

Low Jitter Automotive-Compliant Clock Buffers for ADAS and Infotainment

The PI6C49CB01Q/02Q/04xQ are Automotive-Compliant Single-Ended Clock Buffers that have been qualified to AEC-Q100 grades 2 (105°C) and 3 (85°C) in IATF16949 certified manufacturing sites supporting PPAP documentation.

As automotive systems become more sophisticated the clock tree also gets more complicated. To service this, multiple output clock buffers with low jitter, and low skew are required.

The PI6C49CB01Q/02Q/04xQ meet this need with their one/two/four CMOS/LVTTL outputs offering low skew, low additive jitter and low power.

The PI6C49CB01Q/02Q/04xQ are available in the SO-8 package.



The Diodes Advantage

- AEC-Q100 grade 2 and grade 3 qualified in IATF16949 certified manufacturing sites:**
 Automotive compliant with reliable Performance across -40°C to 105°C and -40°C to 85°C

- Low additive Jitter (0.1ps_{RMS}) clocks**
 Minimum phase noise increasing system timing margin

- Low skew (25ps) clocks**
 All output clocks are aligned and synced

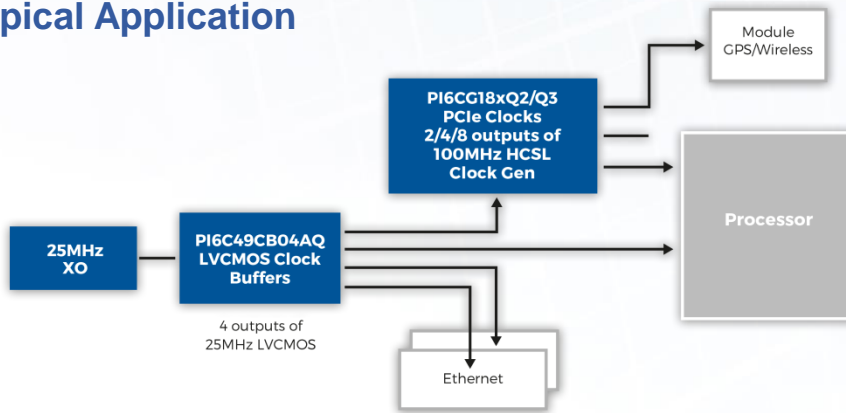
- Low power consumption**
 As low as 5mA total supply I_{dd} @ 1.5V for 4-output devices reducing system power budget

- Small 8-pin SOIC package**
 Ideal for designs with limited board space

Applications

- Infotainment, ADAS, automotive gateway

Typical Application



Automotive Clock Buffers Portfolio

MPN	Outputs	Output Types	Input Types	Additive Jitter	Output Skew	Vdd	Output Enable(OE)	Package
PI6C49CB01Q	1	LVC MOS LVTTTL	Differential	0.1ps	25ps	2.5V 3.3V	No OE pin	SO-8
PI6C49CB02Q	2	LVC MOS LVTTTL	LVC MOS LVTTTL	0.1ps	25ps	2.5V 3.3V	No OE pin	SO-8
PI6C49CB04AQ	4	LVC MOS LVTTTL	LVC MOS LVTTTL	0.1ps	25ps	1.5V to 3.3V	OE Pin without pull up/down resistor	SO-8
PI6C49CB04BQ	4			0.1ps	25ps	1.5V to 3.3V	No OE pin	SO-8
PI6C49CB04CQ	4			0.1ps	25ps	1.5V to 3.3V	OE Pin with 125kΩ pull up resistor	SO-8

To find out more information:

<https://www.diodes.com/products/automotive/automotive-products/clock-buffer-automotive/>

Ordering Information

Part Number	AEC-Q100 Grade	Temp Range	Package	Tape Width	Quantity per reel
PI6C49CB01Q2WEX	2	-40 to 105°C	SO-8	12mm	2500
PI6C49CB01Q3WEX	3	-40 to 85°C	SO-8	12mm	2500
PI6C49CB02Q2WEX	2	-40 to 105°C	SO-8	12mm	2500
PI6C49CB02Q3WEX	3	-40 to 85°C	SO-8	12mm	2500
PI6C49CB04AQ2WEX	2	-40 to 105°C	SO-8	12mm	2500
PI6C49CB04AQ3WEX	3	-40 to 85°C	SO-8	12mm	2500
PI6C49CB04BQ2WEX	2	-40 to 105°C	SO-8	12mm	2500
PI6C49CB04BQ3WEX	3	-40 to 85°C	SO-8	12mm	2500
PI6C49CB04CQ2WEX	2	-40 to 105°C	SO-8	12mm	2500
PI6C49CB04CQ3WEX	3	-40 to 85°C	SO-8	12mm	2500