

Silicon Labs Most Popular Clock Buffers

Key Questions

- Output Format?
- Jitter Spec?
- Buffer Type?

See Back Page:

- # of Outputs?
- Frequency?
- VDD/VDDO?

What Output Format?

- Differential
- Differential/Mixed Mode
- PCIe/HCSL
- Single-ended only

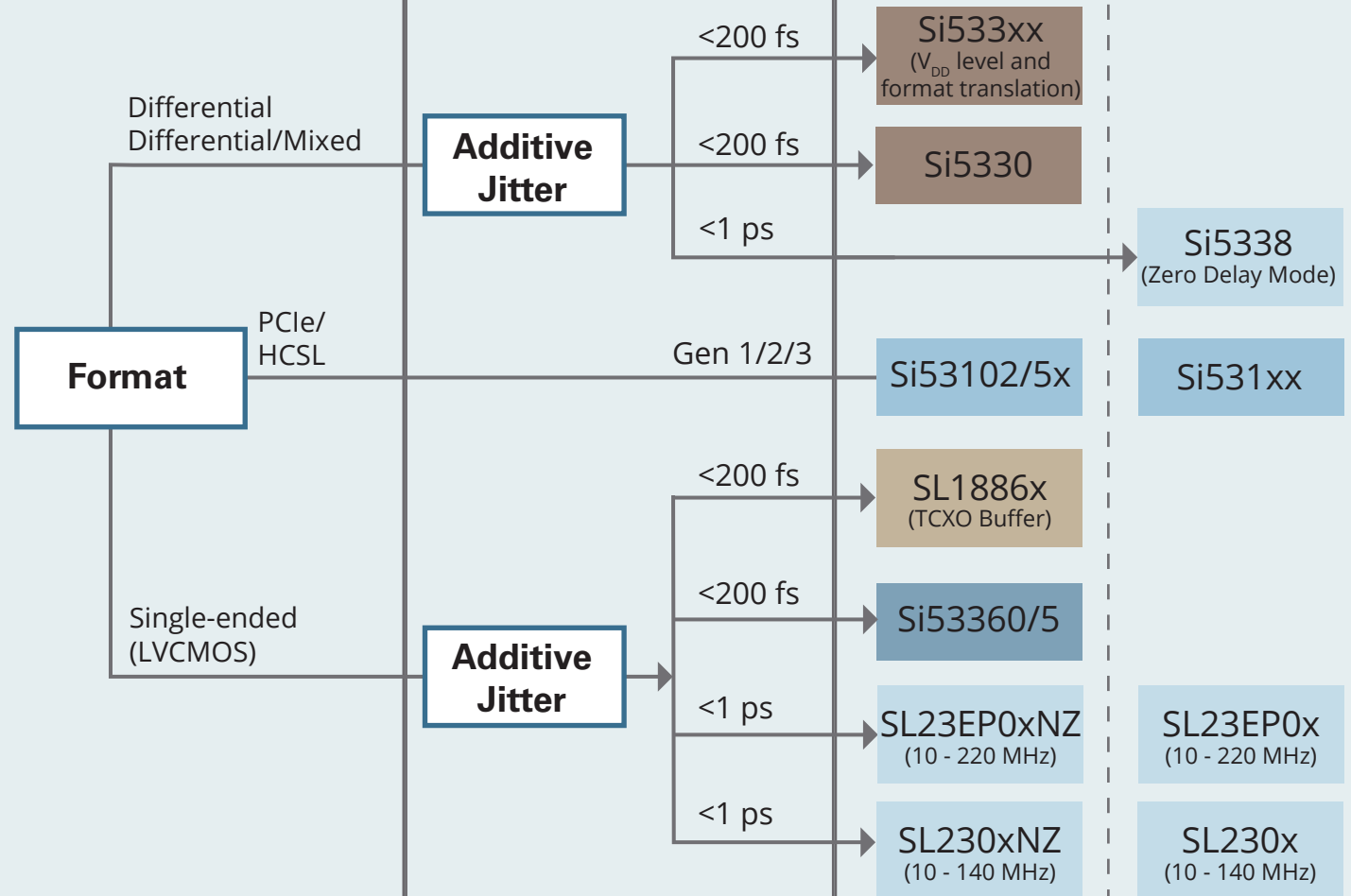
What Jitter Spec/ Performance?

- <200 fs RMS Jitter
- <1 ps RMS Jitter
- >1 ps RMS Jitter
- PCIe Gen 1/2/3

What Buffer Type?

Fanout Buffer

Zero Delay Buffer (ZDB)



Price/Performance ↑

Parameter	Single-ended (LVCMOS) Clock Buffer										PCIe Buffer		Differential/ Mixed Mode Clock Buffer	
	Zero Delay Buffer					Fanout Buffer					TCXO Buffer	Fanout		
	SL23EP04	SL2305/ SL23EP05	SL23EP08	SL2309/ SL23EP09	Si5338	SL2304NZ/ SL23EP04NZ	SL2305NZ	SL23EP09NZ	Si53360/5	SL18860	Si53102/ Si53154/6/9	Si53106/08/ 12/15/19	Si5330	Si533xx
Clock Inputs	1	1	1	1	1	1	1	1	2/1	1	1	1	1	2
Clock Outputs	4	5	8	9	4	4	5	9	8/8	3	2/4/6/9	6/8/12/ 15/19	4/8	up to 10
Input Frequencies (MHz)	10 - 220	10 - 140/ 10 - 220	10 - 220	10 - 140/ 10 - 220	up to 710	10 - 52	0 - 140	0 - 220	1 - 200	10 - 52	10 - 175/ 100 - 210	100, 133	up to 710	up to 1250
Output Frequencies (MHz)	10 - 220	10 - 140/ 10 - 220	10 - 220	10 - 140/ 10 - 220	up to 710	0 - 140/ 0 - 220	0 - 140	0 - 220	1 - 200	10 - 52	10 - 175/ 100 - 210	100, 133	up to 710	up to 1250
Cycle-to-Cycle Jitter	10 ps	150 ps	200 ps	15 ps/ 200 ps							PCIe Gen 1/2/3	PCIe Gen 1/2/3		
RMS Additive Jitter					0.7 ps	0.5 ps	0.5 ps	0.5 ps	150 fs	150 fs	PCIe Gen 1/2/3	PCIe Gen 1/2/3	150 fs	45 fs
Output Format	LVC MOS	LVC MOS	LVC MOS	LVC MOS	LVPECL/ LVDS/HCSL/ SSTL/HSTL/ LVC MOS	LVC MOS	LVC MOS	LVC MOS	LVC MOS	LVC MOS	HCSL	HCSL	LVPECL/ LVDS/HCSL/ SSTL/HSTL/ LVC MOS	LVPECL/ LVDS/HCSL/ SSTL/HSTL/ LVC MOS
VDD (V)	2.5/3.3	3.3; 2.5/3.3	2.5/3.3	3.3; 2.5/3.3	1.8/2.5/3.3	3.3; 2.5/3.3	3.3	2.5/3.3	1.8/2.5/3.3	1.8/2.5/3.3	3.3	3.3	1.8/2.5/3.3	1.8/2.5/3.3
VDDO (V)					1.8/2.5/3.3							1.05 - 3.3	1.5/1.8/ 2.5/3.3	1.8/2.5/3.3
Package(s)	SOIC8	SOIC8/ TSSOP8	SOIC16/ TSSOP16	SOIC16/ TSSOP16	QFN24	TSSOP8	SOIC8	SOIC16	TSSOP16	TDFN10	TDFN8/ QFN24/ QFN32/ QFN48	QFN40/ QFN48/ QFN64/ QFN72	QFN24	QFN16/ QFN32/ QFN44/ TSSOP16/ TSSOP20
SpreadThru ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
OE Control/I ² C					1	1			1	3	4/6/9	6/8/12/I ² C	1	2
Clock Division	x/2, 2x ²		x/2, 2x, 4x ³											x/2, x/4
Industrial Temperature	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Competitive Footprint Comp ⁴	✓	✓	✓	✓		✓	✓	✓	✓			✓		✓

* 1. Spread Spectrum clock pass through. 2. SL23EP04-2 supports clock division/multiplication. 3. SL23EP08-2/-3 support clock division/multiplication. 4. Contact Silicon Labs for information



Lower Cost **Higher Performance**

Switch/Router | DVR/NVR | Industrial | Wearable Device | Server/Storage/Data Center | Datacom/Telecom