New Product Announcement

PI6CB33220x
PI6CB332002

4- and 2-Output Clock Mux-Buffers with Low Jitter Enhance Performance in PCIe® 6.0 Systems

The PI6CB332204/2202/2002 are PCIe 6.0 clock mux-buffers with 2:4/2:2/1:2 input/outputs and a selectable on-chip termination of 85Ω or 100Ω output impedance.

The series has very low 3fs to 5fs typical additive phase jitter and supports flexible start-up power sequencing, loss-of-input signal detection, power-down tolerant input pins, and automatic output clock parking upon loss of the input signal.

Their individual channel OE input provides flexible power management. Output clock frequencies up to 400MHz are supported.

The PI6CB332204/2202/2002 are available in various small-footprint 4mm x 4mm or 3mm x 3mm QFN packages.

The DIODES Advantage

The PI6CB332204/2202/2002's low-additive phase jitter enhances system timing margins in PCIe 6.0 high-speed connectivity applications.

- **Low 3fs-5fs Additive Phase Jitter**
  Minimizes phase noise for increased system timing margins
- **Individual OE Pin for Each Output**
  Allows dynamic routing and enhances power saving
- **Flexible Start-Up Power Sequencing**
  Simplifies system design and ensures well-defined system behavior under various power sequencing scenarios
- **Available in 2:4/2:2/1:2–Input/Output Variants**
  Supports various system clock tree design requirements
- **On-Chip Termination Saves Up to 80 External Resistors**
  Reduces bill-of-materials (BOM) cost, saves board space, and simplifies PCB layout

Applications

- Servers
- Surveillance systems
- Data centers

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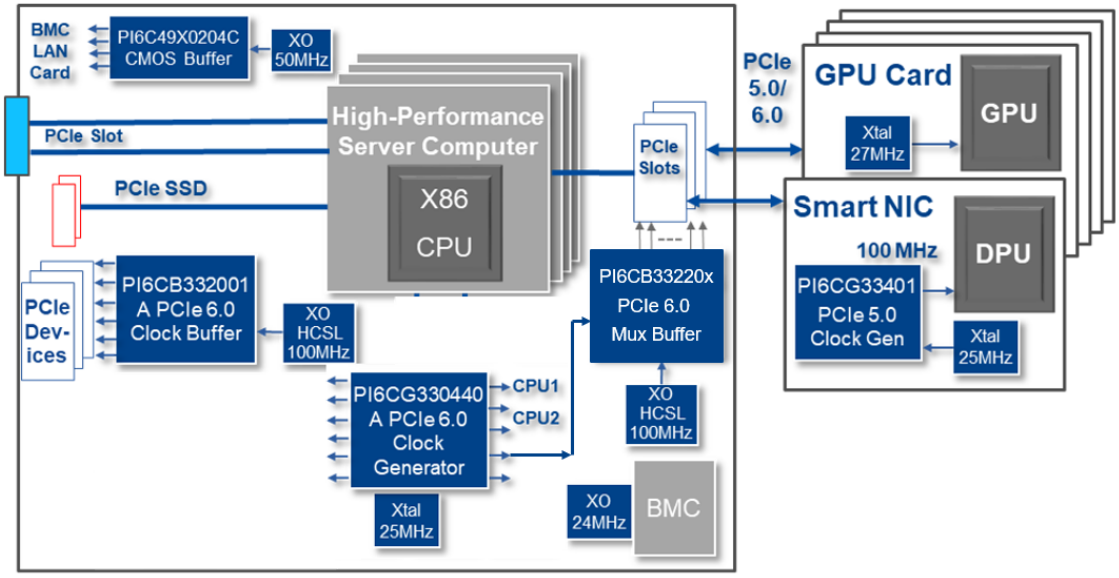
Typical Server Application Diagram



PCIe 6.0 Mux-Buffer Portfolio

Part Number	Outputs	Input/ Output Types	Additive Jitter	V_{DD}	Maximum Output Frequency	Output Impedance	Temperature Range	Package
			Typ.	V	MHz	Ω	°C	
PI6CB332002	**2**	**HCSL**	**3fs**	**3.3**	**400**	**85 100**	**-40 to +105**	**WQFN-20 (ZNA20)**
PI6CB332202	**2**	**HCSL**	**3fs**	**3.3**	**400**	**85 100**	**-40 to +105**	**WQFN-20 (ZNA20)**
PI6CB332204	**4**	**HCSL**	**3fs**	**3.3**	**400**	**85 100**	**-40 to +105**	**VQFN-28 (ZLF28)**
PI6CB332004A	4	HCSL	3fs	3.3	400	85	-40 to +105	VQFN-28 (ZLF28)
PI6CB332008A PI6CB332008A100	8	HCSL	3fs	3.3	400	85 100	-40 to +105	VQFN-40 (ZLF40)
PI6CB332012A	12	HCSL	4fs	3.3	400	85	-40 to +105	WLGA-64 (FLB64)
PI6CB332013A PI6CB332013A100	13	HCSL	3fs	3.3	400	85 100	-40 to +105	VQFN-56 (ZLF56)
PI6CB332016A	16	HCSL	3fs	3.3	400	85	-40 to +105	TQFN-64 (ZD64)
PI6CB332020A	20	HCSL	3fs	3.3	400	85	-40 to +105	AQFN-80 (ZXB80)

Ordering Information

Orderable Part Number	Compliance (Only Automotive Supports PPAP)	Package	Moisture Sensitivity	Packing	
				Quantity	Carrier
PI6CB332204ZLFEX	Standard	VQNF (ZLF28) (4mm x 4mm)	MSL-1	3,500	Tape & Reel
PI6CB332202ZNAEX	Standard	WQFN (ZNA20) (3mm x 3mm)	MSL-1	3,500	Tape & Reel
PI6CB332002ZNAEX	Standard	WQFN (ZNA20) (3mm x 3mm)	MSL-1	3,500	Tape & Reel