



# New Product Announcement

## PI6CL1001

# Tiny, Versatile, and Integrated Clock Buffer with Level Translation

The PI6CL1001 is a low-voltage, low-noise, non-inverting, single-output LVCMOS clock buffer with level translation.

This product supports 1.0V to 1.8V power supplies, low jitter, and has the capability to bridge the power supply disparity between clock-source and clock-sink devices.

The VDD\_IN supply voltage defines the input clock level, and the VDD\_OUT supply voltage defines the output clock level. The device is capable of translating clock levels from low-to-high or from high-to-low.

It has a fail-safe input that prevents oscillation at the output in the absence of an input signal and allows for input signals before VDD is supplied.

The PI6CL1001 is available in the small-footprint DFN0808 package.



## The DIODES Advantage

**The PI6CL1001 supports high-to-low or low-to-high clock level translation.**

- **0.9V Input to 1.8V Output Clock Level Shift, or 1.8V Input to 1.2V Output Clock Level Shift**  
Flexible level shift to bridge processor voltage supply gap
- **DC to 60MHz with 1PPS**  
High-accuracy clock performance increases system timing margins, supporting 32.768KHz clock level shift
- **Small Package**  
Suitable for space-constrained applications such as cellphones and IoT devices
- **Supports 105°C Operation**  
Enhances system reliability in high-temperature environments

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## Applications

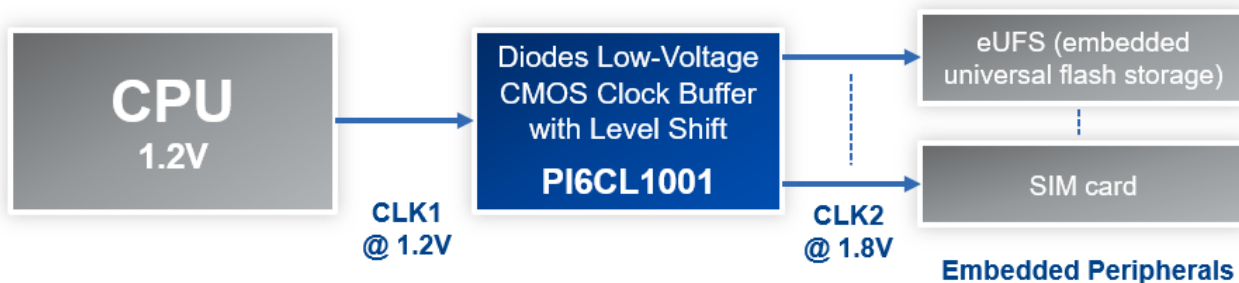
- Notebooks
- Servers
- Cellphones
- IoT devices



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### Typical Server Application Diagram



### Low-Voltage CMOS Buffer Portfolio

Part Number	Outputs	Output Supply Voltage	Max. Output Frequency	Level Shift	Temperature Range	Package
		V	MHz		°C	
<a href="#">PI6CL1001</a>	1	1.2 to 1.8	DC-60	Yes	-40 to 105	X2-DFN0808-5 (XDC5)
<a href="#">PI6C49X0210</a>	10	1.5 to 2.5	200	N/A	-40 to 85	W-QFN5050-32 (ZH32)
<a href="#">PI6C49X0208</a>	8	1.5 to 2.5	200	N/A	-40 to 85	W-QFN5050-32 (ZH32)
<a href="#">PI6C49X0206T</a>	6	1.5 to 2.5	250	N/A	-40 to 85	TSSOP-14
<a href="#">PI6C49X0206T</a>	4	1.5 to 3.3	250	N/A	-40 to 85	X1DFN (XEC8)
<a href="#">PI6C39X0202</a>	2	1.5 to 3.3	250	N/A	-40 to 85	X1DFN (XEC8)

### Ordering Information

Orderable Part Number	Compliance (Only Automotive Supports PPAPs)	Package Code	Package	Moisture Sensitivity	Packing	
					Quantity	Reel
<a href="#">PI6CL1001XDCEX</a>	<a href="#">Standard</a>	XDC5	X2-DFN0808-5	MSL-1	3,000	Tape & Reel