New Product Announcement

PI6CB3320xxA

Low Jitter 20-, 16-, 13-, 12-, 8- and 4-Output Clock Buffers Enhance Performance in PCIe® 6.0 Systems

The PI6CB3320xxA series consists of PCIe 6.0 clock buffers with 20, 16, 13, 12, 8, and 4 channels of low-power HCSL output with on-chip termination of 85Ω or 100Ω output impedance.

The series has very low 3fs to 4fs additive phase jitter and supports flexible start-up power sequence, loss-of-input signal detection, power-down tolerant input pins, and automatic output clock parking upon loss of input signal.

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

The PI6CB3320xxA family is available in various small-footprint QFN and LGA packages ranging from 4mm x 4mm to 9mm x 9mm.

The DIODES Advantage

The PI6CB3320xxA's low-additive phase jitter enhances system timing margins in PCIe 6.0 high-speed connectivity applications.

- **Low 3fs-4fs 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 20-, 16-, 13-, 12-, 8-, and 4-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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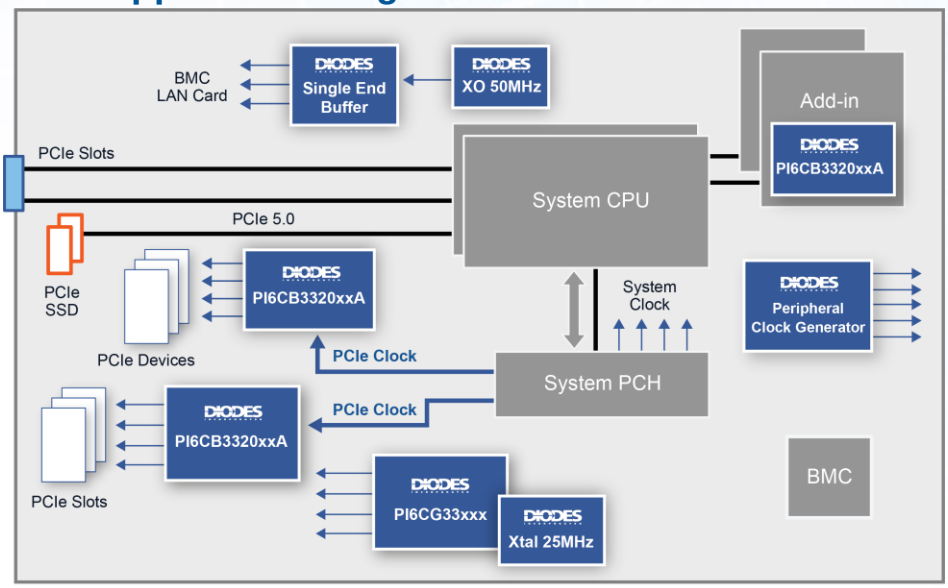
Typical Server Application Diagram



PI6CB3320xxA Portfolio

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

Ordering Information

Orderable Part Number	Compliance (Only Automotive Supports PPAP)	Package	Moisture Sensitivity	Packing	
				Quantity	Carrier
PI6CB332020AZXBEX-13R	Standard	AQFN (ZXB80) (6mm x 6mm)	MSL-3	3,000	Tape & Reel
PI6CB332016AZDEX-13R	Standard	TQFN (ZD64) (9mm x 9mm)	MSL-3	3,000	Tape & Reel
PI6CB332013AZLFEX-13R PI6CB332013A100ZLFEX-13R	Standard	VQFN (ZLF56) (7mm x 7mm)	MSL-3	3,000	Tape & Reel
PI6CB332012AFLBEX-13R	Standard	WLGA (FLB64) (5mm x 5mm)	MSL-3	3,500	Tape & Reel
PI6CB332008AZLFEX-13R PI6CB332008A100ZLFEX-13R	Standard	VQFN (ZLF40) (5mm x 5mm)	MSL-3	3,500	Tape & Reel
PI6CB332004AFLBEX-13R	Standard	VQFN (ZLF28) (4mm x 4mm)	MSL-3	3,000	Tape & Reel