



New Product Announcement

PI6CBE33xx5

PCIe 5.0 with 4-, 6-, 8-, and 12-Output Clock Buffers Support Zero Delay/Fanout Applications

The DIODES™ PI6CBE33xx5 devices are PCIe® 5.0 clock buffers with 4-, 6-, 8-, and 12-channels of low-power HCSL output with on-chip termination and 85Ω output impedance.

The devices have very-low 7.4fs additive phase jitter in fanout buffer mode and support Ultra Path Interconnect (UPI) and Quick Path Interconnect (QPI) applications.

They can be configured into either zero-delay buffer (ZDB) or fanout-buffer modes through hardware or SMBus control.

Individual channel OE provides flexible power management. ZDB mode supports 100MHz or 133.33MHz clock frequency, and fanout-buffer mode supports 1MHz to 400MHz.

The devices are available in the very small TQFN packages, with 5x5mm to 9x9mm footprints.



The DIODES™ Advantage

The PI6CBE33xx5 series has low additive phase jitter, enhancing system timing margins in high-speed connectivity applications.

- **Low 7.4fs Additive Phase Jitter in Fanout-Buffer Mode**
Minimizes phase noise for increased system timing margin
- **Individual OE Pin for Each Output**
Allows dynamic routing and power savings
- **Hardware or SMBus Control to Select ZDB Mode or Fanout-Buffer Mode**
Supports either ZDB or fanout clock applications
- **Available in 4-, 6-, 8-, and 12-Output Series Variants**
Meets various design requirements of system clock trees

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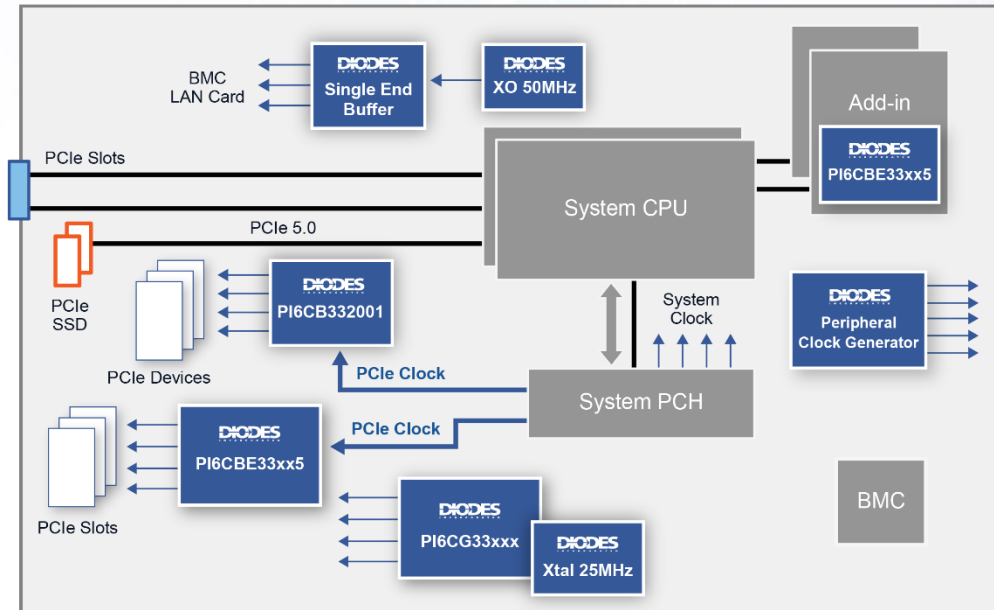
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Applications

- Servers and data centers
- Surveillance systems

Typical Server Application Diagram



PI6CBE33xx5 Portfolio

Part Number	Outputs	Output Types	Additive Jitter	VDD	Maximum Output Frequency	Input Types	Temperature Range	Package
			Typ		MHz			
PI6CBE33045	4	HCSL	7.4fs	3.3V	400	HCSL	-40 to +85°C	TQFN-32
PI6CBE33065	6	HCSL	7.4fs	3.3V	400	HCSL	-40 to +85°C	TQFN-40
PI6CBE33085	8	HCSL	7.4fs	3.3V	400	HCSL	-40 to +85°C	TQFN-48
PI6CBE33125	12	HCSL	7.4fs	3.3V	400	HCSL	-40 to +85°C	TQFN-64

Ordering Information

Orderable Part Number	Compliance (Only Automotive Supports PPAP)	Package Code	Package	Moisture Sensitivity	Quantity Per Reel
PI6CBE33045ZHIEX PI6CBE33045ZHIEX-13R	Standard	ZH32	5x5mm TQFN	MSL-1	2,500
PI6CBE33065ZLAIEX PI6CBE33065ZLAIEX-13R	Standard	ZLA-40	5x5mm TQFN	MSL-1	2,500
PI6CBE33085ZLIEEX PI6CBE33085ZLIEEX-13R	Standard	ZL-48	6x6mm TQFN	MSL-1	2,500
PI6CBE33125ZDIEEX PI6CBE33125ZDIEEX-13R	Standard	ZD-64	9x9mm TQFN	MSL-3	2,500