

<p>Ideal for Clocking FPGAs</p> <ul style="list-style-type: none"> Any-rate frequency synthesis Ultra low jitter Reprogrammable via I2C/SPI w/out BOM changes High power supply noise rejection minimizes impact of board-level noise on clock jitter View reference designs at: www.silabs.com/TimingRD <p>XO/VCXO (Si53x, Si55x, Si57x, Si51x, Si500)</p> <ul style="list-style-type: none"> Single, dual, quad, and any-rate frequency XO/VCXOs Any-frequency programmable: 100 kHz to 1.4 GHz Low jitter <ul style="list-style-type: none"> 0.3 ps rms (Si53x/7x XOs) 0.5 ps rms (Si55x VCXOs) 0.8 ps rms (Si51x XO/VCXOs) 2 week lead time for any device +/-20, 50, 100 ppm stability with guaranteed aging Industry-standard 3.2x5mm and 5x7mm packaging LVPECL, LVDS, CMOS, CML, HCSL 1.8, 2.5, 3.3 V Request a custom XO/VCXO: www.silabs.com/custom-timing 	<p>Clock Generators (Si5335/38, Si5350/51, Si512xx)</p> <ul style="list-style-type: none"> Generate up to 8 unique, non-integer related frequencies Generates any combination of frequencies exactly Wide output frequency range: 8 kHz to 710 MHz Low jitter: <1 ps rms phase jitter Free-run and synchronous operation Integrated format translation (LVPECL, LVDS, CMOS, HCSL, SSTL, HSTL) Independent VDDO per output clock (1.8, 2.5, 3.3 V) PCI Express Gen 1/2/3 and GbE jitter compliant Request a custom clock: www.silabs.com/custom-timing <p>Jitter Attenuating Clocks (Si531x, Si532x, Si536x, Si537x)</p> <ul style="list-style-type: none"> Generate any frequency from 2 kHz to 1.4 GHz from 2 kHz to 710 MHz input Ultra low jitter: 0.3 ps rms phase jitter Jitter cleaning w/integrated adjustable loop filter (>4 Hz) Ideal for OTN, 10G/100G and broadcast video applications Free-run, synchronous, holdover modes of operation Ask your distributor about the FREE Clock Tree service available now!
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Protocol	Data Rate (Gbps/lane)	Xilinx FPGA	Altera FPGA	Lattice FPGA	Silicon Labs XO	Silicon Labs VCXO	Silicon Labs Clock
3G-SDI	2.97	Virtex-7 GTX/GTH Kintex-7 GTX Artix-7 GTP Virtex-6 Virtex-5 Spartan-6	Stratix V GT/GX/GS Stratix IV GT/GX Stratix II GX Hardcopy IV GX Arria V GX/GT Arria II GX/GT Cyclone V GX Cyclone V GT Cyclone IV GX	ECP4 ECP3	Si53x Si51x	Si55x Si51x	Si5324/69 (Genlock) Si5335/38 (clk gen)
SDI SD/HD	0.27/1.485	Virtex-7 GTX/GTH Kintex-7 GTX Artix-7 GTP Virtex-5 Spartan-3	Stratix V GT/GX/GS Stratix IV GT/GX Stratix II GX Hardcopy IV GX Arria V GX/GT Arria II GX/GT Cyclone V GX Cyclone V GT Cyclone IV GX	ECP4 ECP3	Si51x	Si51x	Si5324/69 (Genlock) Si5335/38 (Clk gen.)
CEI-6G/SR/LR	4.976-6.375	Virtex-7 GTX/GTH Kintex-7 GTX Artix-7 GTP	Stratix V GT/GX/GS Stratix IV GT/GX Stratix II GX Hardcopy IV GX Arria V GX/GT		Si51x	Si51x	Si5335/38

Protocol	Data Rate (Gbps/lane)	Xilinx FPGA	Altera FPGA	Lattice FPGA	Silicon Labs XO	Silicon Labs VCXO	Silicon Labs Clock
CEI-11G/SR	9.95-11.1	Virtex-7 GTX/GTH	Stratix V GT/GX/GS Stratix IV GT		Si53x	Si55x	Si5319
CEI-28GG/VSR CPRI	19.9-28.05	Virtex-7 GTX/GTH	Stratix V GT		Si53x	Si55x	Si5319
	0.6144, 1.2288, 2.4576, 3.072, 4.9152, 6.144, 9.8304	Virtex-7 GTX Artix-7 GTP Virtex-6 Virtex-5 Spartan-6	Stratix V GT/GX/GS Stratix IV GT/GX Stratix II GX Hardcopy IV GX Arria V GX/GT Arria II GX/GT Cyclone V GX Cyclone V GT Cyclone IV GX	ECP4 ECP3 ECP2/M	Si53x	Si55x	Si5324/69
Display Port	1.62, 2.7	Virtex-5 Spartan-6	Arria V GX/GT Cyclone V GX Cyclone V GT Cyclone IV GX	ECP3	Si500	Si500	Si5350/51
10GbE XAUI	3.125	Artix-7 GTP Virtex-6 Virtex-5 Spartan-6	Stratix V GT/GX/GS Stratix IV GT/GX Stratix II GX Hardcopy IV GX Arria V GX/GT Arria II GX/GT Cyclone V GX Cyclone V GT Cyclone IV GX	ECP4 ECP3	Si51x	Si51x	Si5335/38
10GbE XFI	10.3125	Virtex-7 GTX/GTH Kintex-7 GTX Virtex-6	Stratix V GT/GX/GS Stratix IV GT Arria V GT		Si53x	Si55x	Si5326/75
40G/100G Ethernet	10.3125	Virtex-7 GTX/GTH/ GTZ Kintex-7 GTX Virtex-6	Stratix V GT/GX/GS Stratix IV GT		Si53x	Si55x	Si5326/75
Gigabit Ethernet	1.25	Virtex-7 GTX/GTH Kintex-7 GTX Artix-7 GTP Virtex-6 Virtex-5 Virtex-4 Spartan-6	Stratix V GT/GX/GS Stratix IV GT/GX Stratix II GX Hardcopy IV GX Arria V GX/GT Arria II GX/GT Cyclone V GX Cyclone V GT Cyclone IV GX	ECP4 ECP3 ECP2/M SC/M XP2	Si51x	Si51x	Si5326/27 Si5335/38

Protocol	Data Rate (Gbps/lane)	Xilinx FPGA	Altera FPGA	Lattice FPGA	Silicon Labs XO	Silicon Labs VCXO	Silicon Labs Clock
Fibre Channel	1.0625, 2.125, 4.25, 8.5, 10.52, 14.025	Virtex-7	Stratix V		Si51x	Si51x	Si5326/27
		GTX/GTH	GT/GX/GS		Si53x	Si55x	Si5326/27
GPON	1.244 (up), 2.488 (down)	Kintex-7	Stratix IV GT/GX				Si5335/38
		GTX	Stratix II GX				
		Artix-7	Hardcopy IV GX				
		GTP	Arria II GX/GT				
		Virtex-6					
OTN OTU-2	10.709	Virtex-5					
		Virtex-7	Stratix V		Si51x	Si51x	Si5326/27
		GTX/GTH	GT/GX/GS				Si5335/38
		Kintex-7	Stratix IV GT/GX				
		GTX	Hardcopy IV GX				
OTN 10GbE w/FEC	11.1, 11.3	Artix-7	Arria V GX/GT				
		GTP	Arria II GX/GT				
		Virtex-6					
		Virtex-7	Stratix V		Si53x	Si55x	Si5326/75
		GTX/GTH	GT/GX/GS				
HiGig+	3.75	Kintex-7	Stratix IV GT				
		GTX					
		Artix-7					
		GTP					
		Virtex-6					
HiGig2	4.0625	Virtex-7	Stratix V		Si51x	Si51x	Si5335/38
		GTX/GTH	GT/GX/GS				
		Kintex-7	Stratix IV GT/GX				
		GTX	Stratix II GX				
		Artix-7	Hardcopy IV GX				
HyperTransport 3.0	0.4, 2.4, 2.8, 3.2	GTP	Arria V GX/GT				
		Virtex-6	Arria II GX/GT				
		Virtex-7	Stratix V		Si51x	Si51x	Si5335/38
		GTX/GTH	GT/GX/GS				
		Kintex-7	Stratix IV GT/GX				
IEEE 802.3ba 10GBASE-KR	10.3125	GTX	Hardcopy IV GX				
			Arria V GX/GT				

Protocol	Data Rate (Gbps/lane)	Xilinx FPGA	Altera FPGA	Lattice FPGA	Silicon Labs XO	Silicon Labs VCXO	Silicon Labs Clock
Interlaken	3.125-12.5	Virtex-7	Stratix V		Si53x	Si55x	Si5326
		GTX/GTH	GT/GX/GS		Si51x	Si51x	Si5335/38
		Kintex-7	Stratix IV GT/GX				
		GTX	Stratix II GX				
PCIe Gen1, Gen2	2.5, 5	Artix-7	Hardcopy IV GX				
		GTP	Arria V GX/GT				
		Virtex-7	Stratix V	ECP4	Si51x	Si51x	Si5335/38
		GTX/GTH	GT/GX/GS	ECP3			Si5121x
		Kintex-7	Stratix IV GT/GX	ECP2/M			
		GTX	Stratix II GX				
PCIe Gen3	8	Artix-7	Hardcopy IV GX				
		GTP	Arria V GX/GT				
RXAUI	6.25	Virtex-6	Arria II GX/GT				
		Virtex-5	Cyclone V GT				
QDR/Infini band QPI	10	Spartan-6					
		Virtex-7	Stratix V	ECP3	Si51x	Si51x	Si5335/38
SAS	1.5, 3, 6	GTX/GTH	GT/GX/GS				Si5121x
		Kintex-7	Stratix IV GT/GX				
SAS12G	1.5, 3, 6, 12	GTX	Stratix II GX				
		GTP	Hardcopy IV GX				
SATA	1.5, 3, 6	Artix-7	Arria V GX/GT				
		GTP	Arria II GX/GT				
SATA	1.5, 3, 6	Virtex-6	Cyclone V GX				
		Virtex-5	Cyclone V GT				
SATA	1.5, 3, 6	Virtex-7	Stratix V	ECP4	Si51x	Si51x	Si5335/38
		GTX/GTH	GT/GX/GS	ECP3			Si5350/51
SATA	1.5, 3, 6	Kintex-7	Stratix IV GT/GX				
		GTX	Hardcopy IV GX				
SATA	1.5, 3, 6	Artix-7	Arria V GX/GT				
		GTP	Arria II GX/GT				
SATA	1.5, 3, 6	Virtex-6	Cyclone V GX				
		Virtex-5	Cyclone V GT				
SATA	1.5, 3, 6	Virtex-7	Stratix V	ECP4	Si51x	Si51x	Si5335/38
		GTX/GTH	GT/GX/GS	ECP3			Si5350/51
SATA	1.5, 3, 6	Kintex-7	Stratix IV GT/GX				
		GTX	Hardcopy IV GX				
SATA	1.5, 3, 6	Artix-7	Arria V GX/GT				
		GTP	Arria II GX/GT				
SATA	1.5, 3, 6	Virtex-6	Cyclone V GX				
		Virtex-5	Cyclone V GT				
SATA	1.5, 3, 6	Virtex-7	Stratix V	ECP4	Si51x	Si51x	Si5335/38
		GTX/GTH	GT/GX/GS	ECP3			Si5350/51
SATA	1.5, 3, 6	Kintex-7	Stratix IV GT/GX				
		GTX	Hardcopy IV GX				
SATA	1.5, 3, 6	Artix-7	Arria V GX/GT				
		GTP	Arria II GX/GT				
SATA	1.5, 3, 6	Virtex-6	Cyclone V GX				
		Virtex-5	Cyclone V GT				
SATA	1.5, 3, 6	Virtex-7	Stratix V	ECP4	Si51x	Si51x	Si5335/38
		GTX/GTH	GT/GX/GS	ECP3			Si5350/51
SATA	1.5, 3, 6	Kintex-7	Stratix IV GT/GX				
		GTX	Hardcopy IV GX				
SATA	1.5, 3, 6	Artix-7	Arria V GX/GT				
		GTP	Arria II GX/GT				
SATA	1.5, 3, 6	Virtex-6	Cyclone V GX				
		Virtex-5	Cyclone V GT				
SATA	1.5, 3, 6	Virtex-7	Stratix V	ECP4	Si51x	Si51x	Si5335/38
		GTX/GTH	GT/GX/GS	ECP3			Si5350/51
SATA	1.5, 3, 6	Kintex-7	Stratix IV GT/GX				
		GTX	Hardcopy IV GX				
SATA	1.5, 3, 6	Artix-7	Arria V GX/GT				
		GTP	Arria II GX/GT				
SATA	1.5, 3, 6	Virtex-6	Cyclone V GX				
		Virtex-5	Cyclone V GT				

Protocol	Data Rate (Gbps/lane)	Xilinx FPGA	Altera FPGA	Lattice FPGA	Silicon Labs XO	Silicon Labs VCXO	Silicon Labs Clock
SerialLite II	0.6-6.375		Stratix V GT/GX/GS Stratix IV GT/GX Stratix II GX Hardcopy IV GX Arria V GX/GT Arria II GX/GT Cyclone V GX Cyclone V GT Cyclone IV GX		Si51x	Si51x	Si5335/38 Si5350/51
Serial RapidIO	1.25, 2.5, 3.125, 5, 6.25	Virtex-7 GTX/GTH Kintex-7 GTX Artix-7 GTP Virtex-6 Spartan-6	Stratix V GT/GX/GS Stratix IV GT/GX Stratix II GX Hardcopy IV GX Arria V GX/GT Arria II GX/GT Cyclone V GX Cyclone V GT Cyclone IV GX	ECP4 ECP3 ECP2/M	Si51x	Si51x	Si5338/35 Si5350/51
SFI-5.1	2.488-3.125	Virtex-7 GTX/GTH Kintex-7 GTX Artix-7 GTP	Stratix V GT/GX/GS Stratix IV GT/GX Stratix II GX Hardcopy IV GX Arria V GX/GT Arria II GX/GT		Si51x	Si51x	Si5335/38
SFI-5.2	9.9-11.3	Virtex-7 GTX/GTH Kintex-7 GTX	Stratix V GT/GX/GS Stratix IV GT		Si53x	Si55x	Si5319
SONET OC-3/12/48/192	0.155, 0.622, 2.488, 9.953	Virtex-7 GTX/GTH Kintex-7 GTX Artix-7 GTP Virtex-6	Stratix V GT/GX/GS Stratix IV GT/GX Stratix II GX Hardcopy IV GX Arria V GX/GT Arria II GX/GT		Si53x	Si55x	Si5326/75 Si5335/38
SPAUI	3.125, 6.25		Stratix V GT/GX/GS Stratix IV GT/GX Stratix II GX Hardcopy IV GX Arria II GX/GT		Si51x	Si51x	Si5335/38
V-by-One	3, 3.75	Virtex-7 GTX/GTH Kintex-7 GTX Artix-7 GTP	Arria V GX/GT Cyclone V GX Cyclone V GT Cyclone IV GX		Si51x	Si51x	Si5335/38