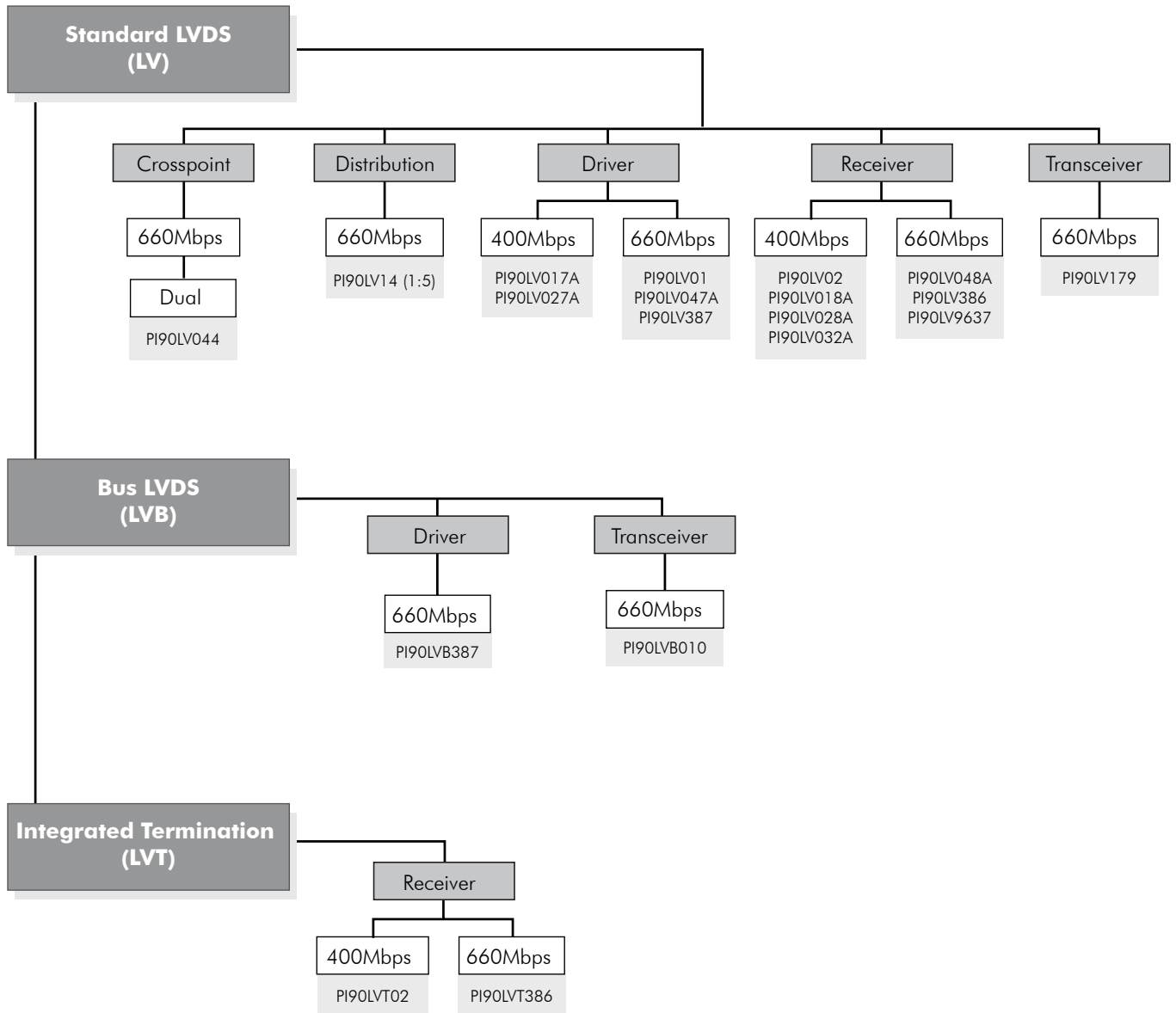


LVDS Products

LVDS

Part No.	Function	Description	Data Rate	Drive Capability	Package
PI90LV044	Crosspoint	LVDS Dual 2x2 Crosspoint/Repeater	660Mbps	4mA	TSSOP (L28)
PI90LV14	Distribution	1:5 Diff Clk/Data Distribution (Bank Select)	660Mbps	4mA	TSSOP (L20)
PI90LV01	Driver	SOTiny Single LVDS Driver	660Mbps	4mA	SOT23 (T5)
PI90LV017A	Driver	Single LVDS Driver	400Mbps	4mA	MSOP (U8), SOIC (W8)
PI90LV027A	Driver	Dual LVDS Driver	400Mbps	4mA	MSOP (U8), SOIC (W8)
PI90LV031A	Driver	Quad LVDS Driver (EN)	400Mbps	4mA	SOIC (W16), TSSOP (L16)
PI90LV047A	Driver	Quad Flow through Driver	660Mbps	4mA	TSSOP (L16)
PI90LV387	Driver	16-Wide LVDS Driver	660Mbps	4mA	TSSOP (A64)
PI90LV018A	Receiver	Single LVDS Receiver	400Mbps	n/a	MSOP (U8)
PI90LV02	Receiver	SOTiny Single LVDS Receiver	400Mbps	n/a	SOT23 (T5)
PI90LV028A	Receiver	Dual LVDS Receiver	400Mbps	n/a	SOIC (W8)
PI90LV032A	Receiver	Quad LVDS Receiver (EN)	400Mbps	n/a	SOIC (W16), TSSOP (L16)
PI90LV048A	Receiver	Quad Flow through Receiver	660Mbps	n/a	TSSOP (L16)
PI90LV386	Receiver	16-Wide LVDS Receiver	660Mbps	n/a	TSSOP (A64)
PI90LV9637	Receiver	Dual LVDS Receiver	660Mbps	n/a	SOIC (W8)
PI90LVT02	Receiver	SOTiny Single LVDS Receiver w/integrated termination	400Mbps	n/a	SOT23 (T5)
PI90LVT386	Receiver	16-Wide LVDS Receiver w/Integrated Termination	660Mbps	n/a	TSSOP (A64)
PI90LV179	Transceiver	Single Transceiver	660Mbps	4mA	MSOP (U8), SOIC (W8)
PI90LVB010	Transceiver	SOTiny Single Bus LVDS Transceiver	100Mbps	8mA	SOIC (W8), MSOP (U8)

LVDS Decision Tree

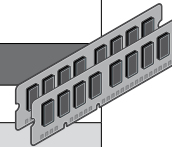
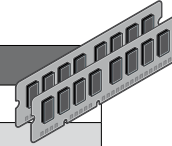


DDR and DDR II Solutions

Pericom Semiconductor offers the complete interface solution for all memory module configurations that includes industry leading performance PLL Clock Drivers and Registered Logic Buffers (optional FET Bus Switches are also available).

Registered DIMM Solutions

DDR-I			
PC1600/PC2100			
DIMM Configuration		Planar 9 to 18 loads	Stacked 36 loads
Standard 1.7"	PLL	PI6CV857	PI6CV857
	Register	PI74SSTV16857	PI74SSTV16859
1U Low Profile <1.2"	PLL	PI6CV857	PI6CV857
	Register	PI74SSTV16857	PI74SSTV16859 PI74SSTV32852
PC2700			
DIMM Configuration		Planar 9 to 18 loads	Stacked 36 loads
Standard 1.7"	PLL	PI6CV857B, PI6CV847	PI6CV857B, PI6CV847
	Register	PI74SSTVF16857	PI74SSTVF16859
1U Low Profile <1.2"	PLL	PI6CV857B	PI6CV857B
	Register	PI74SSTVF16857	PI74SSTVF16859 PI74SSTVF32852
PC3200			
DIMM Configuration		Planar 9 to 18 loads	
1U Low Profile <1.2"	PLL	PI6CVF857	
	Register	PI74SSTVF16857A PI74SSTVF16859 PI74SSTVF16859A PI74SSTVF32852 PI74SSTVF32852A	
DDR-II			
PC2-3200 (200 MHz) / PC2-4200 (266 MHz)			
DIMM Configuration		Planar 9 to 18 loads	
1U Low Profile <1.2"	PLL	PI6CU877 PI6CU878	
PC2-5300 (333 MHz)			
DIMM Configuration		Planar 9 to 18 loads	
1U Low Profile <1.2"	PLL	PI6CUA877 PI6CUA878	
	Register	PI74SSTUA32864	
PC2-6400 (400 MHz)			
DIMM Configuration		Planar 9 to 18 loads	
1U Low Profile <1.2"	PLL	PI6CUA877 PI6CUA878	



Solution Overview

New signal standards are constantly emerging, and voltage levels are perpetually dropping. Today's design engineer's regularly find themselves looking for solutions to solve communication issues amongst these mixed applications. We offer solutions for signal and voltage translation from our LVDS, Logic Interface, and Digital Bus families.

Use Pericom's web tool to find the right devices: www.pericom.com/translators.

LVDS Solutions

Includes bidirectional I/O signal translators for applications including the interfacing from LVDS to LVTTTL, LVPECL or LVDS to LVDS, LVTTTL to LVDS and LVTTTL to LVPECL and/or LVCMOS to LVPECL.

Switch Solutions

Includes bidirectional low voltage translators for applications including the interfacing from 1.8V, 2.5V, 3.3V, and 5V.

Logic Interface Solutions

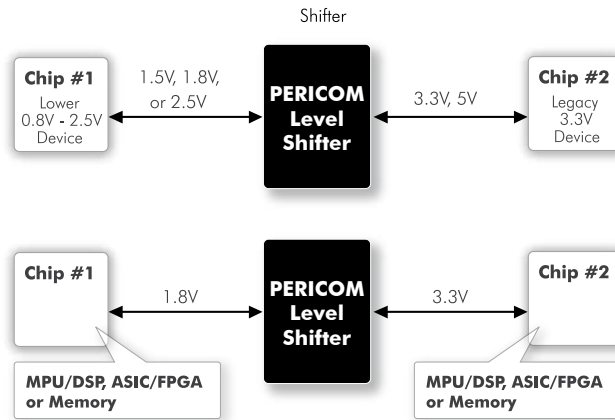
These focus on voltage level shifters and also provide the ability to translate between different I/O's such as HSTL to LVTTTL/LVCMOS, SSTL to TTL, etc. Many products are bidirectional and scalable from 1-bit to +32-bits with support for communicating power from 1.5V to 5V.

Clock IC Solutions

Includes clock driver products specifically designed to translate Xtal, LVCMOS/LVTTTL to LVPECL, or LVDS, and CML, LVDS, LVPECL, LVHSTL, SSTL, HCSSL to LVPECL or LVDS.

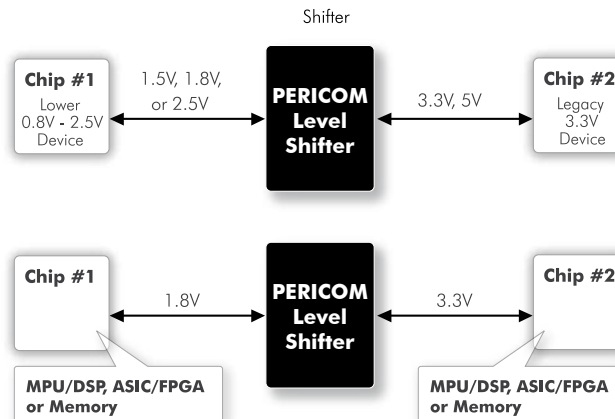
Level Shifting

Pericom offers great chip-to-chip interface between different I/O voltages ranging from 1.5/1.8/2.5/3.3V to 5V, and 0.8V to 2.5V. These translators are scalable from 16-bit to 32-bits and beyond.



I/O Signal Translation

These devices provide the ability to convert between different I/O's (HSTL to LVTTTL or LVCMOS, SSTL to TTL, etc.) and are scalable from 12-bit to 32-bit and beyond.



Voltage Translators

Part No.	Family	Description	Translator description
PI3VT3245	Switch	Low-voltage 2-port bus switch	3.3V to 2.5V and/or 2.5V to 1.8V
PI3VT32X245**	Switch	Low-voltage 2-port bus switch	3.3V to 2.5V and/or 2.5V to 1.8V
PI3VT3306	Switch	Low-voltage 2-port bus switch	3.3V to 2.5V and/or 2.5V to 1.8V
PI3VT34X245	Switch	Low-voltage 2-port bus switch	3.3V to 2.5V and/or 2.5V to 1.8V
PI49FCT20802	Clock IC	150MHz, 1:5 low-skew driver	3.3V to 2.5V
PI49FCT20803	Clock IC	150MHz, 1:7 low-skew driver	3.3V to 2.5V
PI49FCT20807 ⁽¹⁾	Clock IC	150MHz, 1:10 low-skew driver	3.3V to 2.5V
PI49FCT32802	Clock IC	133MHz, 1:5 low-skew driver, 20Ω term. resistor	5V to 3.3V
PI49FCT32803	Clock IC	133MHz, 1:7 low-skew driver 20Ω term. resistor	5V to 3.3V
PI49FCT32805 ⁽¹⁾	Clock IC	133MHz 1:5 driver with monitor output, 20Ω	5V to 3.3V
PI49FCT32806 ⁽¹⁾	Clock IC	133MHz dual 1:5 inverting driver, 20Ω term. resistor	5V to 3.3V
PI49FCT32807 ⁽¹⁾	Clock IC	3.3V, 133MHz 1:10 driver, 20Ω term. resistor	5V to 3.3V
PI49FCT3802	Clock IC	3.3V, 156MHz, 1:5 low-skew driver	5V to 3.3V
PI49FCT3803	Clock IC	3.3V, 156MHz, 1:7 low-skew driver	5V to 3.3V
PI49FCT3805D ⁽¹⁾	Clock IC	3.3V, 133MHz Dual 1:5 driver with monitor output	5V to 3.3V
PI49FCT3807D ⁽¹⁾	Clock IC	3.3V, 156MHz 1:10 non-inverting driver	5V to 3.3V
PI4ULS3V08	Logic	8-bit auto-direction sensing	1.5V to 3.3V on either port
PI4ULS3V08M	Logic	8-bit auto-direction sensing	1.5V to 3.3V on either port
PI4ULS3V16	Logic	16-bit auto-direction sensing	1.5V to 3.3V on either port
PI4ULS3V16M	Logic	16-bit auto-direction sensing	1.5V to 3.3V on either port
PI6C10804	Clock IC	250 MHz, 1:4 networking buffer	3.3V to 2.5V/1.8V
PI6C10806	Clock IC	250 MHz, 1:6 Xtal to LVCMOS buffer	3.3V to 2.5V/1.8V
PI6C10806A	Clock IC	250MHz, low-skew 1:6 Xtal to LVCMOS buffer	3.3V to 2.5V/1.8V
PI6C10806B	Clock IC	100MHz, low-skew 1:6 Xtal to LVCMOS buffer	3.3V to 2.5V/1.8V
PI6C10807	Clock IC	250 MHz, 1:10 networking buffer	3.3V to 2.5V/1.8V
PI6C487016	Clock IC	Low Skew 1:16 LVTTTL/LVCMOS fanout buffer	3.3V to 2.5 and/or 1.8V
PI6CL10804	Clock IC	200 MHz, 1:4 networking buffer	1.8V to 1.2V/1.5V
PI6CL10806	Clock IC	200 MHz, 1:6 Xtal to LVCMOS buffer	1.8V to 1.2V/1.5V
PI6CL10807	Clock IC	200 MHz, 1:10 networking buffer	1.8V to 1.2V/1.5V
PI6CV2304	Clock IC	160MHz, 4-output low-skew driver, 30Ω termination resistor	5V to 3.3V
PI6CV304	Clock IC	160MHz, 4-output low-skew driver	5V to 3.3V
PI74AVC164245	Logic	16-bit level-shifting transceiver	1.8V to 3.3V; 2.5V to 3.3V - Bidirectional
PI74AVC164245A	Logic	16-bit level-shifting transceiver	1.8V to 3.3V; 2.5V to 3.3V - Bidirectional
PI74AVC164245LA	Logic	16-bit level-shifting transceiver	1.5V to 3.3V; 2.5V to 3.3V - Bidirectional
PI74HSTL1212	Logic	24-bit HSTL level-shifting transceiver	1.8V HSTL to 3.3V LVTTTL - Bidirectional
PI74LVC3245A	Logic	8-bit dual supply w/3-State Outputs	3.3V to 5V - Bidirectional
PI74LVCC3245A	Logic	8-bit dual supply w/configurable volt. & 3-state output	3.3V to 5V - Bidirectional
PI74STX2G4245	Logic	2-bit level shifter w/dual supply voltage	1.5V to 3.3V; 2.5V to 5V - Bidirectional

NOTES: 1) Industrial Temp. Operation | ** Pb-free not available

I/O Signal Translators

Part No.	Family	Description	Translator description
PI6C41204	Clock IC	3.3V, 4-output converter with selectable inputs	LVTTTL and/or LVCMOS to LVPECL
PI6C41204A	Clock IC	3.3V, 4-output converter with enhanced selectable inputs	LVTTTL and/or LVCMOS to LVPECL
PI6C485311	Clock IC	3.3V, 2-output, differential buffer, selectable inputs	CML, LVDS, LVPECL, LVHSTL, SSTL,
PI6C4853111	Clock IC	2.5V/3.3V 1GHz low-skew 1-to-10 differential fanout buffer	LVPECL, LVDS, CML, SSTL to LVPECL
PI6C48533-01	Clock IC	3.3V, 4-output differential buffer, selectable inputs	CML, LVDS, LVPECL, LVHSTL, SSTL, HCSL to LVPECL
PI6C48535-01	Clock IC	3.3V, 4-output buffer with selectable inputs	LVTTTL/LVCMOS to LVPECL
PI6C48543	Clock IC	3.3V, low-skew differential fanout buffer	LVDS, LVPECL, LVHSTL, SSTL, HCSL, CML to LVDS
PI6C48545	Clock IC	3.3V, low-skew differential fanout buffer	LVTTTL and/or LVCMOS to LVDS
PI74HSTL1212	Interface	24-Bit HSTL level shifting transceiver	1.8V HSTL to 3.3V LVTTTL - Bidirectional
PI90LV01	LVDS	SOTiny single LVDS driver	LVTTTL to LVDS
PI90LV14	LVDS	1:5 data distribution, bank select, integrated termination	LVTTTL or LVDS to LVDS
PI90LV017A	LVDS	Single LVDS driver	LVTTTL to LVDS
PI90LV018A	LVDS	Single LVDS receiver	LVDS to LVTTTL
PI90LV02	LVDS	SOTiny single LVDS receiver	LVDS to LVTTTL
PI90LV027A	LVDS	Dual LVDS driver	LVTTTL to LVDS
PI90LV028A	LVDS	Dual LVDS receiver	LVDS to LVTTTL
PI90LV031A	LVDS	Quad LVDS driver (EN)	LVTTTL to LVDS
PI90LV032A	LVDS	Quad LVDS receiver (EN)	LVDS to LVTTTL
PI90LV047A	LVDS	Quad flow-through driver	LVPECL or LVDS to LVDS
PI90LV048A	LVDS	Quad flow-through receiver w/integrated termination	LVDS to LVTTTL
PI90LVT048A	LVDS	Quad flow-through receiver w/integrated termination	LVDS to LVTTTL
PI90LV179	LVDS	Single transceiver	LVTTTL to LVDS and/or LVDS to LVTTTL
PI90LV386	LVDS	16-Wide LVDS receiver	LVDS to LVTTTL
PI90LV387	LVDS	16-Wide LVDS driver	LVTTTL to LVDS
PI90LV9637	LVDS	Dual LVDS receiver	LVDS to LVTTTL
PI90LVB010	LVDS	SOTiny single bus LVDS transceiver	LVTTTL to LVDS and/or LVDS to LVTTTL
PI90LVT02	LVDS	SOTiny single LVDS receiver w/integrated termination	LVDS to LVTTTL
PI90LVT386	LVDS	16-Wide LVDS receiver w/integrated termination	LVDS to LVTTTL