



New Product Announcement

PI6CG18xQ/ PI6CB184Q

Automotive Compliant PCIe 4.0 Clock Generators and Buffers

The PI6CG18xQ is a family of AEC-Q100 qualified low power PCIe Gen4 clock generators with 2, 4 and 8 outputs.

These devices use a 25MHz crystal or CMOS reference input to generate multiple 100MHz HCSL outputs with on-chip terminations. The on-chip termination saves 4 external resistors for each output and board space. An additional buffered reference output is provided to serve as a low noise and synchronous reference.

The PI6CB184Q is an AEC-Q100 qualified low power PCIe Gen4 clock buffer with 4 outputs. This buffer includes on-chip termination and also individual output enables for improved power management.

Both of these Diodes Incorporated clock generators and buffers are packaged in specially designed wettable/side-walled QFN packages to enable automated visual inspection and testing in automotive production environment



The Diodes Advantage

Automotive Compliant (AEC-Q100) PCIe 4.0 clocks supports ambient temperatures up to +105°C

- **On-chip termination**
BOM savings of 4 resistors/ output pair (up to 32 resistors)
- **Wettable flank/side-wall plated QFN packages**
Meets automotive requirements for visual inspection
- **Programmable slew rate and amplitude**
For design flexibility
- **Individual output enables and 1.8V power supply**
For better power management and lower power consumption
- **Extended temperature range support -40 to +105°C (Grade 2)**
Full portfolio of timing solutions supporting PCIe Gen 4 from clock generators, buffers to crystals and oscillators

Applications

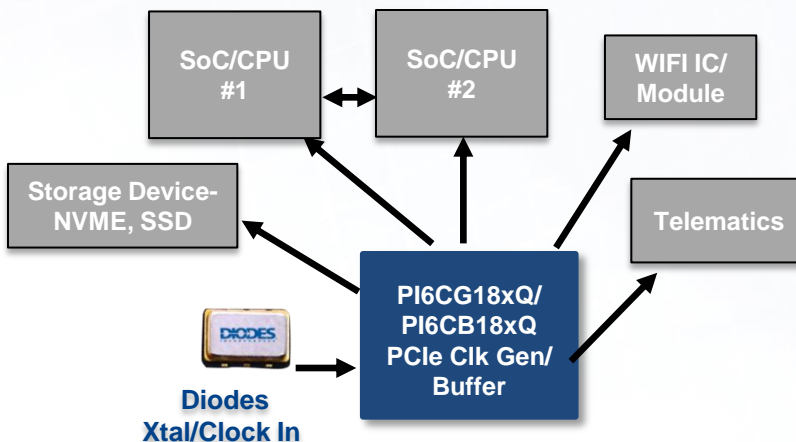
- Electrical Control Unit
- Navigation
- Telematics Head Unit
- Infotainment
- ADAS
- NVME/ Storage



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Typical Application Diagram



Product Portfolio

Part Number	Function	# of Outputs	Voltage Support	Temp Range	Package	AEC-Q100 Grade
PI6CG182Q	Generator	2	1.8V	-40 to +105°C	24-TQFN (4 x 4mm)	2
PI6CG184Q	Generator	4		-40 to +105°C	32-TQFN (5 x 5mm)	2
PI6CG188Q	Generator	8		-40 to +105°C	48-TQFN (6 x 6mm)	2
PI6CB184Q	Buffer	4		-40 to +105°C	32-TQFN (5 x 5mm)	2

Ordering Information

Part Number	Package code	Packaging		7" Tape and Reel	
				Quantity	Tape & Reel
PI6CG182Q2ZDQEX	ZDQ	24-TQFN	V-QFN4040-24	3,000	X
PI6CG184Q2ZHQEX	ZHQ	32-TQFN	W-QFN5050-32	2,500	X
PI6CG188Q2ZLQEX	ZLQ	48-TQFN	V-QFN6060-48	3,000	X
PI6CB184Q2ZHQEX	ZHQ	32-TQFN	W-QFN5050-32	2,500	X