



New Product Announcement

UC - XO Family

Low-Power HCSL Crystal Oscillator Family for PCIe 6.0/5.0 Networking and Computing Applications

The UC family of ultra-low jitter, low-power crystal oscillators (XO) supports PCIe® 6.0 clocks in high-speed networking and computing applications.

Their high-speed current steering logic (HCSL) output is backward compatible with PCIe 5.0 through PCIe 1.0 and supports other high-speed interfaces utilizing HCSL clocks.

The family has an ultra-low jitter of less than $100\text{fs}_{\text{RMS}}$, which allows them to meet the stringent needs of PCIe 6.0.

They operate from 1.8V to 3.3V supply voltage and consume around half the current of standard HCSL devices.

These devices are available in a variety of ceramic seam-sealed packages from 2.5mm x 2.0mm, up to 7.0mm x 5.0mm, with ambient temperatures across -40°C to $+125^{\circ}\text{C}$.



The DIODES Advantage

The UC family's ultra-low jitter make the devices ideal for PCIe 6.0 clocks in networking and computing applications.

- **PCIe 6.0 Standard 100MHz Frequency, Plus Optional 25~161MHz Frequency Range**
Flexible frequency options support various system design requirements
- **Low 15mA Current, Supporting 1.8V, 2.5V, 3.3V Supply Voltages**
Half supply current of standard HCSL devices
- **Ultra-Low $<100\text{fs}_{\text{RMS}}$ Jitter**
Meets PCIe 6.0 specifications
- **On-Chip Termination**
No need for external resistors—saves board space, and reduces cost

Applications

High-speed, low-jitter clocks and timing in:

- Servers/storage
- Networking systems
- Edge computing
- Industrial PCs

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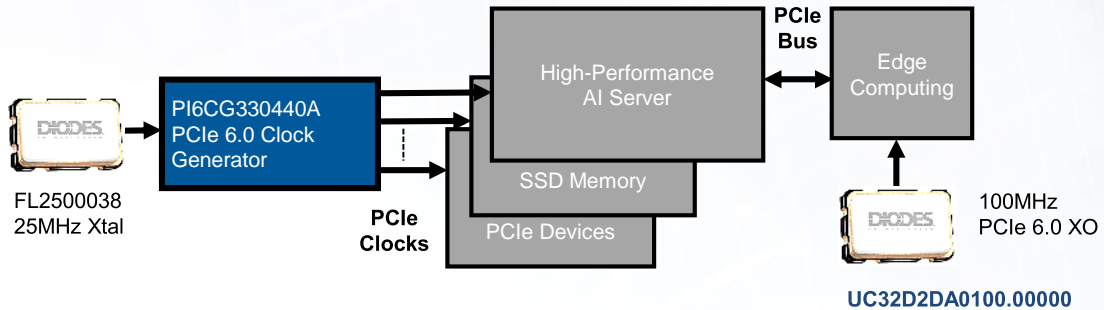


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Typical Application

High-Performance CPU/GPU Server



PCIe 6.0 XO Portfolio¹

Part Number	Supply Voltage	Frequency	Temperature Range	Frequency Stability	Package
		MHz	°C		
UC2543FA0100.000000	1.8V	100	-40 to +105	±50ppm	Seam-sealed 2.5 x 2.0mm
UC25D2EC0133.300000	2.5V	133	-40 to +85	±25ppm	Seam-sealed 2.5 x 2.0mm
UC25D1DB0156.250000	3.3V	156.25	-40 to +85	±50ppm	Seam-sealed 2.5 x 2.0mm
UC32D2DA0100.000000	2.5V	100	-40 to +85	±25ppm	Seam-sealed 3.2 x 2.5mm
UC32D3DA0100.000000	1.8V	100	-40 to +85	±25ppm	Seam-sealed 3.2 x 2.5mm
UC32D1HB0156.250000	3.3V	156.25	-40 to +125	±70ppm	Seam-sealed 3.2 x 2.5mm
UC50D2DA0100.000000	2.5V	100	-40 to +85	±25ppm	Seam-sealed 5.0 x 3.2mm
UC50D3DA0100.000000	1.8V	100	-40 to +85	±25ppm	Seam-sealed 5.0 x 3.2mm
UC50D1DB0156.250000	3.3V	156.25	-40 to +85	±25ppm	Seam-sealed 5.0 x 3.2mm

1. The UC family supports more options than the listed Part Numbers above.
For other variations, including other frequencies, please contact Diodes' sales department.

Ordering Information

