



New Product Announcement

PI6C4921502TQ PI6C4921504TQ

High-Performance Automotive Two- and Four-Output LVDS Clock Buffers

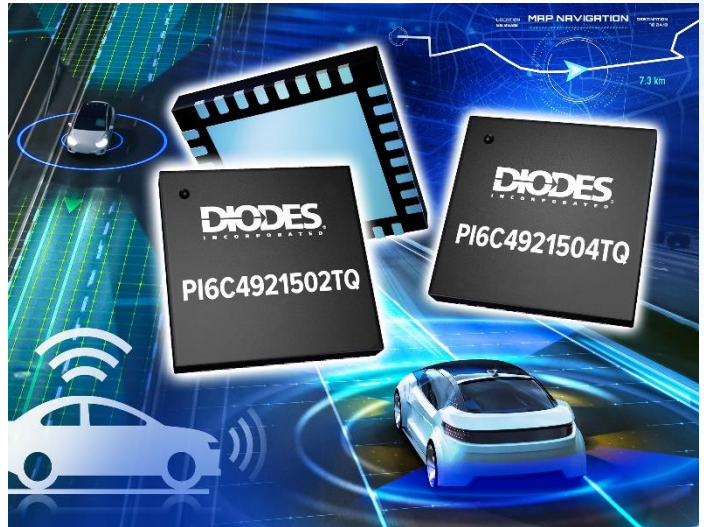
The PI6C4921502TQ and PI6C4921504TQ are automotive-compliant, high-performance, two- and four-output LVDS fanout clock buffers that support up to 1GHz clock frequencies with very low additive jitter.

They are ideal for systems that need to distribute low jitter clock signals to multiple end devices. Both devices support single-ended, differential, or crystal input.

The PI6C4921502TQ and PI6C4921504TQ have ultra-low $<0.03\text{ps}$ additive phase jitter and low $<40\text{ps}$ skew between outputs within the same bank.

The devices support 2.5V/3.3V power supplies with separate input and output supply voltages for level shifting.

The PI6C492150xTQ is AEC-Q100 grade 1 qualified and is available in the W-QFN5050-32/SWP wettable flank package.



The DIODES Advantage

The PI6C492150xTQ's low-additive jitter enhances system timing margin in high-speed connectivity.

- Up To 1GHz Output Frequency with Low 30fs Additive Jitter**
 Minimizes phase noise for increased system timing margin
- Low Skew ($<40\text{ps}$) Between Outputs Within Same Bank**
 Aligns clock outputs for multiple end devices to achieve synchronization
- Offers User-Selectable Inputs from Either Single-Ended, Differential Inputs or Crystal Input**
 Adds flexibility for input clock selection
- 2.5V/3.3V Power Supply with Separate Input and Output Supply Voltages**
 Supports input and output level shifting

Applications

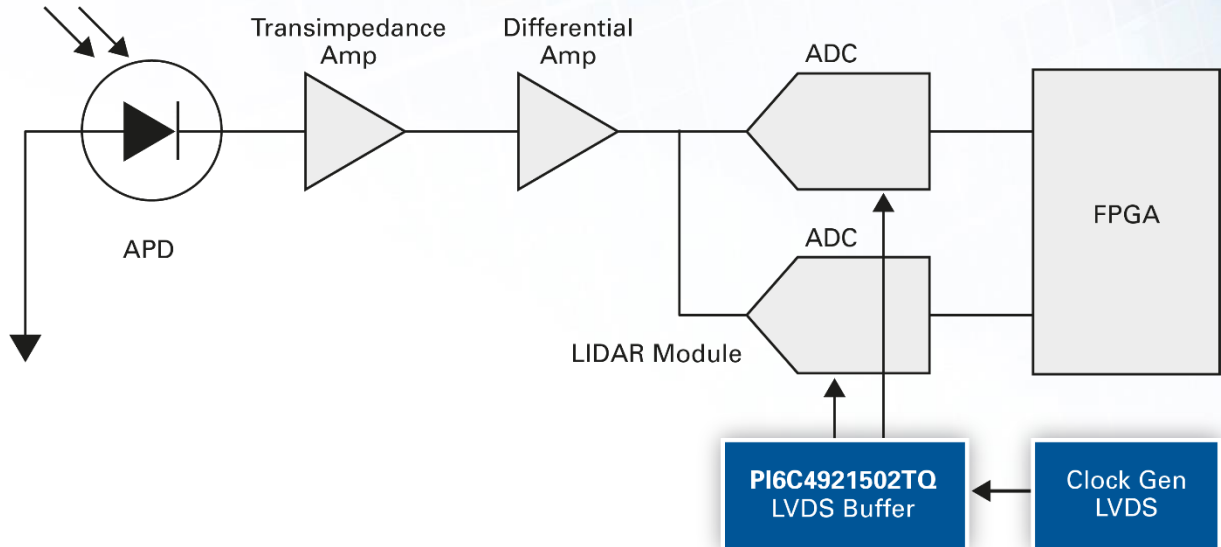
- ADAS
- LiDAR
- Automotive networking systems
- Automotive infotainment
- High-frequency backplane-based automotive computing platforms

Automotive-compliant - AEC qualified, manufactured in IATF 16949 certified sites supporting PPAP documents.

The Diodes logo is a registered trademark of Diodes Incorporated in the United States and other countries.

© 2023 Copyright Diodes Incorporated. All Rights Reserved.

Typical Application Diagram



Automotive Clock Buffers Portfolio

Part Number	Outputs	Output Types	Additive Jitter	V _{DD}	Maximum Output Frequency	Input Types	Temperature Range	Package
			ps	V	MHz		°C	
PI6C4921502TQ	2	LVDS	0.03	2.5 3.3	1500	Crystal, LVCMOS, Differential	-40 to +125	W-QFN5050-32/SWP
PI6C4921504TQ	4	LVDS	0.03	2.5 3.3	1500	Crystal, LVCMOS, Differential	-40 to +125	W-QFN5050-32/SWP
PI6C49CB01Q	1	LVC MOS LVTTTL	0.1	2.5 3.3	360	Differential	-40 to +105	SOIC-8
PI6C49CB02Q	2	LVC MOS LVTTTL	0.1	2.5 3.3	250	LVC MOS LVTTTL	-40 to +105	SOIC-8
PI6C49CB04Q	4	LVC MOS LVTTTL	0.1	1.5 3.3	160	LVC MOS LVTTTL	-40 to +105	SOIC-8

Ordering Information

Orderable Part Number	Compliance (Only Automotive Supports PPAP)	Package Code	Package	Moisture Sensitivity	Packing	
					Quantity	Carrier
PI6C4921502TQ1ZHWEEX	Automotive	ZHW	W-QFN5050-32	MSL-1	2,500	13" Tape & Reel
PI6C4921504TQ2ZHWEEX	Automotive	ZHW	W-QFN5050-32	MSL-1	2,500	13" Tape & Reel