PERICOM

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Enabling High-speed Serial Connectivity

For all your Timing, Switching,
Connectivity & Signal Integrity Needs

Pericom Storage Segment Solutions

March 2016

Value Proposition for the Storage Segment

ReDrivers

- Next Generation Low Power Multi-Lane PCIe3, 10Gb, SAS3 ReDrivers
- Complete portfolio encompassing all major high speed serial protocols with 1.05V-3.3V VDD options
- Over 48M SAS/SATA ReDrivers and over 163M total ReDrivers including HDMI, Display port, USB and PCIe Redrivers shipped since 2006
- Complete technical support including simulation models, evaluation board and application support

ASSP Switches

- Most complete family of high speed signal switches for SAS2/3, PCIe3, 10GE, DDR3, DDR4, USB3.0/3.1, Type C, Thunderbolt with best signal integrity
- Only company to offer 3:1 Mux, 2x2 matrix switch for data rates up to 10Gb/s

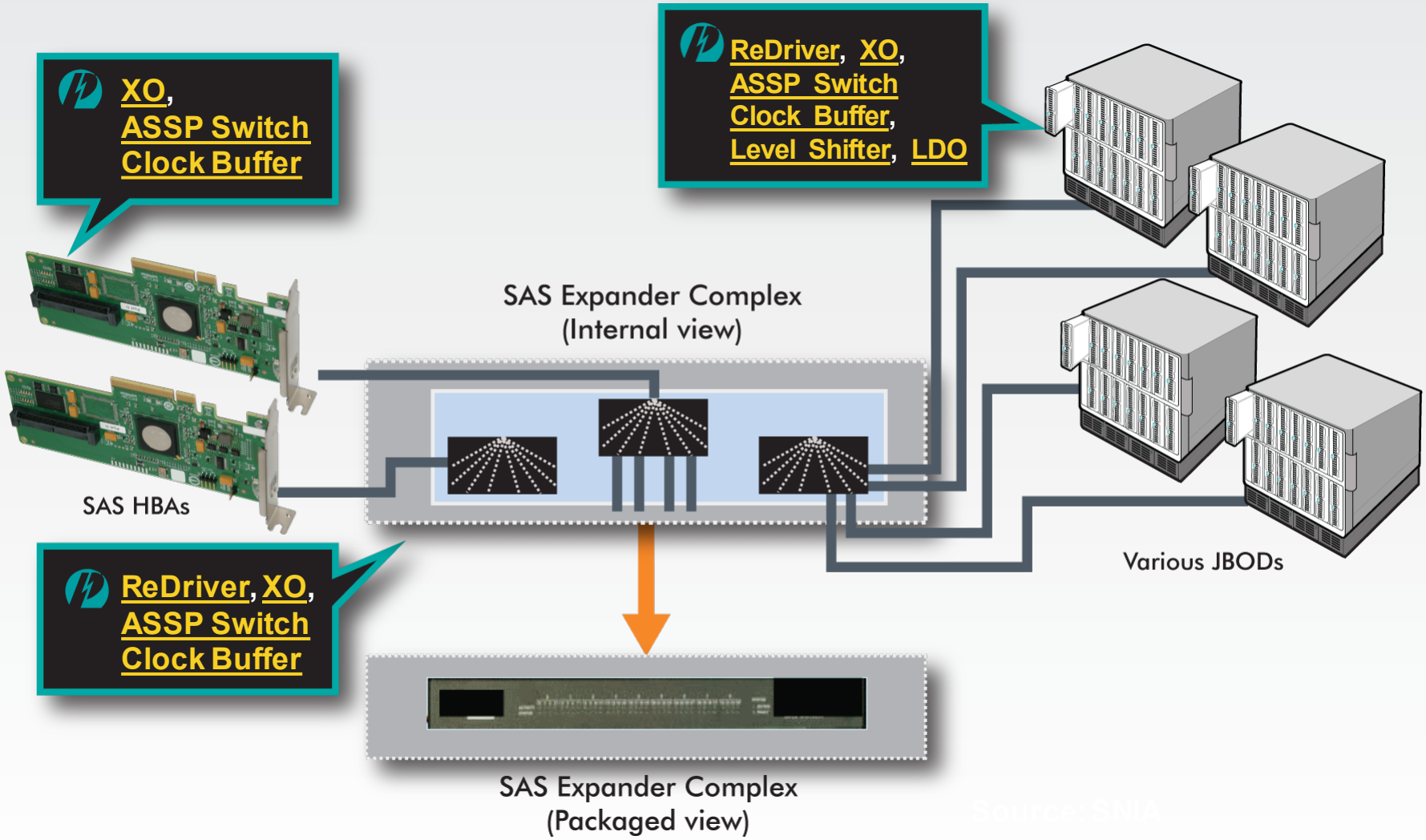
Total Timing Solution – FCP+IC

- Vertical Integration – Cost-effective multi-source XO
- Best Performance – Margins for system designs up to 40GE
  - Ultra Low Jitter XO (0.2ps max) and Ultra low additive jitter clk buffer (0.03ps)
- User Configurable timing IC – Ease of board design

Power Management

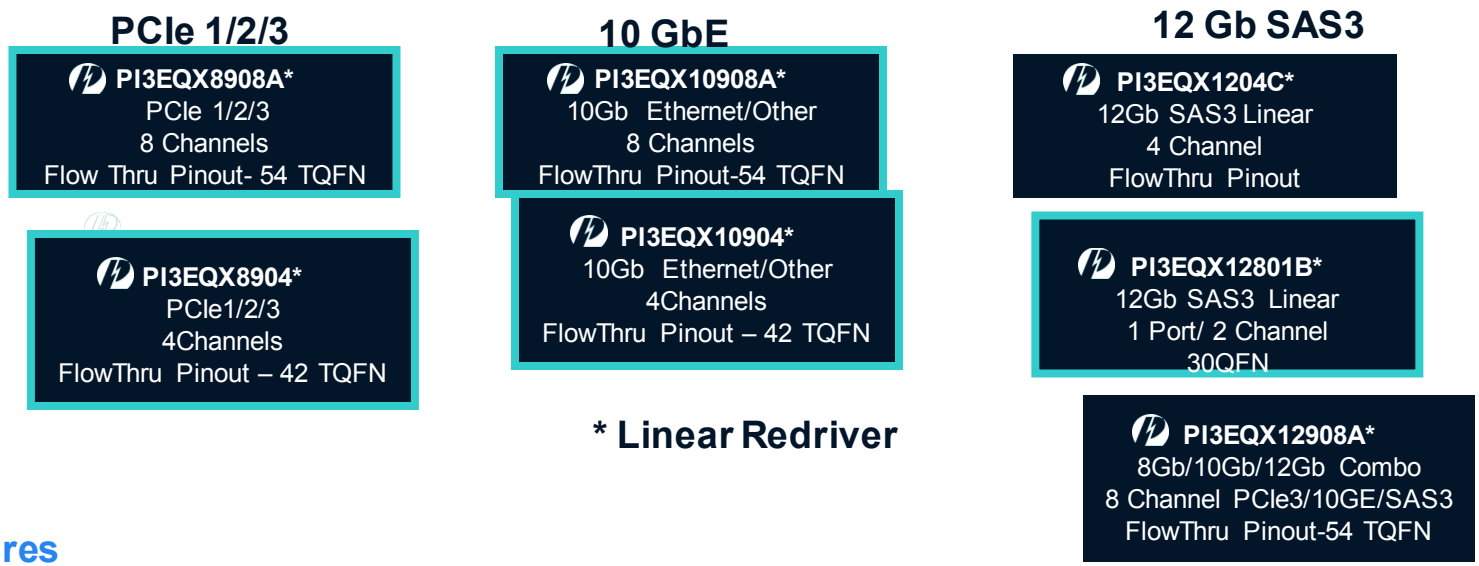
- Bidirectional Level Shifter – Lowest on/off current, Highest ESD tolerance, Smallest package

Storage Segment – Pericom Solution



Source: SNIA

2.5/5/8/10/12Gb ReDriver Portfolio



Key Features

- Flow Thru or Interleave pinout options at 8Gb (only Pericom offers both options)
- Advanced analog design in BiCMOS SiGe process – 4th generation redriver
- Limiting & Linear Redriver Options
- Single Power Supply - 3.3V +/-10%.
- I2C master or slave – up to 16 devices controllable via single low cost EEPROM
- Low power dissipation - ~1W at 1V output swing – all 8 Channels operating
- Industrial Temp rated -40C to +85C
- Rj contribution <1.0pS (based on actual silicon measurement) – extremely low!

Legend

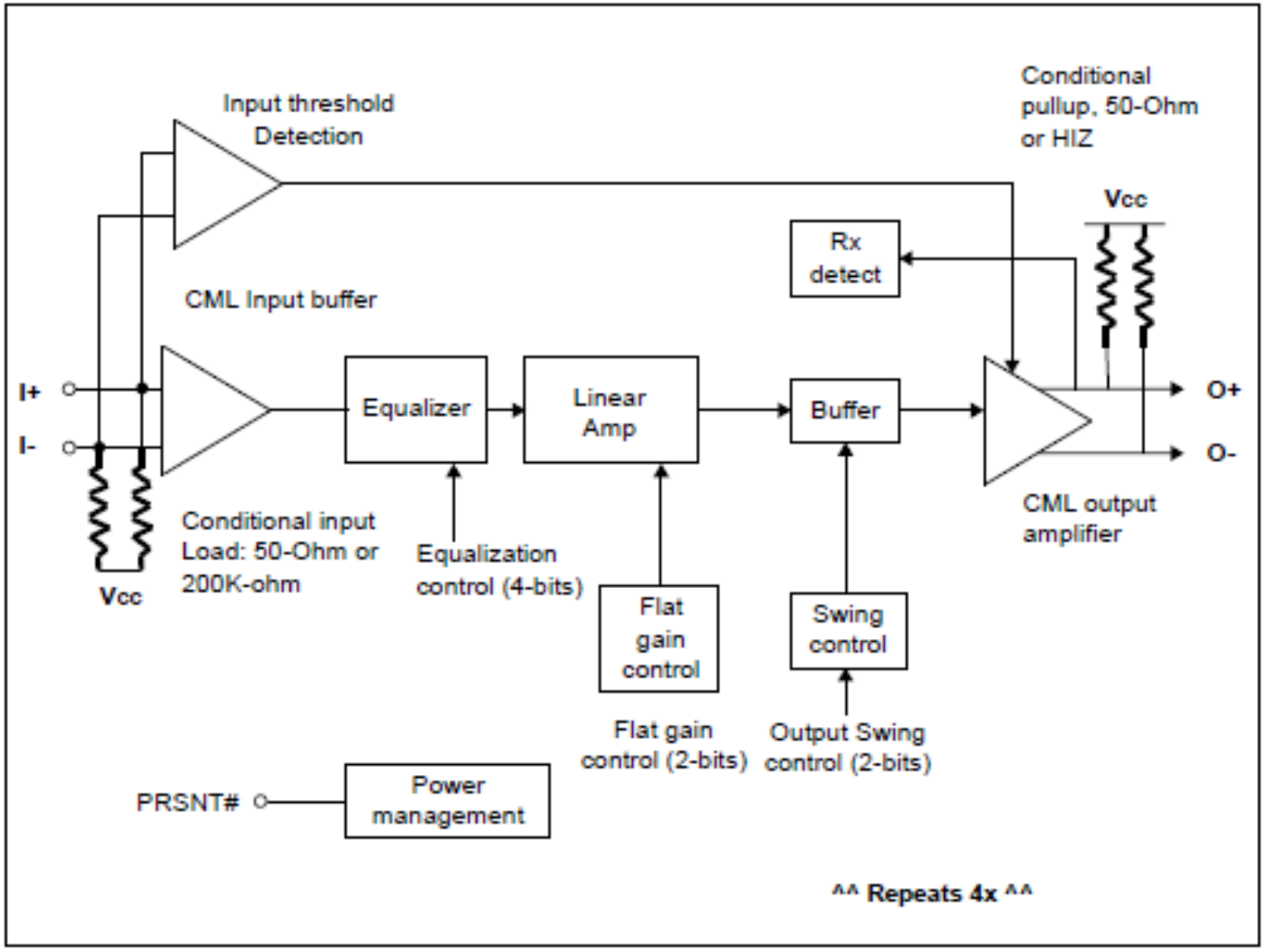
Production

Sampling

SATA/SAS ReDriver Portfolio

PI3EQX1204C Block Diagram

Block Diagram



PI3EQX1204-C Features

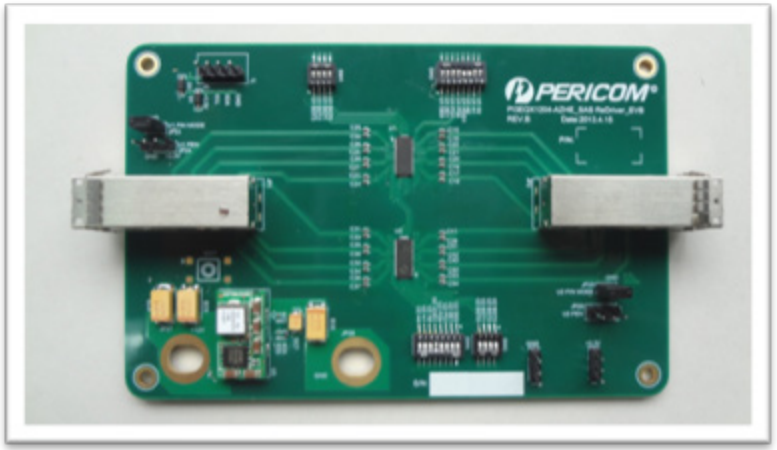
- 1-12.5Gbps serial link with linear equalizer
- Handle upto 36.3 dB Channel loss , 42" FR4 trace or up to 10 meter cable at 12Gbps error-free
- Support SATA Gen1/Gen2/Gen3, SAS2/3, and XAUI protocol
- Supporting 4 differential channels
- Independent channel configuration of receiver equalization, output swing and flat gain
- Per Channel Activity Detector with selectable input termination between 50Ω to V_{CC} and 200KΩ to V_{CC}
- Per Channel Output Termination Detector on power up with selectable output termination between 50Ω to V_{CC} and High impedance
- Rate and Coding Agnostic
- Transparent to link training, OOB, Idle
- Single-ended mode receiver detection for PCIe
- Input Threshold detection
- 260mW per channel power dissipation with 700 mVpp output swing
- Pin strap and I^2C selectable device programming
- 4-bit selectable address bit for I^2C
- Supply Voltage: 3.3V±0.3V
- Industrial Temperature Range: -40°C to 85°C
- Packaging (Pb-free & Green): 42-contact TQFN (9mm x3.5mm)

PI3EQX1204-C Status Update

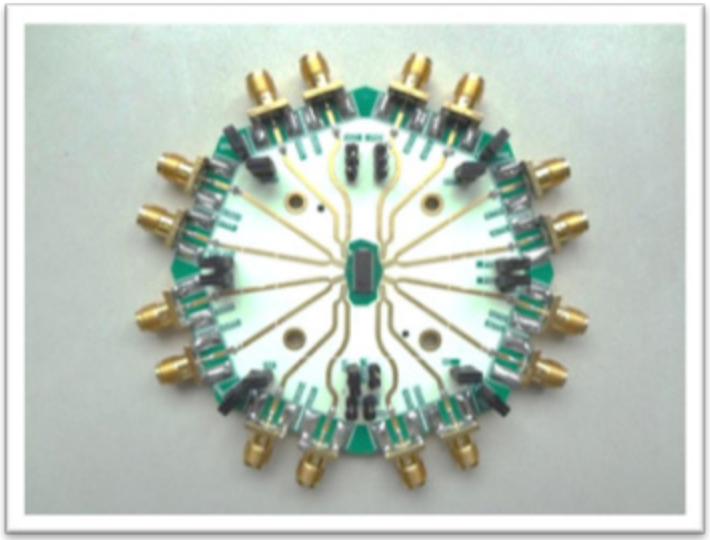
- Works with link training with both PMC and LSI HBA
- Works with 36.3 dB channel loss.
- Tested successfully with up to 42” FR4 trace and 50cm additional SAS3 cable.
- Tested successfully with 5 meter of SAS3 cable on either side of PI3EQX1204-C Redriver

12G PI3EQX1204-C ReDriver mini SAS HD and SMA Eval board

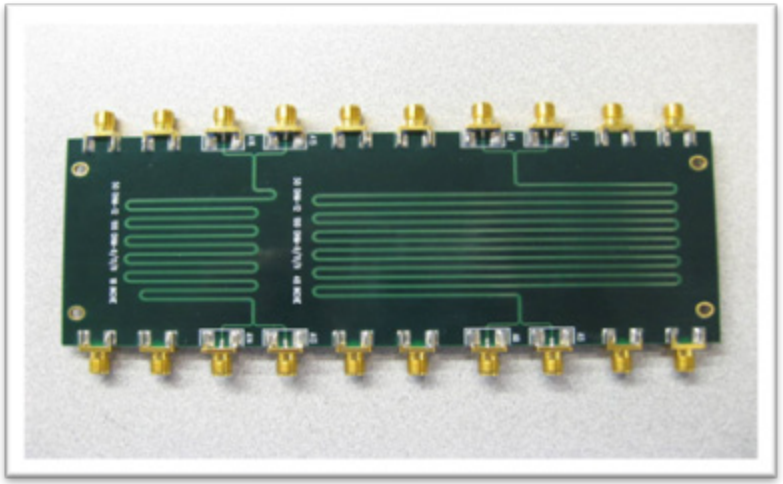
Mini SAS HD



SMA



Trace Board



Pericom USB3.0 ReDriver Product Portfolio

Feature	Pericom PI1EQX512A	Pericom PI2EQX502T	Pericom PI2EQX510E	Pericom PI2EQX510T	Pericom PI3EQX7741	Pericom P3EQX7841
Channels	2	2	Single	Single	2	2
VDD voltage	1.0V	1.2V	1.8V	1.2V	3.3V	3.3V
I2C control	No	No	No	No	No	Yes
USB3 Spec Compliant	Yes	Yes	Yes	Yes	Yes	Yes
Power-Down Mode (EN pin)	Yes	No	Yes	Yes	Yes	Yes
Output Swing	No	Yes	Yes	Yes	Yes	Yes
De-emphasis	0 ~ -6.0dB	0 ~ -6.0dB	0 ~ -6.0dB	0 ~ -6.0dB	0 ~ -6.0dB	0 ~ -6.0dB
Rx EQ	3~9dB	3~9dB	3~9dB	3~9dB	3~9dB	16 EQ (0~15dB)
Package	2x2mm QFN	3x3mm QFN	1.6x1.6mm QFN	1.6x1.6mm QFN	4x4mm QFN	4x4mm QFN

Sales Resources - Customer Design Support

Simulation Support – AMI-IBIS modeling

- Customer provides AMI-IBIS model
- Customer provides physical layout model
- We have new channel model **CUSTOMER GUIDELINE DOCUMENT**

Evaluation Boards:

- SMA connector – good for bench testing with lab equipment
- Mini-SAS HD connector – good for actual SAS platform testing
- Have different length trace cards
- Full documentation for all boards

Customer Technical Support:

- Applications, Design, and FAE support worldwide
- Apps notes, I2C programming tools, layout schematics, etc.
- Local on site support
- Schematic review before gerber out – save time and $$
- Local on site support of platform bring up and debug testing

High Speed Switch – Key Features

➔ Leadership in high speed Mux/Demux Signal switch

- Very High Bandwidth - -3dB BW of 11.3 GHz: Enables 12Gb/s applications
- Low Insertion loss - – 1.5dB @6 GHz (12 Gb/s): Enables 12Gb/s applications
- Low Return loss - -17dB @6 GHz: Wider eye opening and better SI
- Low Power – 0.2mA typical for 2 channel 2:1 mux: Critical for emerging green trends in computing
- Low switching enable/disable times – 25ns max: good for fast switching applications such as in Flash
- Low skew – bit to bit and channel to channel – 1/7 ps typ: Enables wider lane configurations for servers
- High off-isolation - -17 dB @6GHz: better SI
- Low Cross talk - -30dB @6GHz: better SI

2-12 Gbps Differential Signal Switch Portfolio

PCIeG2 @ 5.0Gbps 1.5 to 1.8V

PI2PCIE2422
2-Lane, 4 Channel
2:1 Mux + Bypass

PI2PCIE2214
1-lane, 2 Channel 4:1 Mux

PI2PCIE2412
2-Lane, 4 Channel 2:1Mux

PI2PCIE2212
1-Lane,2 Channel2:1Mux

PI2PCIE2442
2 lane, 4 Channel
2x2 Exchange

PCIeG2 @ 5.0Gbps 3.3V

PI3PCIE2612-A
PCIE / DP mux, ATX pin

PI3PCIE2415
2-Lane,4 Channel 2:1 Mux

PI3PCIE2215
1-Lane,2 Channel 2:1 Mux

PCIeG3/10GE @8-10Gbps 3.3V

PI3PCIE3215
1-Lane, 2 Channel 2:1 Mux

PI3PCIE3413
2-Lane, 4 Channel
3:1 Mux

PI3PCIE3212
1-Lane, 2 Channel 2:1 Mux

PI3PCIE3442
2-Lane, 4 Channel
2:2 Matrix Switch

PI3PCIE3415
2-Lane, 4 Channel 2:1 Mux

PI3PCIE3242
1-Lane, 2 channel
2:2 Matrix Switch

PI3PCIE3412
2-Lane, 4 channel 2:1 Mux

10-12Gbps 3.3V

PI2DBS12412-A
2-Lane 2:1 Mux
10-12Gbps

PI2DBS12212-A
1-Lane 2:1 Mux
10-12Gbps

DDR3/DDR4 1.5V-3.3V 4.266 GT/s

PI2DDR3212
14 bit 2:1 DDR3/4
Switch 1.5V/1.8V

PI3DDR4212
12 bit 2:1 DDR3/4
Switch 1.8v/3.3V

Differential Broadband SAS2/SATA2/XAUI/TB/10GE 1.5 to 1.8V, 3.3V

PI2DBS212
3.2Gbps, 1.5-1.8V
SAS,SATA2,XAUI
1-Lane, 2 Channel 2:1 Mux

PI2DBS6212
6.5Gbps , 1.5-1.8V
SAS2,SATA3,XAUI
1-Lane, 2 Channel 2:1Mux/Demux

Legend

Production

Sampling

USB Switch Roadmap

Best in Signal Integrity and Performance

USB 2.0

PI3USB102G
2:1 Mux, 10TQFN
USB2 With 5V Protection

PI3USB42
2:1 Mux, 10UQFN
USB2 Vdd: 1.8V to 4.3V

PI3USB14A
4:1 Mux, 16QSOP/ 20TQFN
USB2

PI3USB221
2:1 Mux, 10TLLGA/TDFN
USB2

USB 2.0 with Audio

PI3USB223
2:1 Mux, 10TQFN
USB2 & Audio

USB 3.1 Gen1

PI3USB302-A
Dual 2:1 Mux, 20TQFN

PI3USB3102
2:1 Mux, 32TQFN
USB3 & USB2 Combo

PI2USB4122
4:1 Mux, 42TQFN
USB 3.0

USB3.1 Gen2

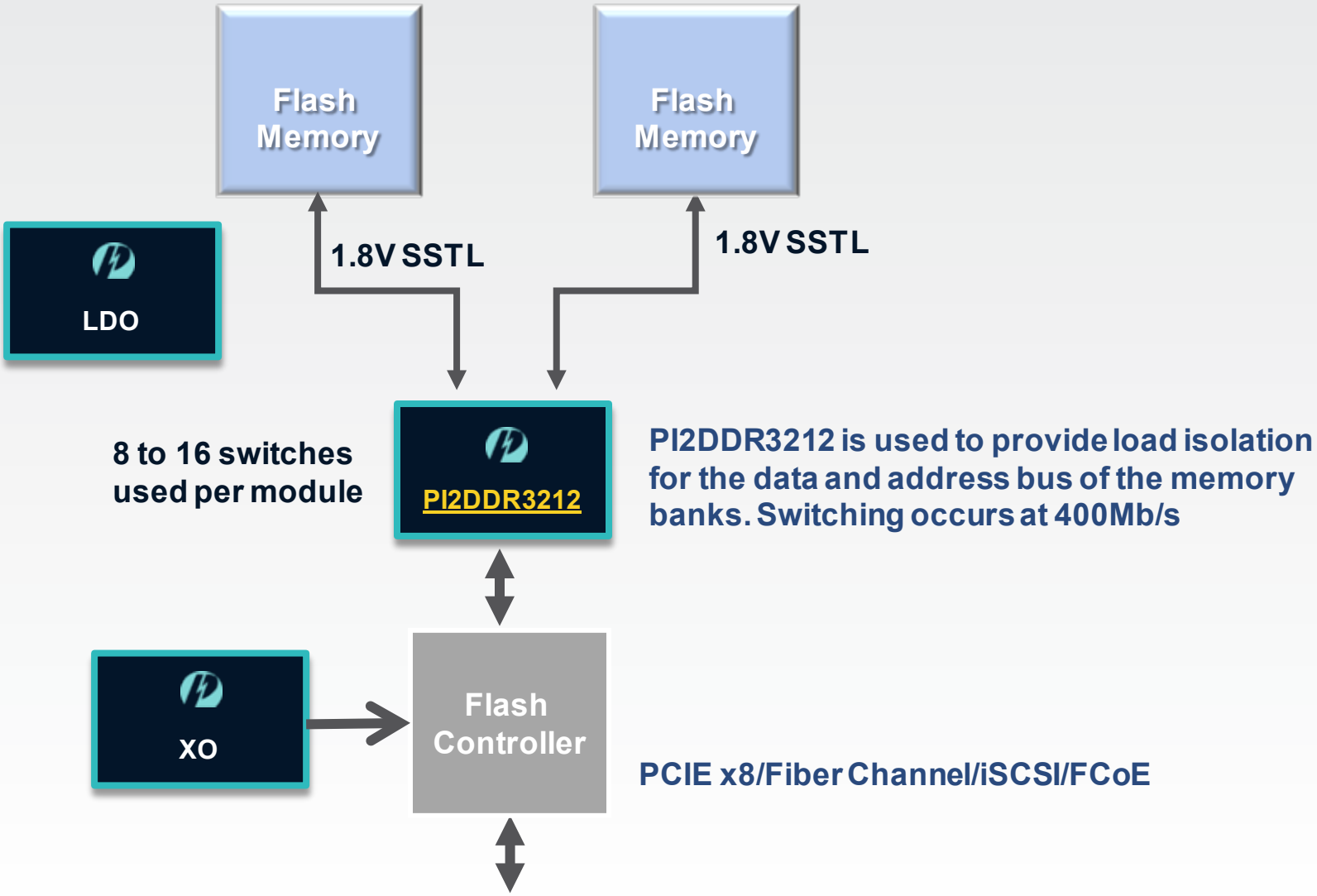
PI3USB32212
USB3/3.1, USB2 Combo Mux

Legend

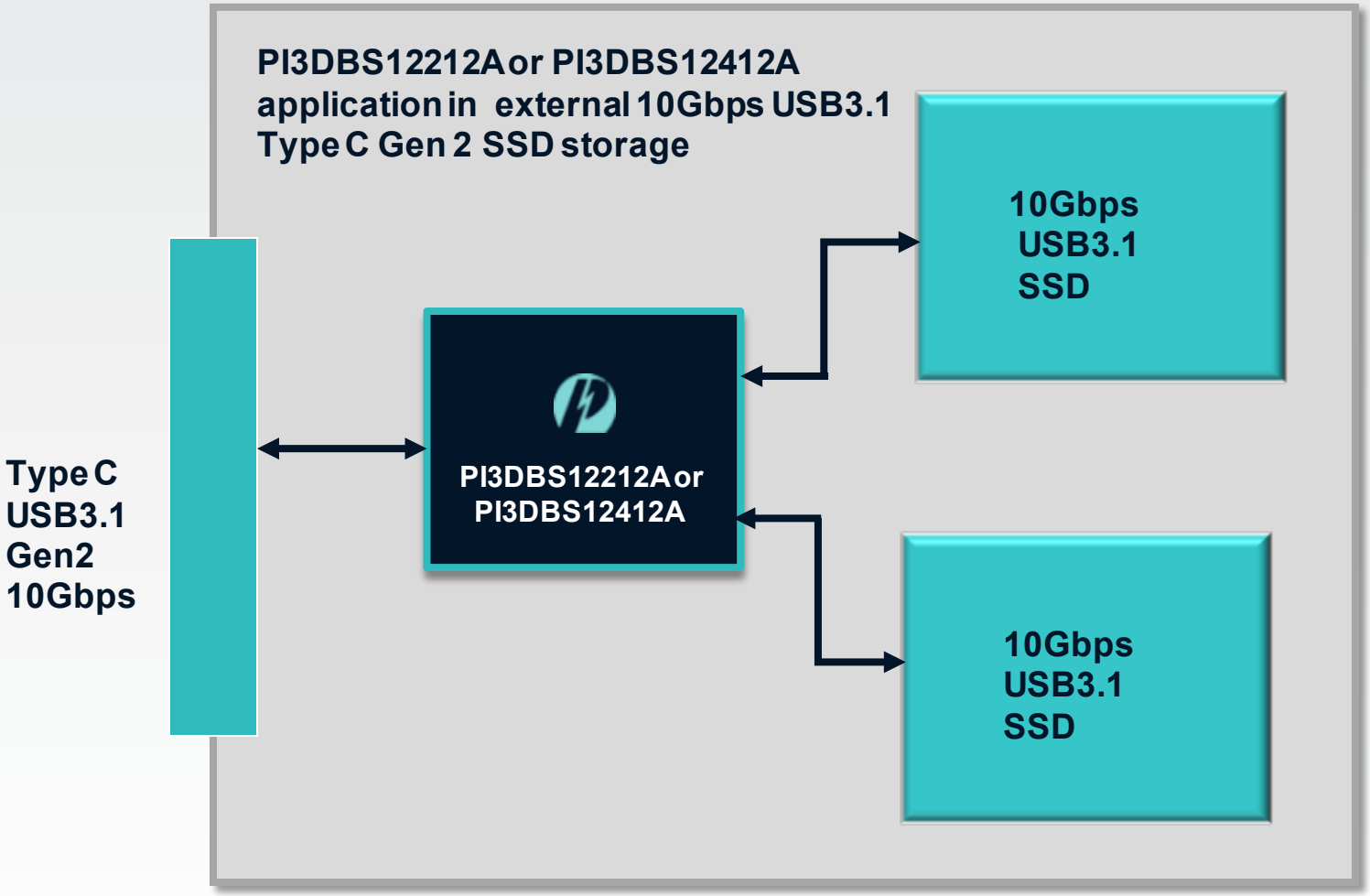
Production

Sampling

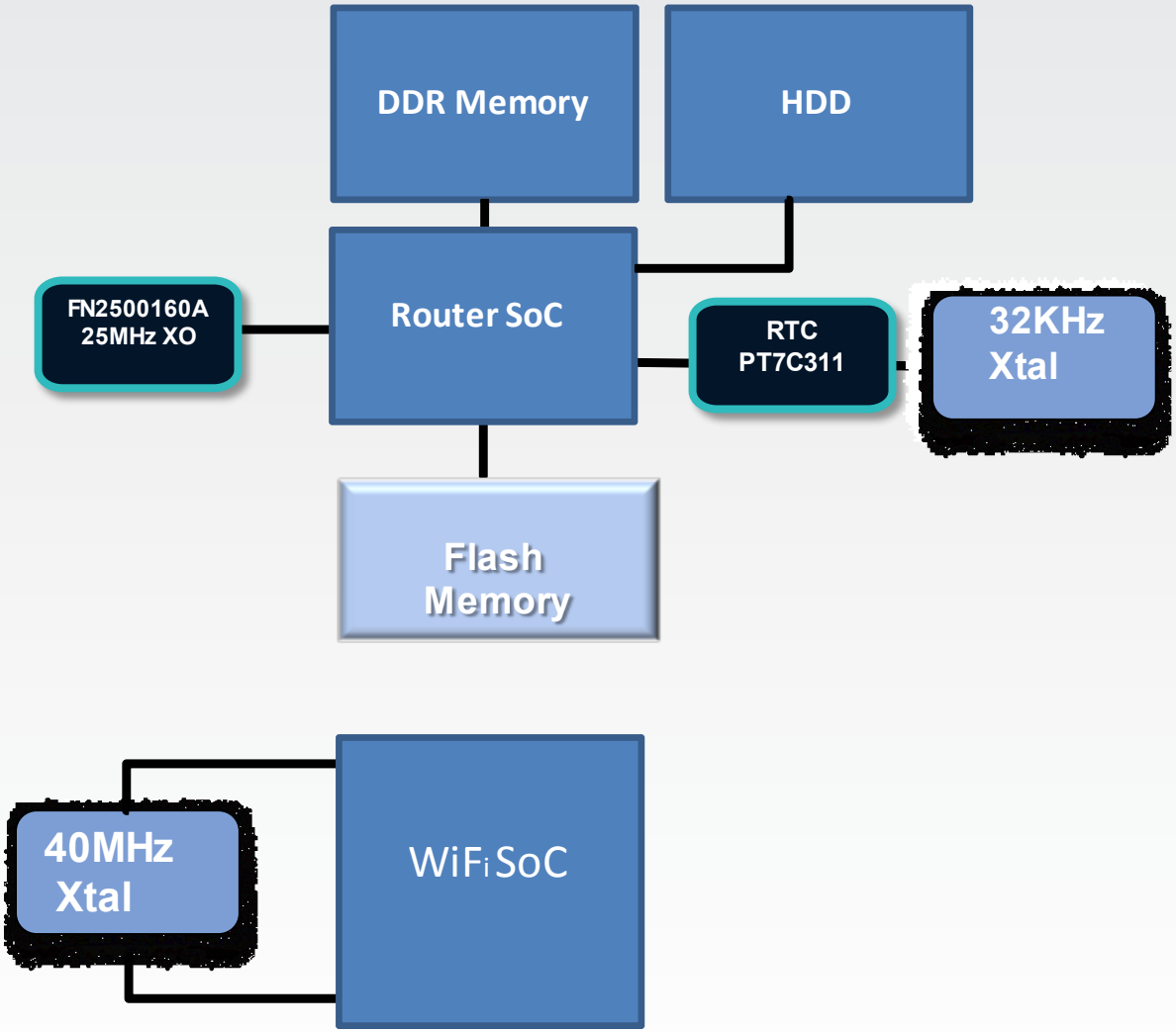
PI2DDR3212 Switch in Flash Memory Array/SSD applications – for large memory configurations



Type C USB3.1 Gen 2 Mux in External SSD storage

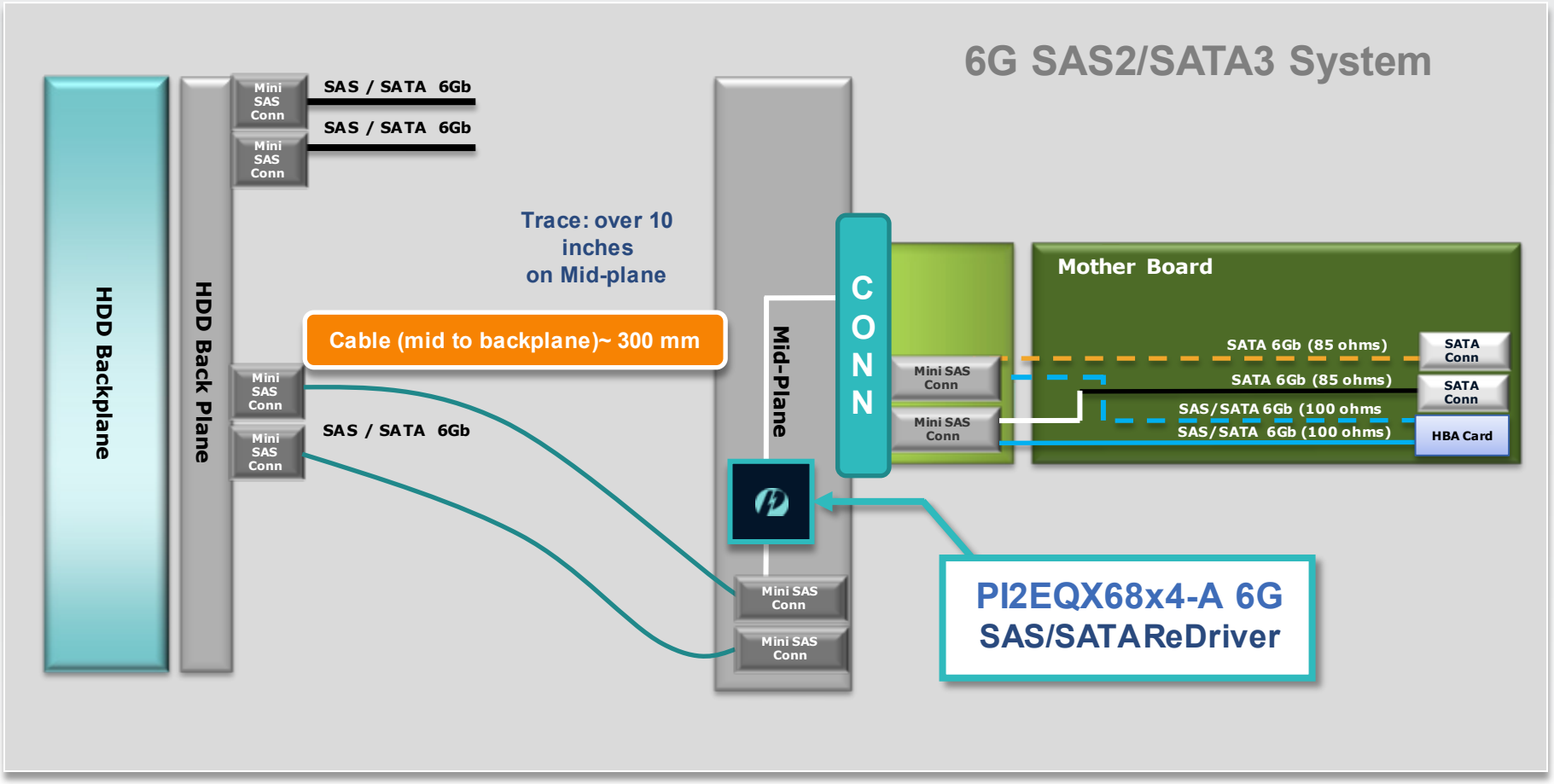


Pericom Solution in Wireless NAS Application

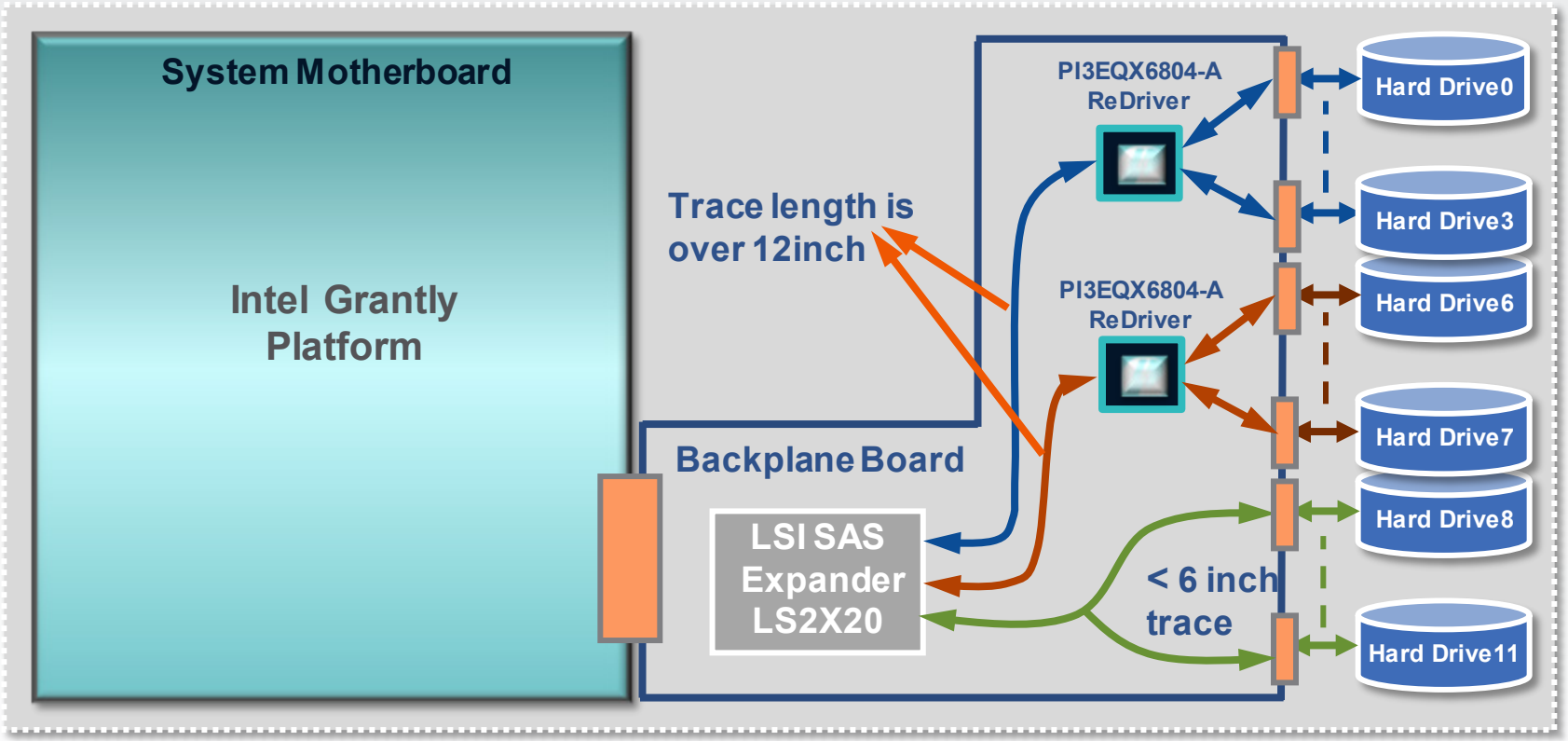


PI2EQX68x4-A in Rack Server Application

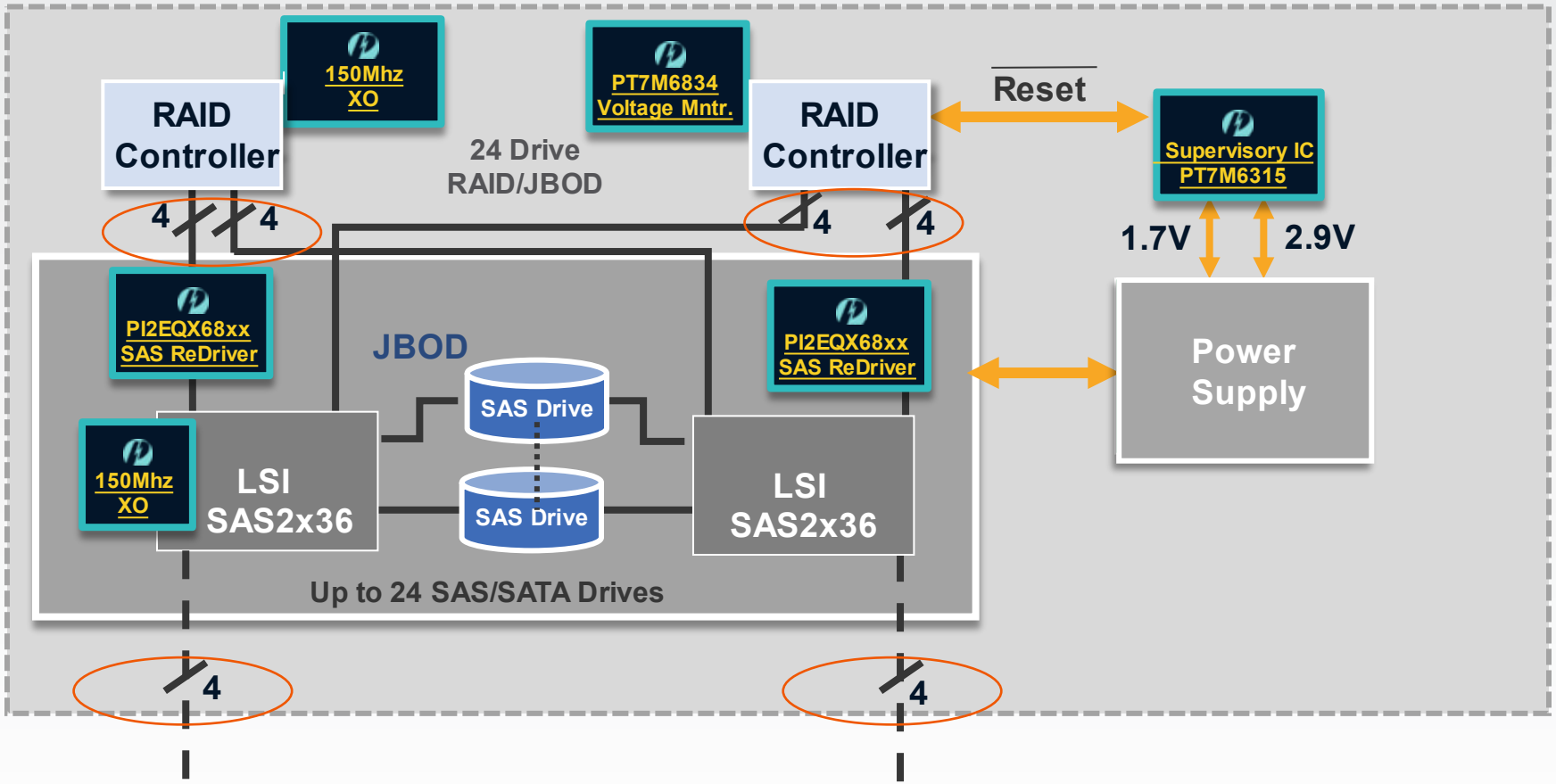
PI2EQX68x4-A ReDriver in midplane board of Grantley Rack Server



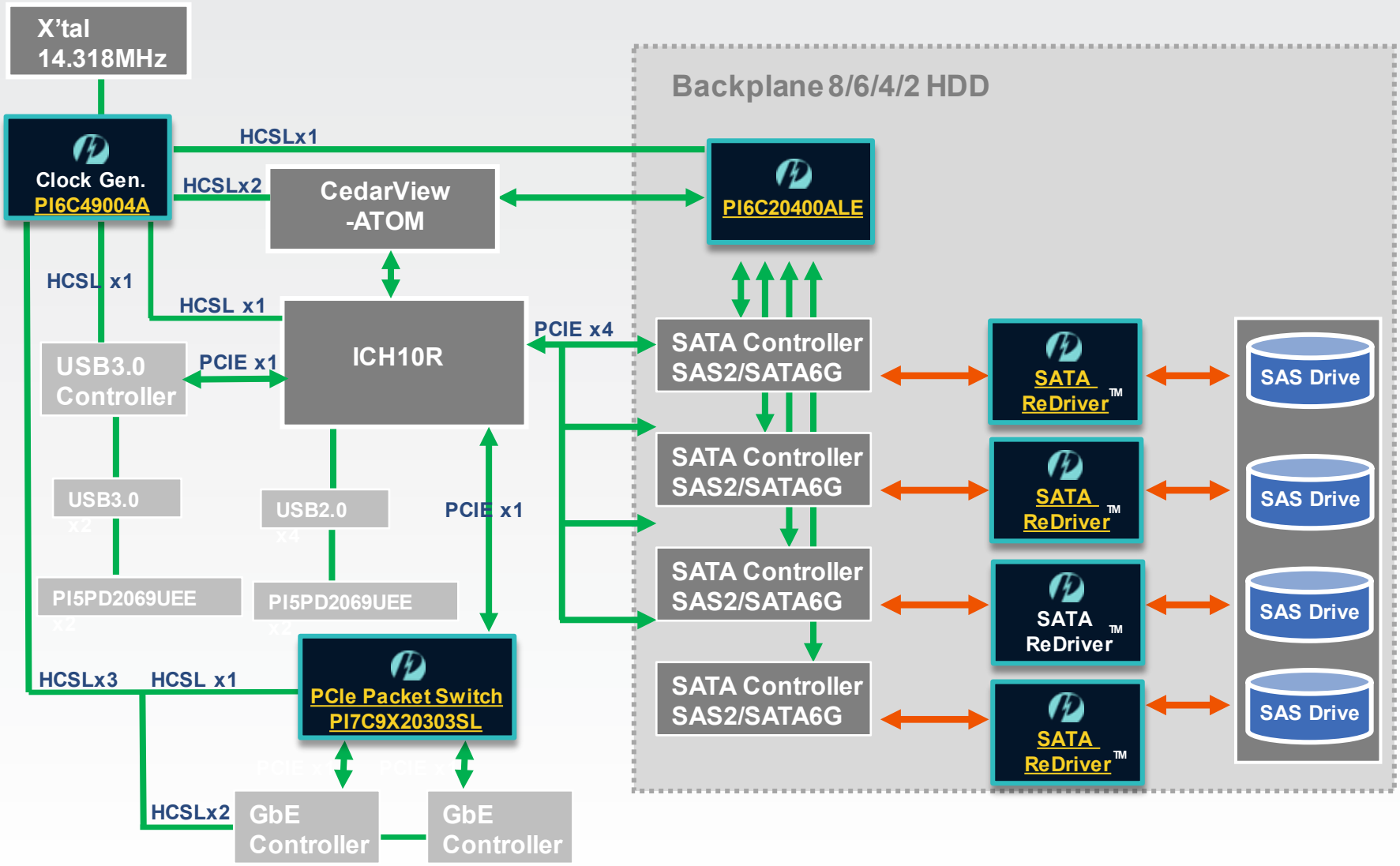
PI2EQX6804-A in Intel Grantly Blade Server



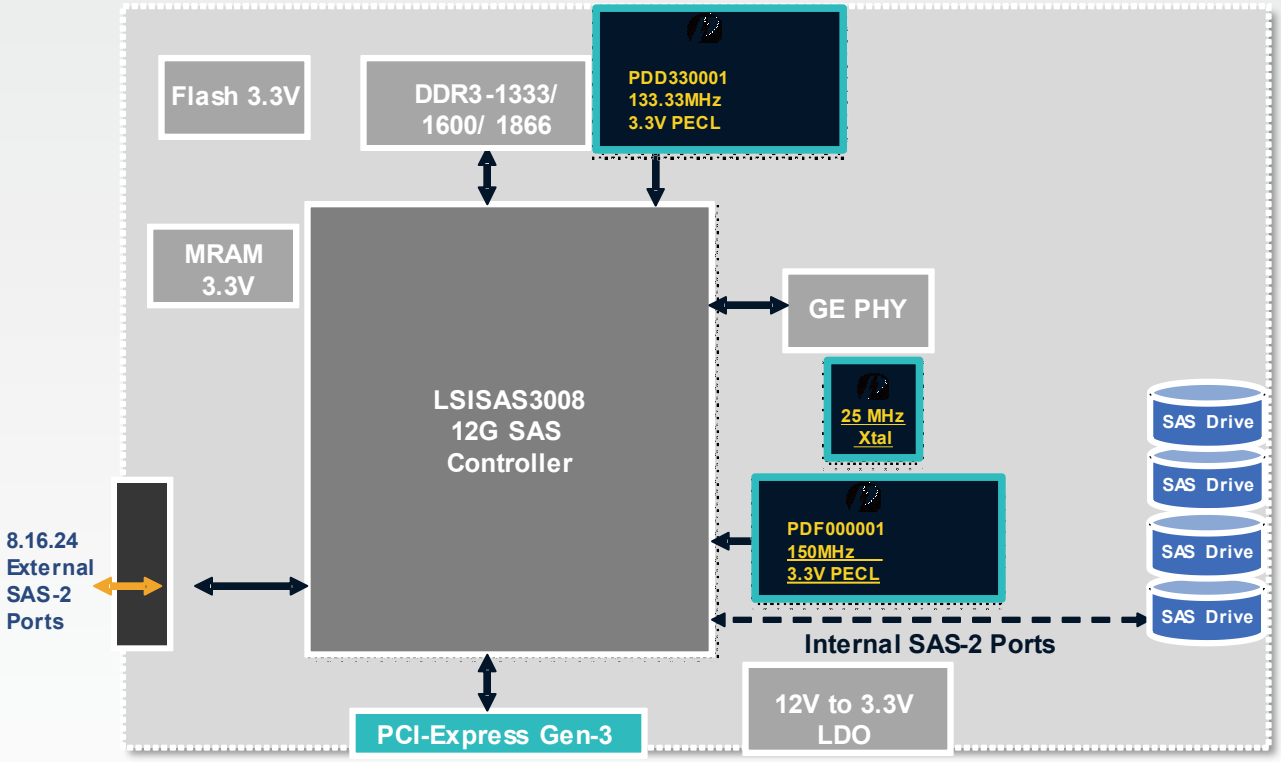
JBOD Storage Application



Pericom Products in NAS Application---



Pericom solution in Storage SAS3 Host Bus Adapter



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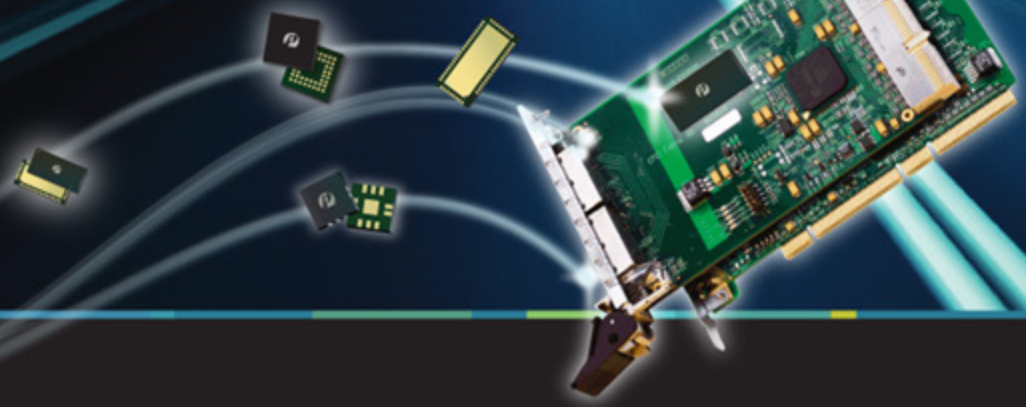
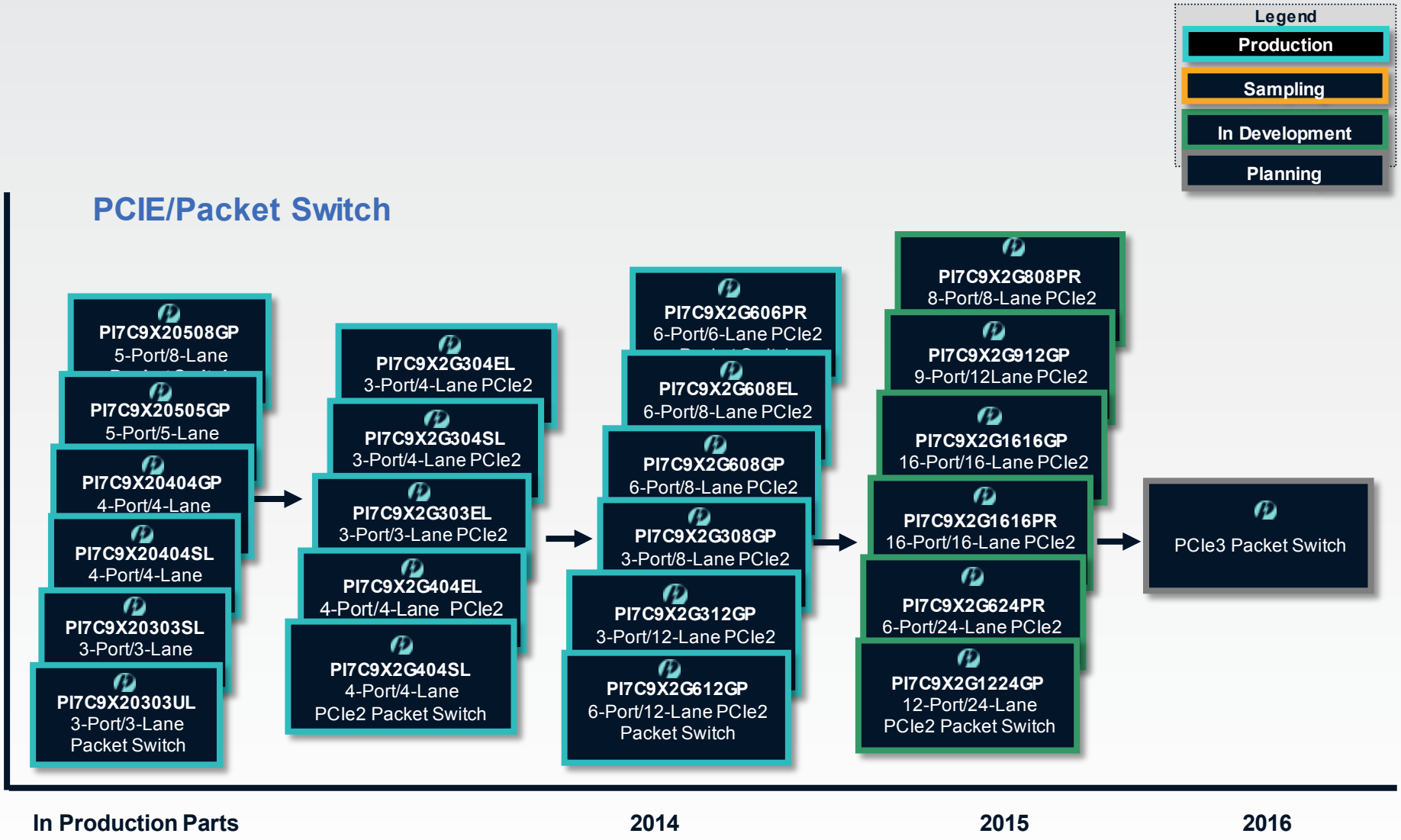
Enabling High-speed Serial Connectivity

For all your Timing, Signal Integrity & Connectivity Needs

PCIe Packet Switch/Bridge Solutions

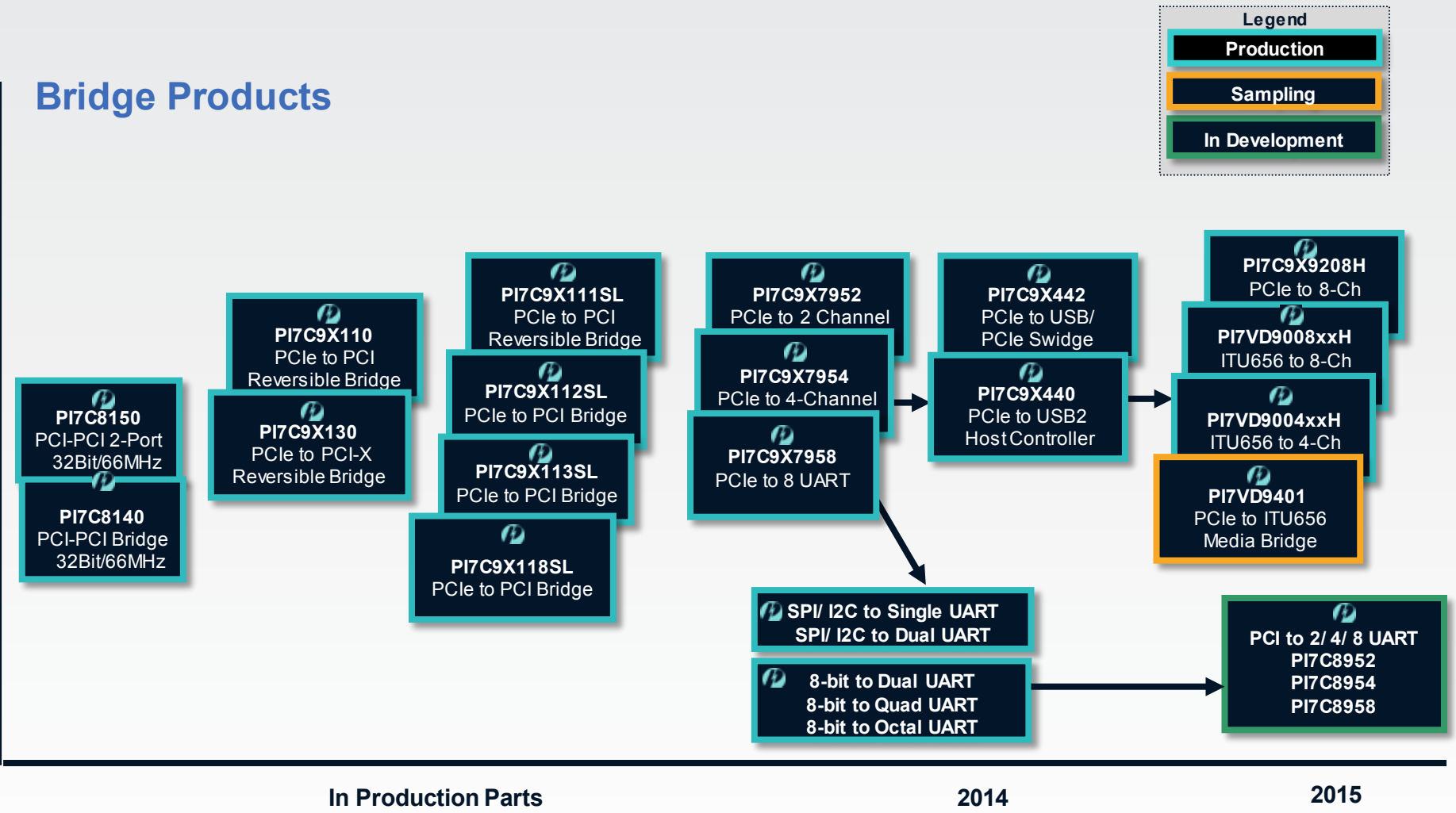


Connect ASIC Product Roadmap: PCIe Packet Switches



Connect ASIC Product Roadmap: Bridges

Bridge Products



Key Features - PCIe Packet Switch

- **High performance, low power, reliable, easy use & cost effective solutions**
  - Integration clock buffer- Easy design & Good C/P ratio
  - Support I-temp (-40~ 85°C)
  - Low Latency- 30~ 60% short than other suppliers
  - Save 75% Power with advance power management
  - Have better features- Support the latest PCIe spec
  - Multi-option package of QFP, QFN, BGA for better choice in various applications
  - Provide comprehensive tech document- Design Kit
  - Robust tracking record- Have shipping multi-Mu small GEN1/ 2 PCIe Packet Switch to tier-1 customers

Key Features- PCI/PCIe Bridge

- Broad spectrum of PCIe-to-PCI/PCIX Bridge product
- Forward or Reverse bridging
- Best throughput in the industry based on 3rd party tests
- Support I-temp (-40~ 85°C)
- Standard offerings include:
  - PCI to PCI Bridges – pin for pin with higher performance
  - PCI-X to PCI-X – legacy PCI-X parallel bus applications
  - PCIe to PCI – Industry leader with highest performance
  - PCIe to PCI-X – Fastest throughput in industry
  - PCIe to UART I/O Bridge – low power, many user options
  - PCIe to USB Hub – unique low power USB fanout solution

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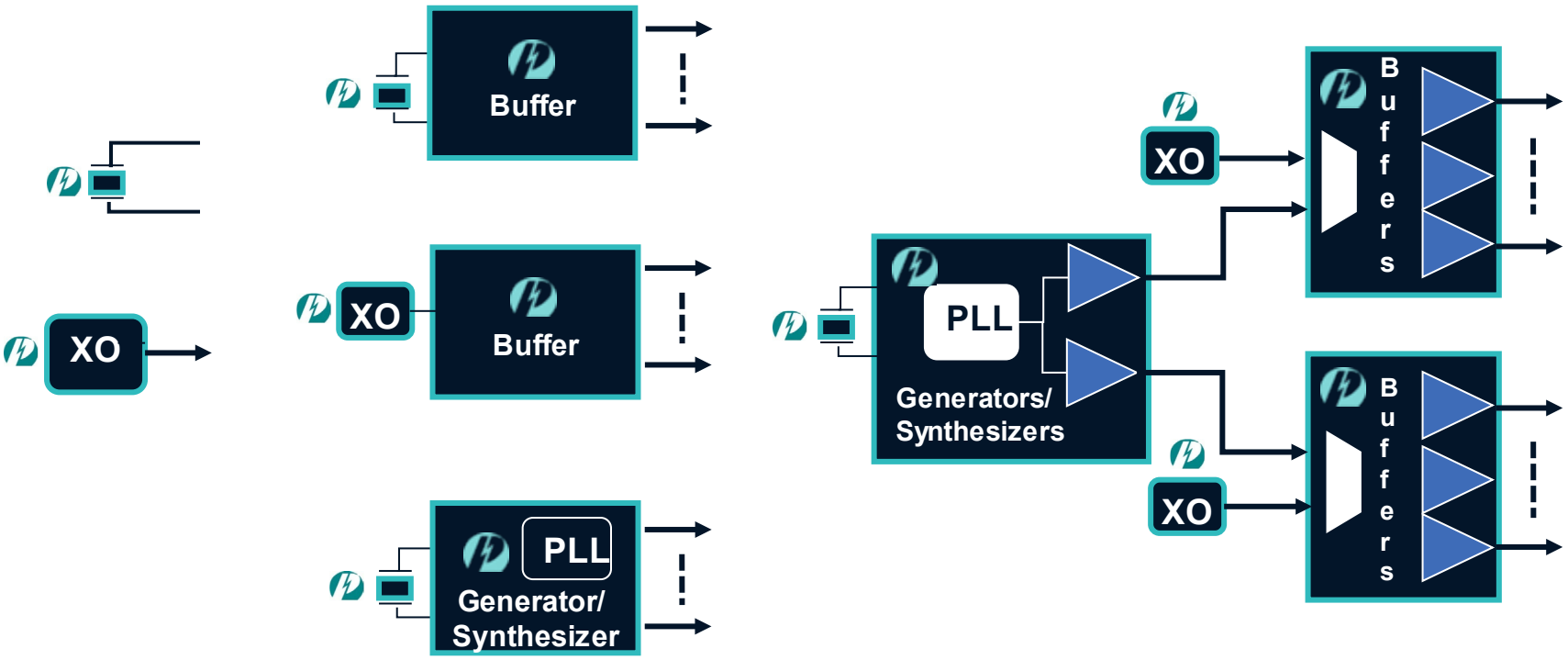
Timing Solutions

Pericom Timing Solution Value Proposition

→ Your Complete Timing Solution Partner

- The only vendor with quartz and silicon timing in house



Our Mission: To provide the most optimized total timing solution for your design

Pericom Timing Solution Value Proposition

➔ Focused Product Line

- Continuous investment in new product development – Over 30 new products released in the last 3 yrs
- Long term commitment for products and services
- Focused on performance centric applications

Working with Comm./Server/ Storage Customers for over 20 years

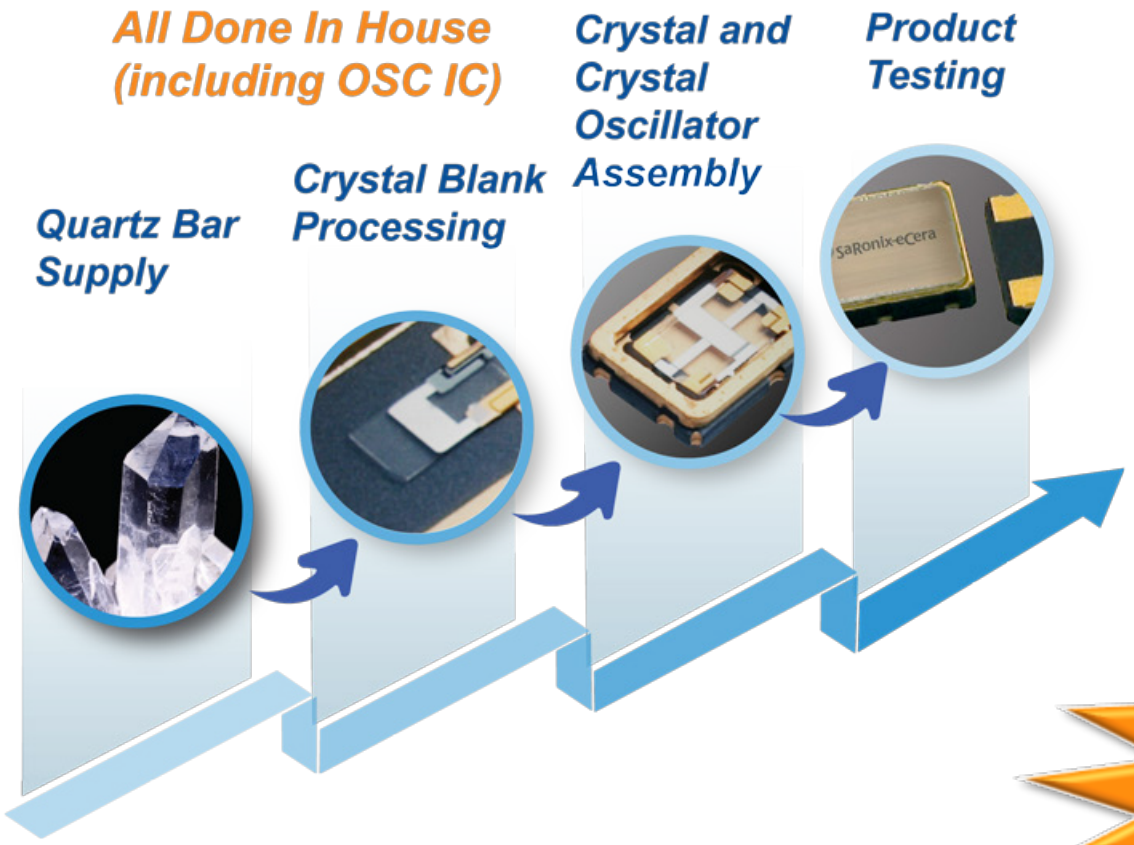
➔ Total Timing Solutions – FCP + IC

- Vertical Integration – True multi-source XO
- Best performance – Margins for system designs
- User configurable timing IC – Ease of board design
- Cost competitive solutions – Money saving

➔ Complete portfolio for high speed serial connectivity

- Packet switch and Bridge – Efficient data throughput
- Redriver – Better system performance
- Analog switch / LDO – Another alternative source

Pericom's FCP Advantage : Vertical Integration

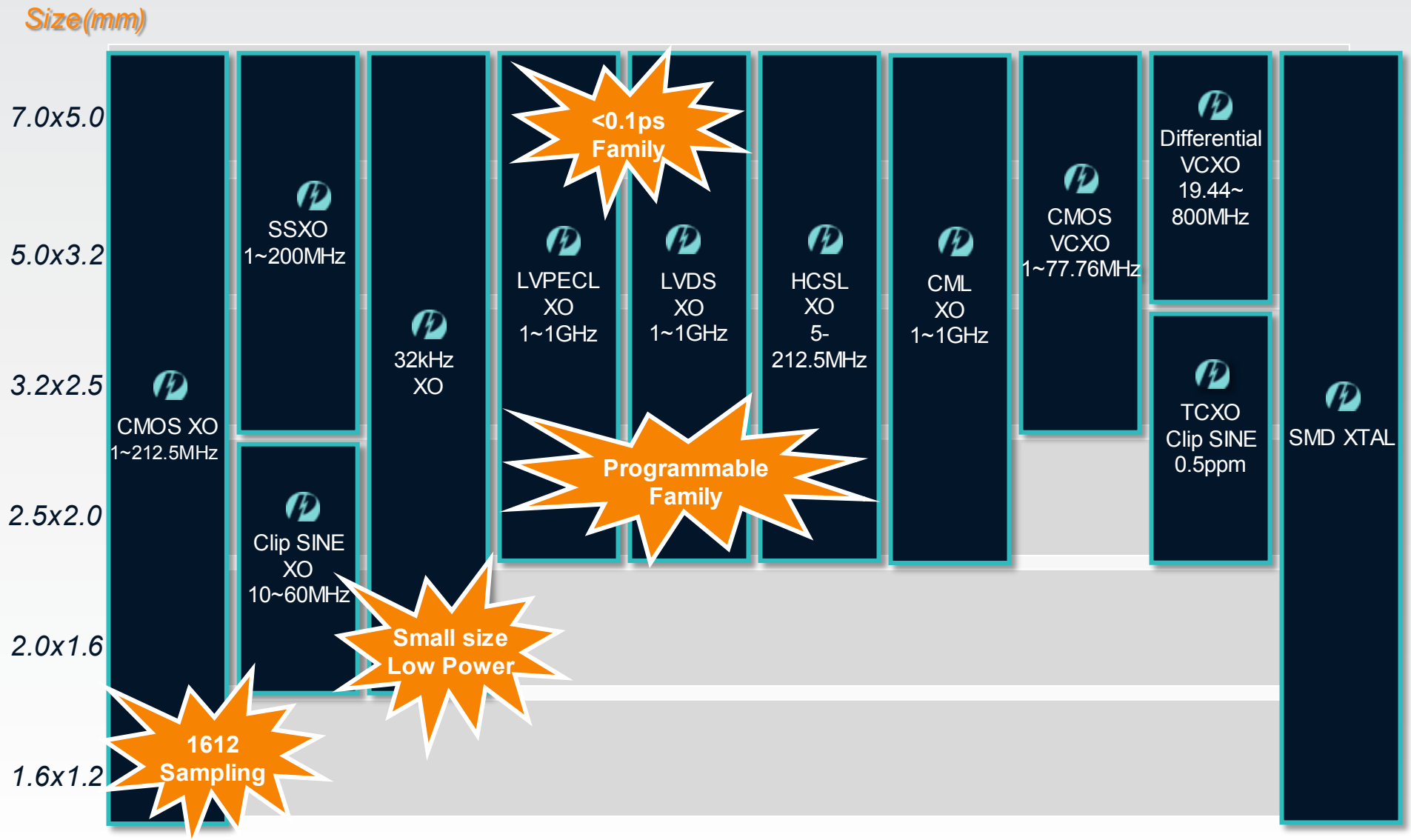


Benefits:

- True Alternate Source (own Oscillator IC)
- Best Lead Time and Supply
- Consistent Quality Control
- Best Cost Structure

Optimum performance
Minimal risk

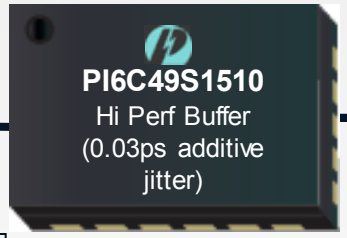
Pericom FCP: Portfolio



Solutions for 40GbE Switches/Routers

156.25MHz, 0.2ps RMS jitter MAX@10k – 1MHz

0.3ps RMS jitter MAX @12k – 20MHz

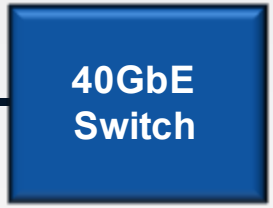


156.25MHz, 0.2xps RMS jitter MAX@10k – 1MHz

156.25MHz, 0.2xps RMS jitter MAX@10k – 1MHz

156.25MHz, 0.3xps RMS jitter MAX@12k – 20MHz; 1ps 12k – 50MHz

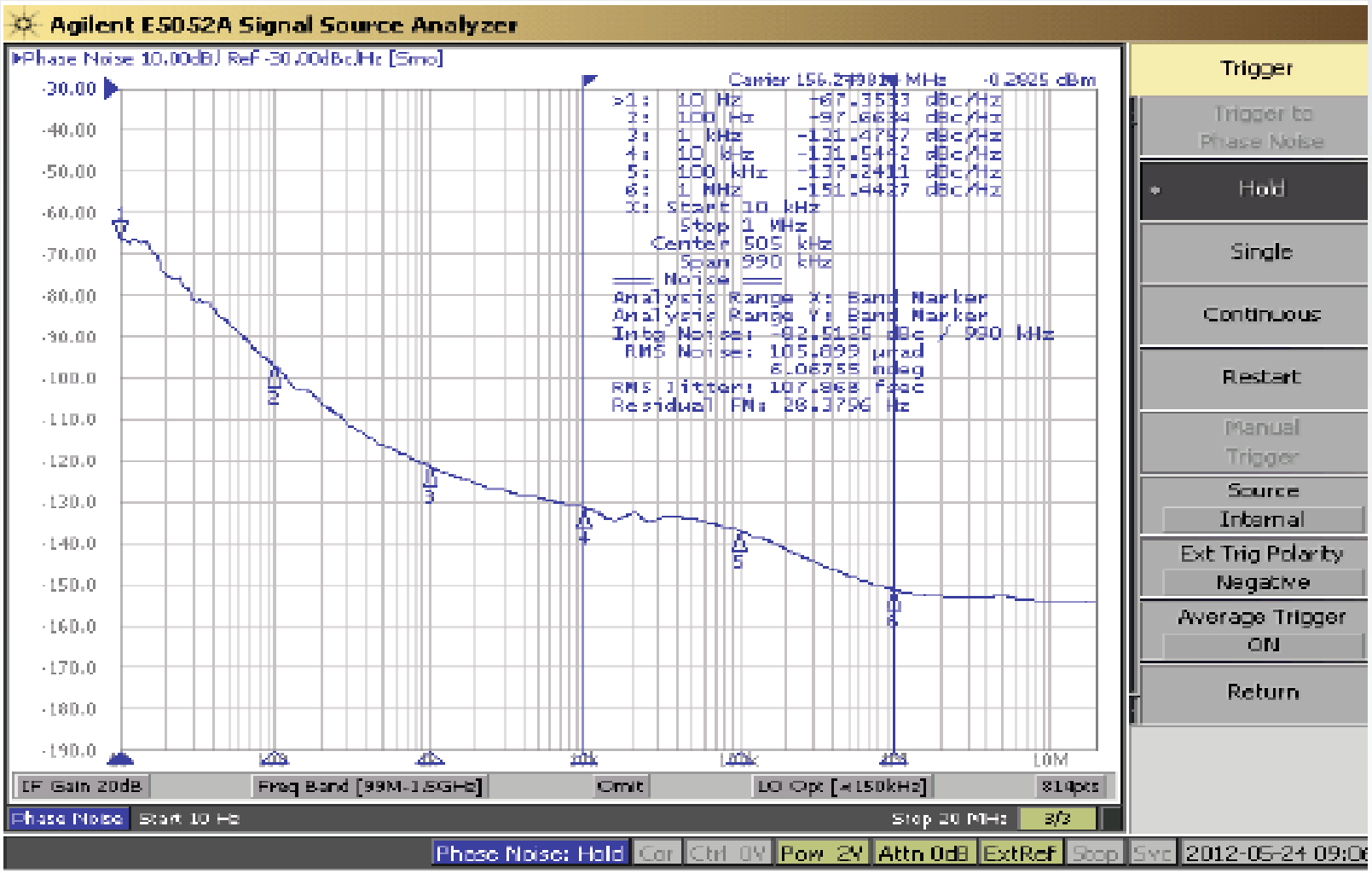
Requires 0.3ps RMS jitter MAX @10k – 1MHz

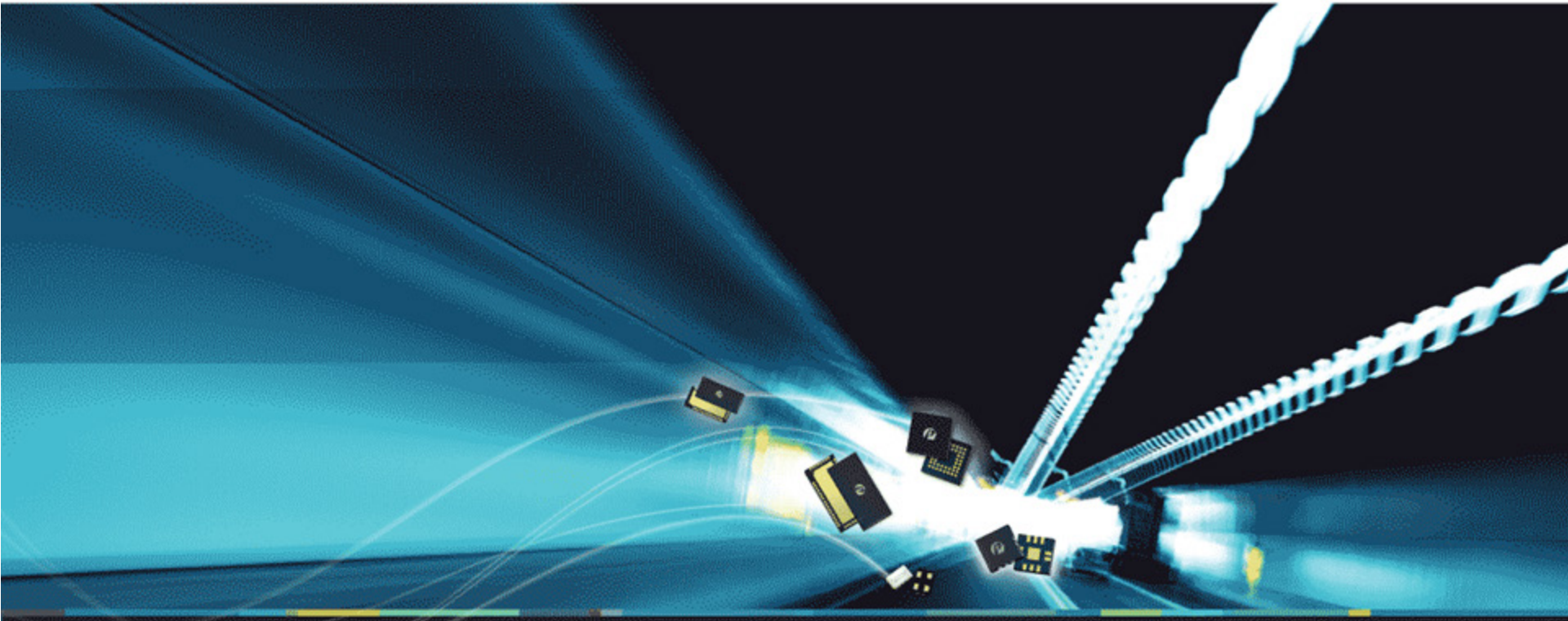


Requires 0.3ps RMS jitter MAX @10k – 1MHz

Requires 0.5ps RMS jitter MAX @ 12k – 20MHz

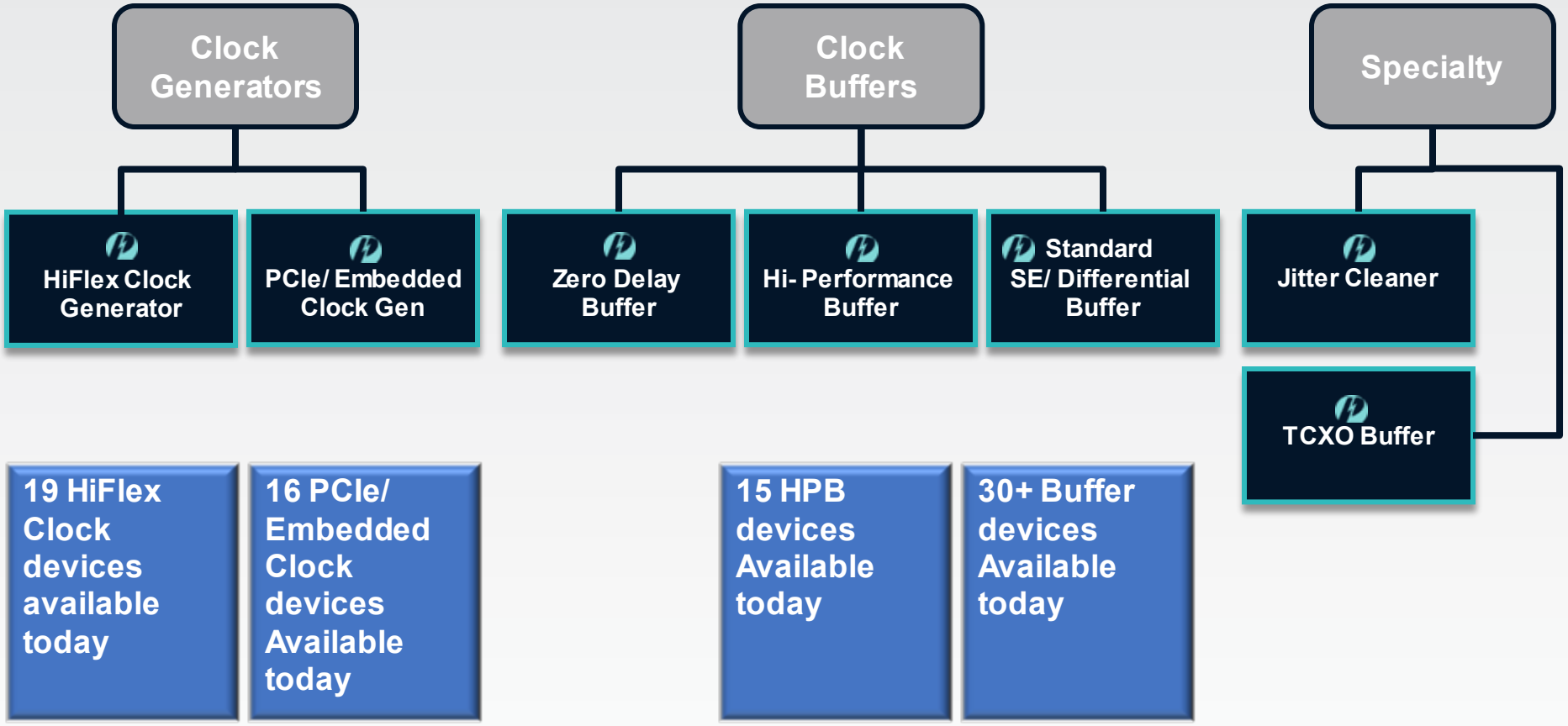
40GbE Performance



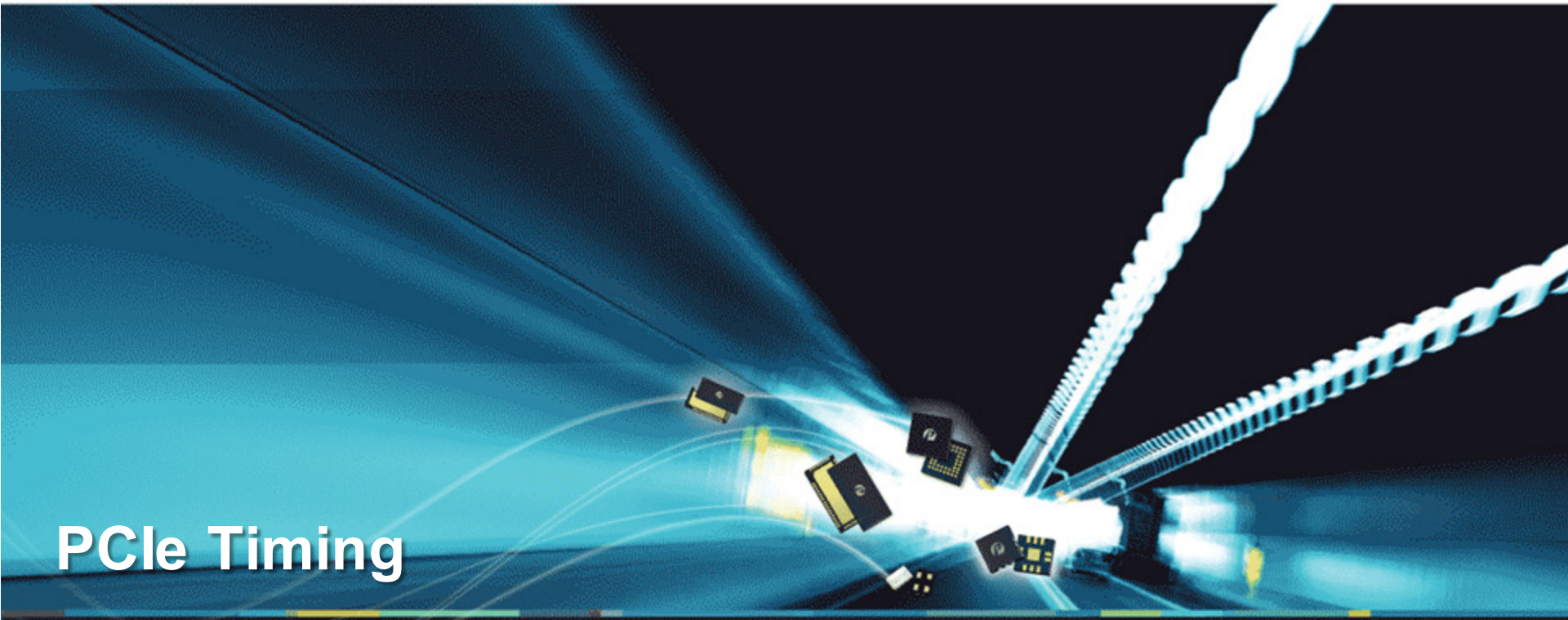


Clock IC

Pericom Clock IC: Portfolio



➔ Combines well with our quartz solutions to provide total timing for customer designs

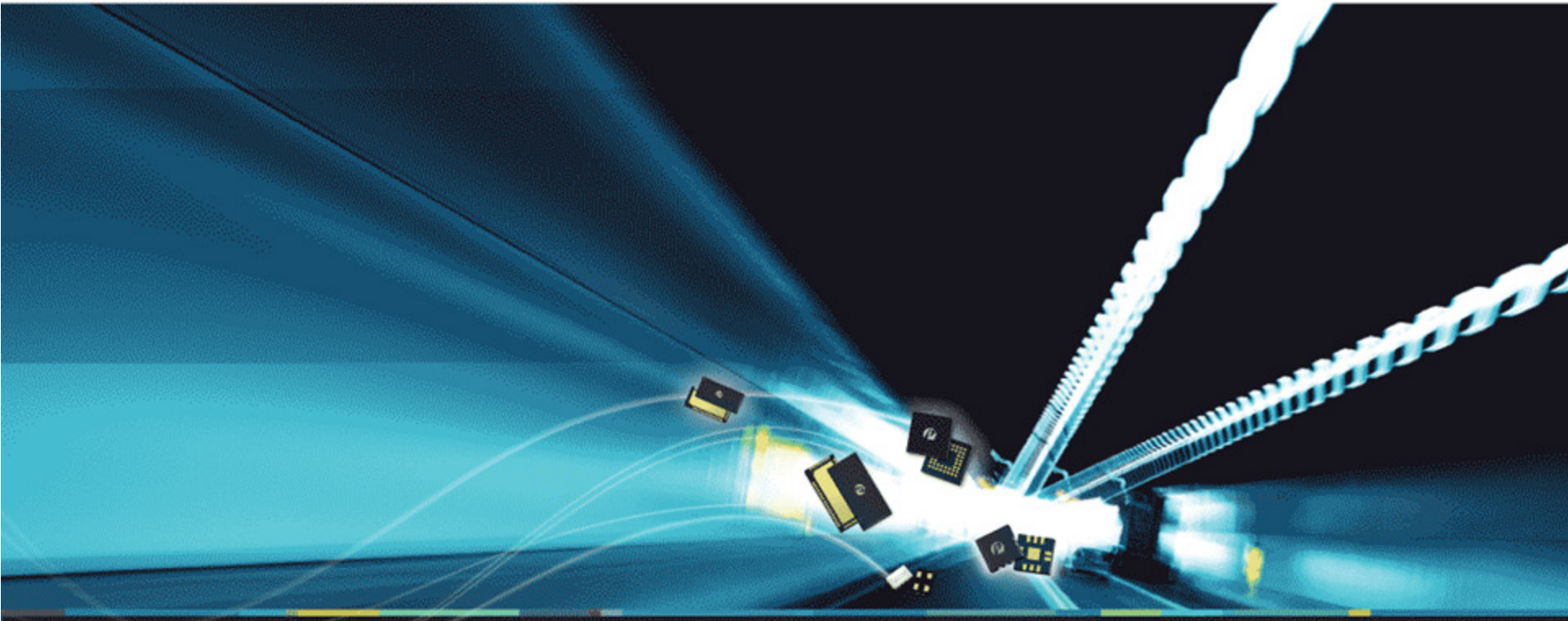


PCIe Timing

PCIe Timing Solution

	Part Number	Outputs	PCIe Gen	Jitter (max)
Generator	PI6C557-01B	1x 100MHz	G3	<1ps RMS
	PI6C557-10	1x 100MHz, 1x 33MHz	G1	<86ps pk-pk
	PI6C557-03A/B	2	G2 / G3	<3.1ps / <1ps RMS
	PI6C557-05/ B	4	G2 / G3	<3.1ps / <1ps RMS
	PI6C49003	5x 100MHz, 2x 50MHz, 1x 33/66/133MHz, 1x 32.256MHz	G2	<3.1ps RMS
	PI6C49004	12x 100MHz, 2x 50MHz, 1x 33/66/133MHz, 1x 32.256MHz	G2	<3.1ps RMS
	PI6C49015	5x 100MHz, 2x 25MHz	G2	<3.1ps RMS
Buffer	PI6CEQ20200	2	G2/ G3	<3.1ps / <1ps RMS
	PI6C20400A / B	4	G2/ G3	<3.1ps / <1ps RMS
	PI6PCIEB24	4	G2	<3.1ps RMS
	PI6C557-06	2 MUX input : 4 Output	G3	<1ps RMS
	PI6C20800S/ B	8	G2 / G3	<3.1ps / <3ps RMS
	PI6C21200	12	G1	<3.1ps RMS
ASSP XO	SHPCIE100	1	G2/G3	<1ps RMS

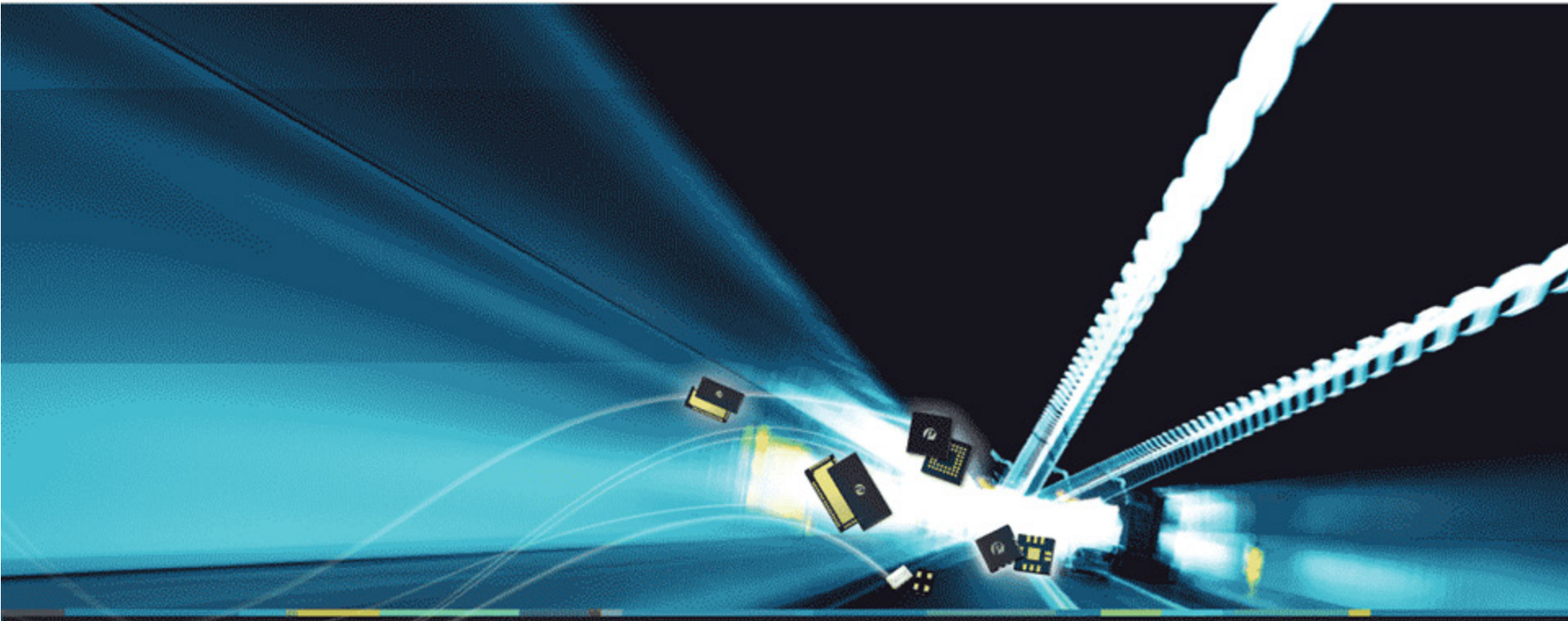
➔ **Best jitter performance to support PCIeG1/2/3** ➔ **The only ASSP XO supporting PCIe**



PCIe & Embedded Clock

PCIe & Embedded Clock Generators

P/N	Output Frequencies
PI6C49003A	5x 100MHz PCIe 2.0; 2x 50MHz CMOS, 1x 33/66/133MHz CMOS, 1x 32.256MHz CMOS
PI6C49004A	12x 100MHz PCIe 2.0, 2x 50MHz CMOS; 1x 33/66/133MHz CMOS; 1x 32.256MHz CMOS
PI6C49005	6x 100/ 125MHz PCIe 2.0; 1+1x 33/ 50/ 66/ 100MHz CMOS; 1x 125MHz CMOS; 2x 25MHz CMOS; 1x 25MHz Diff
PI6C49006	4x 100/ 125MHz PCIe 2.0; 2+2x 33/ 50/ 66/ 100MHz CMOS; 1x 125MHz CMOS; 2x 25MHz CMOS; 1x 25MHz Diff
PI6C49014	1x 200MHz PCIe 2.0; 2x 25MHz CMOS 1x 32.256MHz CMOS
PI6C49015	5x 100MHz PCIe 2.0; 2x 25MHz CMOS
PI6C49053	4x 100MHz PCIe 2.0; 1x 33MHz CMOS; 1x 125MHz CMOS
PI6C5572-05	5x 100MHz PCIe 2.0; 2x 25MHz CMOS
PI6C49019	4x 100MHz PCIe; 1x 33.33/67.33MHz CMOS; 1x 125MHz CMOS; 1x 25MHz CMOS; 1x 48MHz CMOS; 1x 19.2MHz CMOS
PI6C49018	4x 100MHz PCIe; 1x 66.66MHz CMOS; 1x 125MHz CMOS; 1x 80MHz CMOS; 1x 60MHz CMOS
PI6C49016	3x 100MHz PCIe; 1x 66.66MHz CMOS; 1x 125MHz 2.5V CMOS ; 1x 80MHz CMOS
PI6C49021	3x100MHz low power PCIE clock; 2x25MHz PECL output; 2x66.67MHz CMOS for Freescale CPU; 2x50MHz CMOS for CPLD; 1x125MHz CMOS for CPLD; 3x25MHz CMOS for PHY; 1x24MHz CMOS for USB



Lever Shifter, I2C Mux, IO expanders, MPS
Product Offerings

I²C/SMBus Universal Level Shifters & Buffer

Features	PI6ULS5V 9627A	PI6ULS5V 9617A	PI6ULS5V 9517A	PI6ULS5V 9509	PI6ULS5V 9515A	PI6ULS5V 9306
Channel #	4	2	2	2	2	2
VCCA or VCC supply range	0.6V - 5.5V	0.6V - 5.5V	0.8V - 5.5V	1.0V to VCC(B)-1.0V	2.3V -3.6V	1.0V - 3.3V
VCCB or VCC supply range	2.2V - 5.5V	2.2V - 5.5V	2.2V - 5.5V	3.0V- 5.5 V		1.8V - 5.5V
Speed	1MHz	1MHz	400kHz	400kHz	400kHz	1.5ns propa-gation delay
ESD protection	8000V	8000V	8000V	8000V	4000V	4000V
Capacitance Isolation	Yes	Yes	Yes	Yes	Yes	No
Load Cap. capbility	540pF high speed 4000pF low speed	540pF high speed 4000pF low speed	400pF	400pF	400pF	Determined by application conditions
Internal current source pull-up resister	No	No	No	1mA current source A side	No	No
Buffer	Yes	Yes	Yes	Yes	Yes	No

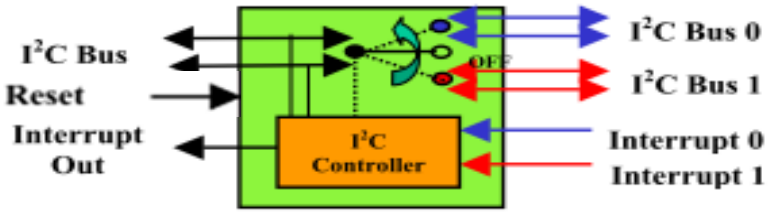
Push-Pull/Open Drain Universal Level Shifters

Features	PI4ULS5V202	PI4ULS5V102	PI4ULS3V302	PI4ULS3V502	PI4ULS5V104	PI4ULS3V304	PI4ULS3V504	PI4ULS3V204(*)
Channel #	2	2	2	2	4	4	4	4
VCCA supply range	1.2V – 5.5V	1.2V – 3.6V	0.9V – 2.5V	0.9V – 2..5V	1.2V – 3.6V	0.9V – 2..5V	0.9V – 2..5V	1.1V – 3.6V
VCCB supply range	1.2V - 5.5V	1.65V to 5.5V	1.5V – 3.6V	1.5V – 3.6V	1.65V to 5.5V	1.5V – 3.6V	1.5V – 3.6V	1.1V – 3.6V
VCCA can be Less than, greater than or equal to VCCB	Yes	VCCA ≤ VCCB	Yes	Yes	VCCA ≤ VCCB	Yes	Yes	Yes
Max Data Rate	20Mbps	100Mbps	140Mbps	280Mbps	100Mbps	140Mbps	280Mbps	20Mbps
Low Power Consumption	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Internal One-Short	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ESD protection	4000V	2500V	2500V	2500V	2500V	4000V	4000V	4000V
Features	Push-Pull/ Open Drain	CSP package	Low VCCA: 0.9V Higher Data Rate: 140Mbps	Low VCCA: 0.9V Higher Data Rate: 280Mbps	Smaller package size (CSP 1.4x1.9mm)	Low VCCA: 0..9V	High spee:280MBps	Push-Pull/ Open Drain

Pericom I2C Mux/Switches Family

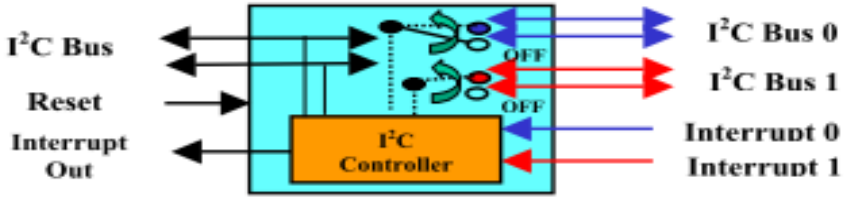
- **Mux/Switches Family**
  - Master Selector Interrupt & Reset PCA9541A (don't plan)
  - **2:1 Mux/Switches**
    - Mux PI4MSD5V9540
    - Mux Interrupt PI4MSD5V9542
    - Switch Interrupt & Reset PI4MSD5V9543
  - **4:1 Mux/Switches**
    - Mux Interrupt PI4MSD5V59544
    - Switch Interrupt & Reset PI4MSD5V9545
    - Switch Interrupt & Reset PI4MSD5V9546/9646/9846
  - **8:1 Mux/Switch**
    - Mux & Reset PI4MSD5V9547
    - Switch & Reset PI4MSD5V9548

MULTIPLEXER



Can only select one downstream channel at a time

SWITCH



Can select one channel at a time like multiplexer or multiple channels can be selected for broadcast mode

I2C Mux Benchmark (NXP/TI Product portfolio)

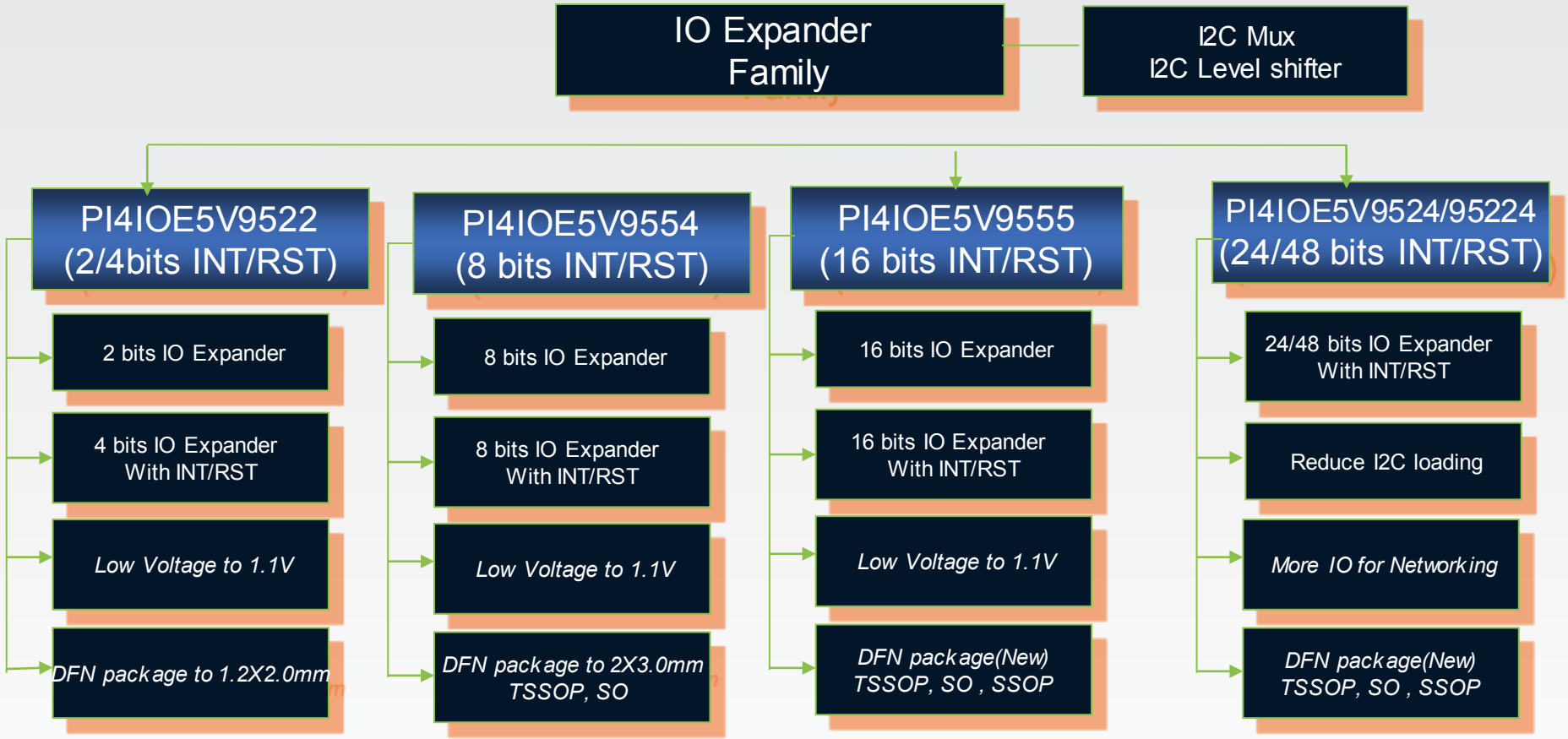
NXP	Pericom	MULTIPLEXER(IN/OUT)	SWITCH(IN/OUT)	Features							Remark
				Frequency(Hz)	Mini VDD (V)	Mini I/O voltage (V)	# OF ADDRESSES	INTERRUPT (IN/OUT)	HADWARE RESET	PIN COUNT	
PCA9540B	v	1-2		400K	2.3V	1.8V	1			8	
PCA9541/41A		2-1		400K	2.3V	1.8V	16	1-2	•	16	Master
PCA9542A	v	1-2		400K	2.3V	1.8V	8	2-1		14	
PCA9543A/B	v		1-2	400K	2.3V	1.8V	4	2-1	•	14	
PCA9544A	v	1-4		400K	2.3V	1.8V	8	4-1		20	
PCA9545A/B/C	v		1-4	400K	2.3V	1.8V	4	4-1	•	20	
PCA9546A	v		1-4	400K	2.3V	1.8V	8		•	16	
PCA9547	v	1-8		400K	2.3V	1.8V	8		•	24	
PCA9548A	v		1-8	400K	2.3V	1.8V	8		•	24	
PCA9549	v		8bit	400K	2.3V	1.8V	8		•	24	
PCA9646	v		1-4	1M	2.7V	n/a	8		•	16	Buffer
	v		1-2	400K	1.65V	1.8V	4	2-1	•	14	
	v		1-4	400K	1.65V	1.8V	4	4-1	•	20	
	v		1-8	400K	1.65V	1.8V	8		•	24	

Pericom Leading spec.

1.0V to 5.5 V I/O signal (VDD: 1.65V)

- **High HBM ESD: 8KV**
- **Support 4MHz (PI4SMD9846)**
- **Pericom provides same part with better spec. to against NXP/TI..**

IO Expander Family



I/O Expander Portfolio Comparison

P/N	Bits#	Vcc Range	I2C Max (KHz)	Reset	INT	Pericom P/N
PCA9535A	16	1.65 to 5.5	400		y	PI4IOE5V9555
PCA9555A	16	1.65 to 5.5	400		y	
PCA8575	16	2.3 to 5.5	400		y	
PCA9535C	16	2.3 to 5.5	400		y	
PCA9535	16	2.3 to 5.5	400		y	
PCA9675	16	2.3 to 5.5	1000		y	
PCA9555	16	2.3 to 5.5	400		y	
PCF8575	16	2.3 to 5.5	400		y	
PCF8575C	16	2.3 to 5.5	400		y	
PCA6416A	16	1.65 to 5.5	400	y	y	PI4IOE5V9539
PCA9539A	16	1.65 to 5.5	400	y	y	
PCA9671	16	2.3 to 5.5	400	y		
PCA9539	16	2.3 to 5.5	400	y	y	
PCA9673	16	2.3 to 5.5	1000	y	y	
PCA9505 ü	40	2.3 to 5.5	400	y	y	PI4IOE5V95224
PCA9506	40	2.3 to 5.5	400	y	y	
PCA9698ü ü	40	2.3 to 5.5	400	y	y	

P/N	Bits#	Vcc Range	I2C Max (KHz)	Reset	INT	Pericom P/N
PCA9570	4	1.1 to 3.6	1000			PI4IOE5V9522
PCA9537	4	1.1 to 3.6	400	y	y	
PCA9536	4	2.3 to 5.5	400			PI4IOE5V9537
PCA6408A	8	1.65 to 5.5	400	y	y	PI4IOE5V9538
PCA9538A	8	1.65 to 5.5	400	y	y	
PCA9502	8	2.3 to 3.6	400	y	y	
PCA9557	8	2.3 to 5.5	400	y		
PCA9670	8	2.3 to 5.5	1000	y		
PCA9538	8	2.3 to 5.5	400	y	y	
PCA9672	8	2.3 to 5.5	1000	y	y	
PCA9571	8	1.1 to 3.6	1000			PI4IOE5V9554
PCA9554B(C)	8	1.65 to 5.5	400		y	
PCA9500	8	2.3 to 3.6	400			
PCA9501	8	2.3 to 3.6	400		y	
PCA9558 ü ü	8	2.3 to 5.5	400			
PCA8574(A)	8	2.3 to 5.5	400		y	
PCA9534	8	2.3 to 5.5	400		y	
PCA9554(A)	8	2.3 to 5.5	400		y	
PCA9674(A)	8	2.3 to 5.5	1000		y	
PCF8574(A)	8	2.3 to 5.5	400		y	

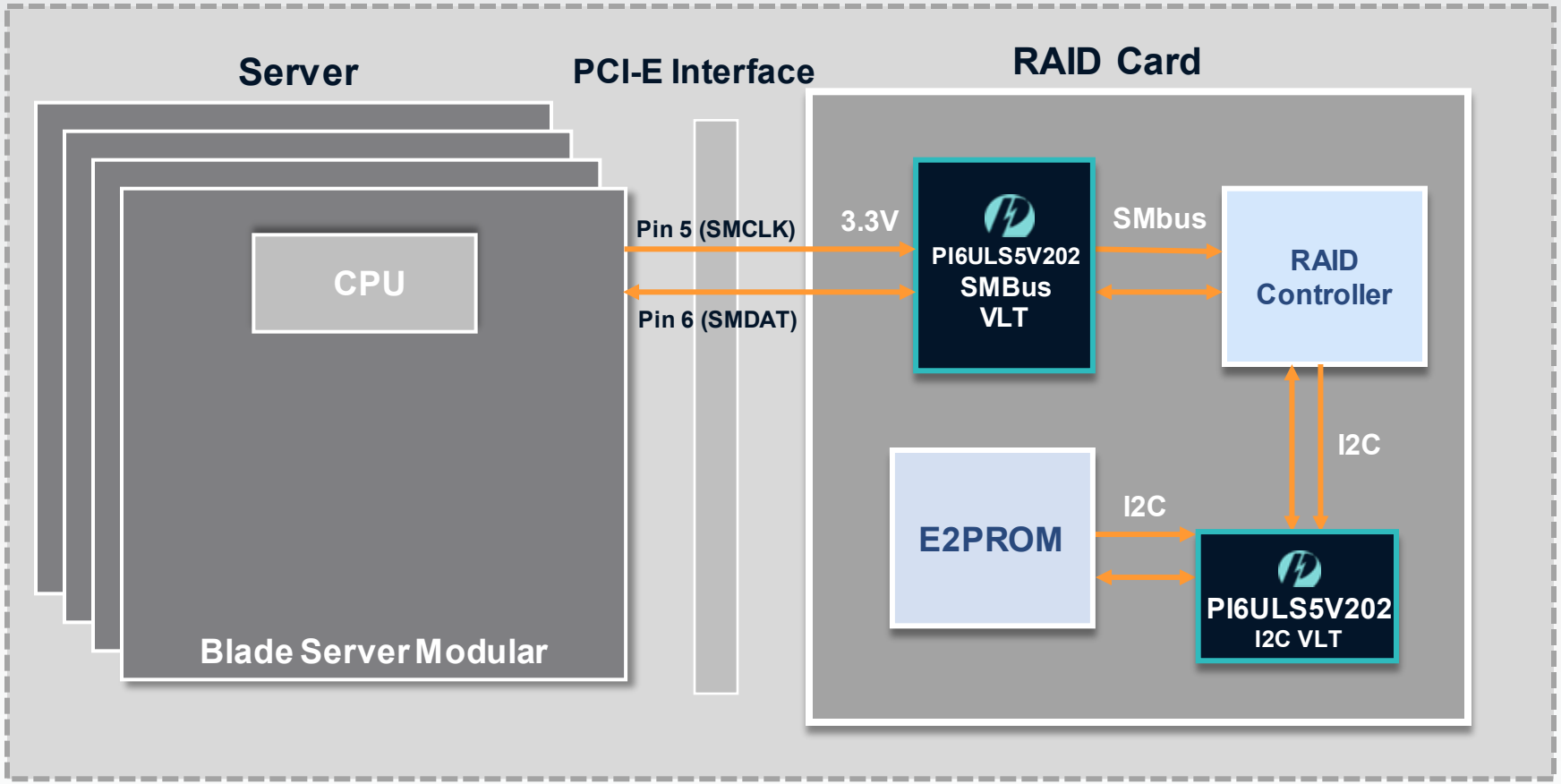
Pericom I2C Products Values Proposition

- Provide complete I2C product portfolio (ULS, I2C Mux/Switch, IO expander etc…)
- Provide advance features to lead the market, like PI6ULS5V9627A (4 Channel I2C ULS), PI6ULS5V9617A (0.6V)
- Support up to 4MHz I2C/SMbus Mux and 1MHz IO expander
- Support lower power rail on I/O signal type (1.0V for I2C MUX)
- Support I2C/SMbus Switch/Mux with Buffer
- Provide Higher ESD (8KV HBM)

Pericom Voltage Translation & ULS Product Offering

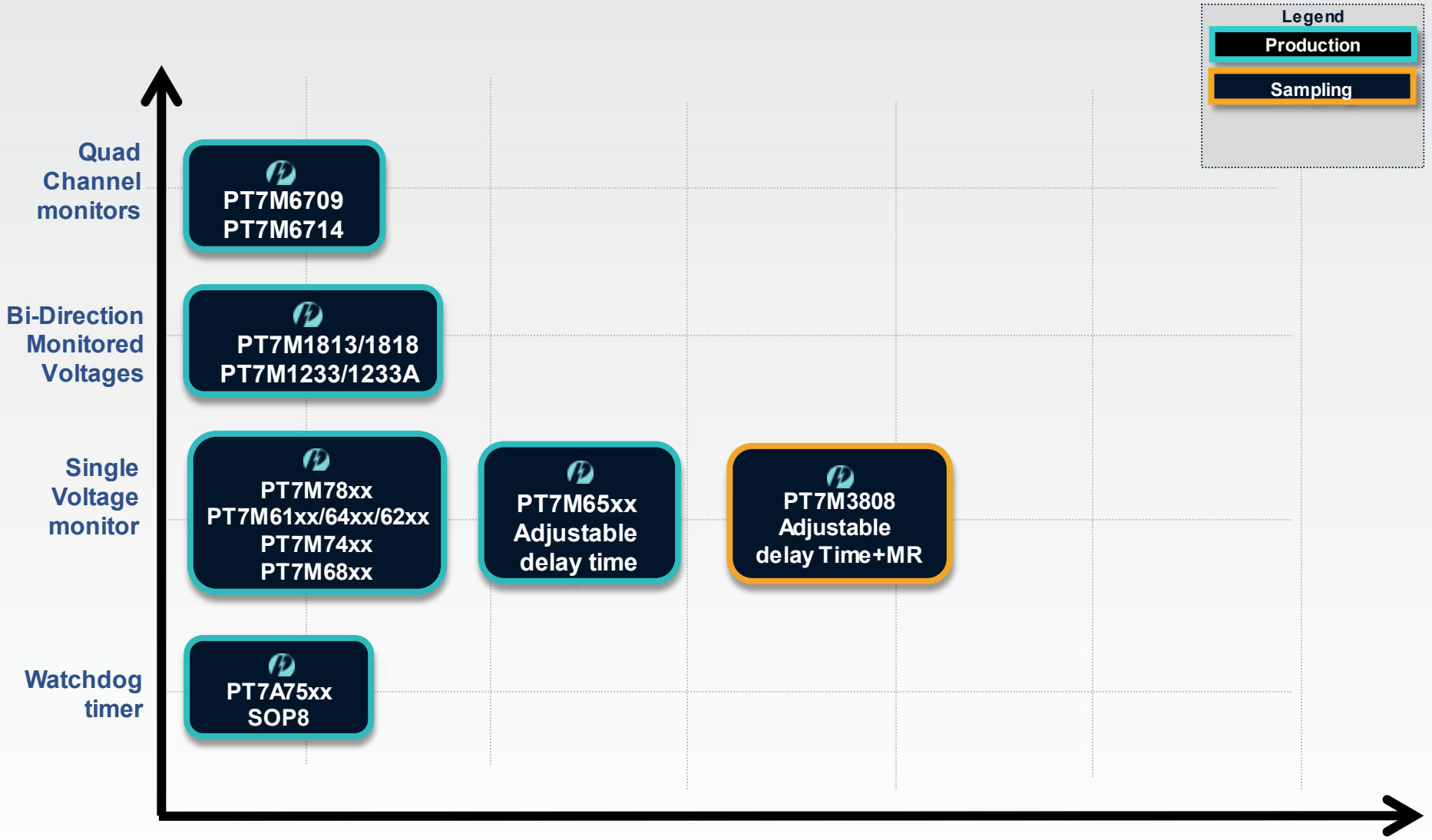
Part Number	Description	Translator
PI3VT3245	8-bit, 2-port, Low Voltage Translator Bus Switch	3.3V to 2.5V
PI3VT32X245	16-bit, 2-port, Low Voltage Translator Bus Switch	2.5V to 1.8V
PI3VT3306	2-bit, 2-port, Low Voltage Translator Bus Switch	3.3V to 2.5V
PI3VT34X245	32-bit, 2-port, Low Voltage Translator Bus Switch	2.5V to 1.8V
PI4ULS5V102	2-bit Automatic Direction Sensing Voltage Translator	1.2V to 5.5V
PI4ULS5V104	4-bit Automatic Direction Sensing Voltage Translator	1.2V to 5.5V
PI4ULS3V08MZLE	8-bit Automatic Direction Sensing Voltage Translator	1.5V to 3.3V
PI4ULS3V16MNLE	16-bit Automatic Direction Sensing Voltage Translator	1.5V to 3.3V
PI74AUC164245	16-Bit Level Shifting Transceiver	0.8V to 2.7V
PI74AVC164245	16-Bit Level Shifting Transceiver	3.3V to 2.5V
PI74AVC164245A	16-Bit Level Shifting Transceiver	3.3V to 1.8V
PI74AVC164245LA	16-Bit Level Shifting Transceiver	3.3V to 2.5V
PI74HSTL1212	24-Bit HSTL Bi-Directional Level Shifting Transceiver	3.3V to 1.8V
PI74LVC3245A	8-Bit Dual Supply Bidirectional Transceivers w/3-State Outputs	3.3V to 5V
PI74LVC4245A	8-Bit Dual Supply Bidirectional Transceivers w/3-State Outputs	5V to 3.3V
PI74LVCC3245A	8-Bit Dual Supply Bidirectional Transceivers w/Configurable Output Voltage and 3-State Outputs	3.3V to 5V
PI74LVCC4245A	8-Bit Dual Supply Bidirectional Transceivers w/Configurable Output Voltage and 3-State Outputs	3.3V to 5V
PI74STX2G4245	2-Bit Level Shifter Transceiver w/Dual Supply Voltage	1.5V to 3.3V
PI74STX4G4245	4-Bit Level Shifter Transceiver w/Dual Supply Voltage	1.5V to 3.3V

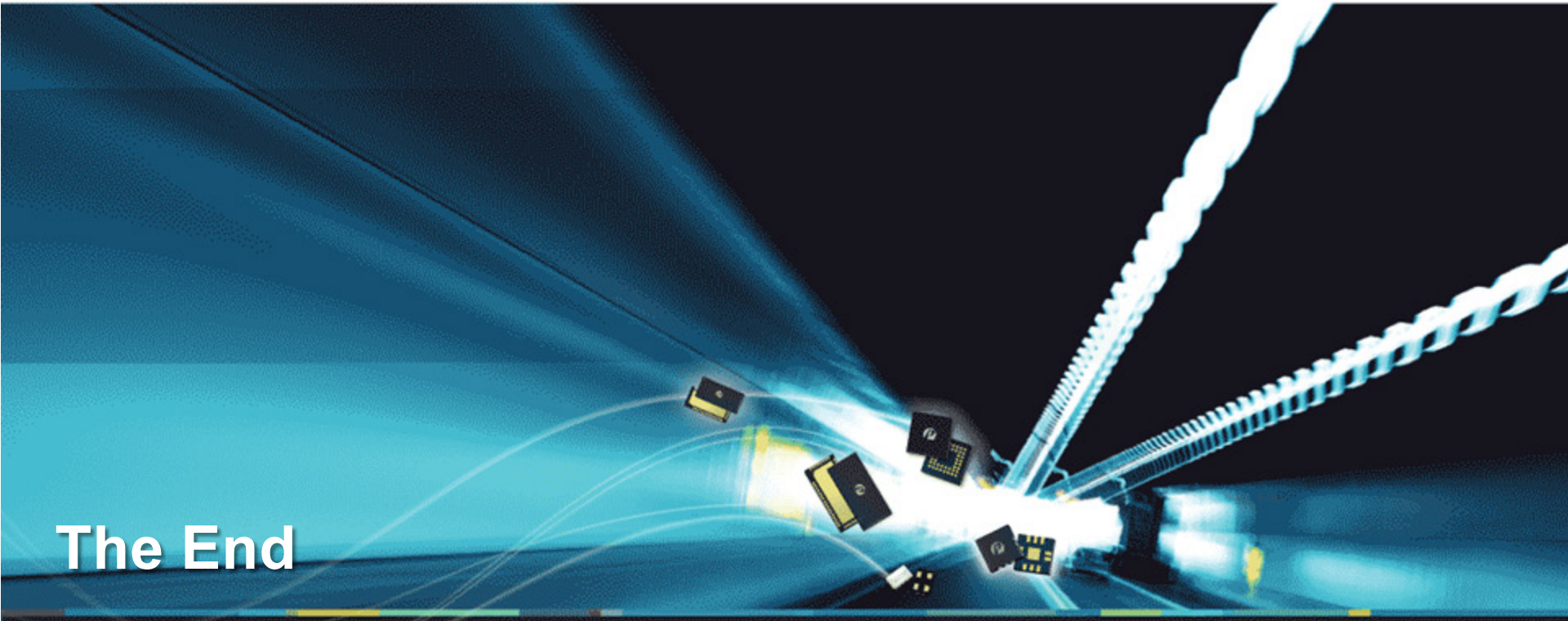
PI6ULS5V9517A in Mezz Card (Server)



PI4ULS5V202 is Open Drain level shifter which can do SMBus voltage translation due to different voltage between SMBus (3.3V) and I/O voltage of chip IC such as 2.8V/1.8V.

Microprocessor Supervisory Circuit





The End

Thank You