



Xilinx Reference Clocks

Protocol	Line/Lane Rate (Gbps)	Xilinx FPGA Family	XO Crystal Oscillator	VCXO Crystal Oscillator	Clock Generation	Jitter Attenuating Clock Generation
Video						
SDI 3G/HD/SD	0.27 1.485 2.970	Virtex 6 / 7 / UltraScale Kintex 7 / UltraScale Artix 7 Spartan 6 Zync-7000	FemtoClock 8N30xxx 8N40xxx IDT XO	FemtoClock 8N30Vxxx 8N40Vxxx	VersaClock5 5P49V5901	UFT 3G 8T49N28x FemtoClock 813Nxxx
Display Port	1.62, 2.7, 5.4, 8.1				UFT 8T49N28x	
HDMI/DVI	1.65, 3.4, 6				8T49N00x	
Communication						
1 GbE	1.25	Virtex 6 / 7 / UltraScale Kintex 7 / UltraScale Artix 7 Spartan 6 Zync-7000			VersaClock5 5P49V5901	
10GbE XAUI	3.125				8T49N00x	
10GbE XFI	10.313	Virtex 6 / 7 / UltraScale Kintex 7 / UltraScale Zync-7000			VersaClock5 5P49V5901	
40GbE 100GbE	10.313	Virtex 6 / 7 / UltraScale Kintex 7 / UltraScale Zync-7000			UFT 8T49N28x	
PCIe Generator 1 Generator 2	2.5 5.0	Virtex 6 / 7 / UltraScale Kintex 7 / UltraScale Artix 7 Spartan 6 Zync-7000	FemtoClock 8N30xxx 8N40xxx IDT XO	FemtoClock 8N30xxx 8N40xxx	UFT 8T49N28x	UFT 3G 8T49N28x FemtoClock 813Nxxx
PCIe Generator 3	8	Virtex 6 / 7 / UltraScale Kintex 7 / UltraScale Zync-7000			5V4123x (common ck) 5V41235 9FGxxxx	
Serial RapidIO	1.25 2.5 3.125 5 6.25	Virtex 6 / 7 / UltraScale Kintex 7 / UltraScale Artix 7 Spartan 6 Zync-7000			VersaClock5 5P49V5901	
JESD204B	3.125 6.375 12.5	Virtex 6 / 7 / UltraScale Kintex 7 / UltraScale Artix 7 Spartan 6 Zync-7000			UFT 8T49N28x	
					8T49N00x	
					8V79S690	

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Storage						
Fibre Channel	1.0625 2.125 4.25 8.5 10.52 14.025	Virtex 6 / 7 / UltraScale Kintex 7 / UltraScale Artix 7 Zync-7000	FemtoClock 8N30xxx 8N40xxx IDT XO	FemtoClock 8N30xxx 8N40xxx	VersaClock5 5P49V5901 UFT 8T49N28x	UFT 3G 8T49N28x FemtoClock 813Nxxx
SAS 12G	1.5 3.0 6.0 12.0	Virtex 6 / 7 / UltraScale Kintex 7 / UltraScale Artix 7 Zync-7000				
SAS/ SATA	1.5 3.0 6.0	Virtex 6 / 7 / UltraScale Kintex 7 / UltraScale Artix 7 Zync-7000				
WAN						
SONET OC-3, OC-12, OC-48, OC-192	.155, .622, 2.488 9.953	Virtex 6 / 7 / UltraScale Kintex 7 / UltraScale Zync-7000	FemtoClock 8N30xxx 8N40xxx IDT XO	FemtoClock 8N30xxx 8N40xxx	VersaClock5 5P49V5901 UFT 8T49N28x	UFT 3G 8T49N28x FemtoClock 813Nxxx
OTN OTU-2	10.709	Virtex 6 / 7 / UltraScale Kintex 7 / UltraScale Zync-7000				
OTN OTU-3 OTU-4	43.018 112	Virtex 6 / 7 / UltraScale Kintex 7 / UltraScale Zync-7000				
CPRI	0.6144, 1.2288, 2.4876, 3.072, 4.9152, 6.144, 9.8304	Virtex 6 / 7 / UltraScale Kintex 7 / UltraScale Zync-7000				

IDT Clock Guide by Xilinx FPGA family

	Spartan-6	Artix-7	Kintex-7	Virtex-7	Kintex UltraScale	Virtex UltraScale	Zync-7000
Transceiver Reference Clock Phase Noise Mask*	IDT Compliant Spartan 6	IDT Compliant Series 7	IDT Compliant Series 7	IDT Compliant Series 7	IDT Compliant Series 7	IDT Compliant Series 7	IDT Compliant Series 7
IDT Clock Generator	UFT 8T49N2xx	UFT 8T49N28x	UFT 8T49N28x	UFT 8T49N28x	UFT 8T49N28x	UFT 8T49N28x	UFT 8T49N28x
	VersaClock® 5 5P49V5901	VersaClock 5 5P49V5901	VersaClock 5 5P49V5901**	VersaClock 5 5P49V5901**	VersaClock 5 5P49V5901**	VersaClock 5 5P49V5901**	VersaClock 5 5P49V5901**
IDT Jitter Attenuator	UFT 8T49N2xx	UFT 8T49N28x	UFT 8T49N28x	UFT 8T49N28x	UFT 8T49N28x	UFT 8T49N28x	UFT 8T49N28x
Transceiver Type	GTP	GTP	GTX	GTX/GTH/GTZ	GTH	GTH/GTY	GTX
Transceiver Count	8	16	32	96	64	120	16
Transceiver Speed	3.2 Gb/s	6.6 Gb/s	12.5 Gb/s	28.05 Gb/s	16.3 Gb/s	32.75 Gb/s	12.5 Gb/s
PCI Express® Interface	x1 Gen1	x4 Gen2	x8 Gen2	x8 Gen3	x8 Gen3	x8 Gen3	x8 Gen2

Notes

* Different phase noise masks are applied dependent on clock rate and transceiver type. These IDT clock devices provide phase noise requirements which are lower than the Xilinx mask requirements. This results in no additional jitter on the transceiver data.

** VersaClock 5 compliant for transceiver rates up to ~6.6Gb/s

Additional Info:

[Xilinx Transceiver link](#)

Request samples and download documentation and tools at www.idt.com

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