

PCI Express® Timing Solutions

Enable Rapid Data Transfer with Industry's broadest PCI Express Timing Solution

Summary

Through the years, PCI Express (PCIe) protocol has evolved to accommodate the needs of higher speeds, imposing stringent requirements for a reliable clock source. Microchip offers a comprehensive line of PCIe Gen 4 compliant oscillators, clock generators and buffers to address this need. Microchip's timing parts not only meet the PCIe jitter requirements, but also allow allocation of up to 70% of total jitter margin to the rest of the system. With our highly integrated single-chip solutions, you can reduce component count and board area without sacrificing performance.

Need for Speed

Enable Rapid Data Transfer with Industry's Broadest PCIe® Gen 1/2/3/4 Compliant Timing Solutions



Key Features

- PCIe Gen 1/2/3/4 compliant
- Single and multi-output solutions
- Fully integrated single-chip solution
- Configurable with fast samples
- Smallest PCIe timing solution on the market

Applications

- Servers
- Storage
- Networking
- Data centers
- Instrumentation
- Consumer



Standard PCIe Timing Parts

Microchip offers both ready-to-design standard and customizable PCIe oscillators, clock generators and buffers. Simply click on the part name and order samples for your next design.

Part Name	PCIe® Generation	No. of Outputs	Input	Output Logic	Voltage (V)	Dimensions	Temperature Range
Clock Generators							
PL602-21SC	Gen 1/2	1	25 MHz Crystal	HCSL	2.5–3.3	8-pin SOP 5 x 4 mm	–40° to 85°C
PL602-21TC	Gen 1/2	1	25 MHz Ref	HCSL	2.5–3.3	6-pin SOT 3 x 3 mm	–40° to 85°C
PL602032UMG	Gen 1/2	2	25 MHz Crystal	HCSL	2.5–3.3	16 pin QFN 3 x 3 mm	–40° to 85°C
PL602041UMG	Gen 1/2/3/4	4	25 MHz Crystal	HCSL	2.5–3.3	24-pin QFN 4 x 4 mm	–40° to 85°C
PL602081UMG	Gen 1/2/3/4	8	25 MHz Crystal	HCSL	2.5–3.3	44-pin QFN 7 x 7 mm	–40° to 85°C
SM802379UMG	Gen 1/2/3/4	2	25 MHz Crystal or Ref	HCSL	2.5–3.3	24-pin QFN 4 x 4 mm	–40° to 85°C
MX852EB0027	Gen 1/2/3/4	5	Crystal Integrated	HCSL	2.5–3.3	38-pin LGA 7.0 x 5.0 mm	–40° to 85°C
DSC557-0344F10	Gen 1/2/3/4	2	MEMS Integrated	HCSL ⁽¹⁾	2.5–3.3	14-pin QFN 3.2 x 2.5 mm	–40° to 85°C ⁽²⁾
DSC557-04444KI1	Gen 1/2/3/4	3	MEMS Integrated	HCSL ⁽¹⁾	2.5–3.3	20-pin QFN 5.0 x 3.2 mm	–40° to 85°C ⁽²⁾
DSC557-054444KI1	Gen 1/2/3/4	4	MEMS Integrated	HCSL ⁽¹⁾	2.5–3.3	20-pin QFN 5.0 x 3.2 mm	–40° to 85°C ⁽²⁾
Clock Generators with Spread Spectrum							
PL607041UMG	Gen 1/2/3	4	25 MHz Crystal	HCSL	2.5–3.3	24-pin QFN 4 x 4 mm	–40° to 85°C
PL607081UMG	Gen 1/2/3	8	25 MHz Crystal	HCSL	2.5–3.3	44-pin QFN 7 x 7 mm	–40° to 85°C
Oscillators							
MX555ABD100M000	Gen 1/2/3/4	1	Crystal Integrated	HCSL	2.5–3.3	6-pin DFN 5.0 x 3.2 mm	–40° to 85°C
MX575ABD100M000	Gen 1/2/3/4	1	Crystal Integrated	HCSL	2.5–3.3	6-pin DFN 7.0 x 5.0 mm	–40° to 85°C
DSC1124AI1-100.0000	Gen 1/2/3/4	1	MEMS Integrated	HCSL	2.5–3.3	6-pin DFN 7.0 x 5.0 mm	–40° to 85°C ⁽²⁾
DSC1124BI1-100.0000	Gen 1/2/3/4	1	MEMS Integrated	HCSL	2.5–3.3	6-pin DFN 5.0 x 3.2 mm	–40° to 85°C ⁽²⁾
DSC1124CI1-100.0000	Gen 1/2/3/4	1	MEMS Integrated	HCSL	2.5–3.3	6-pin DFN 3.2 x 2.5 mm	–40° to 85°C ⁽²⁾
DSC1124DI1-100.0000	Gen 1/2/3/4	1	MEMS Integrated	HCSL	2.5–3.3	6-pin DFN 2.5 x 2.0 mm	–40° to 85°C ⁽²⁾
Buffers							
SY75572LMG	Gen 1/2/3/4	2	LVDS/HCSL	HCSL	3.3	16-pin QFN 3 x 3 mm	–40° to 85°C
SY75576LKY	Gen 1/2/3/4	4	LVDS/HCSL	HCSL	3.3	20-pin TSSOP 6.4 x 6.5 mm	–40° to 85°C
SY75578LMG	Gen 1/2/3/4	8	LVDS/HCSL	HCSL	3.3	32-pin QFN 5 x 5 mm	–40° to 85°C

(1) LVDS and LVCMS output logic options available

(2) –40° to 105°C options available

Customized PCIe Timing Parts

Use our online tool to easily customize the PCIe Gen 1/2/3/4 compliant clock generators and oscillators to achieve the desired frequency and output format.

Visit www.clockworks.microchip.com/Timing/ to customize and order samples.



Useful Resources

Check out our entire portfolio of PCIe Timing solutions at
www.clockworks.microchip.com/Timing/

Please email us at tcg_help@microchip.com for more information about PCIe timing products.

ClockWorks®
CONFIGURATOR

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