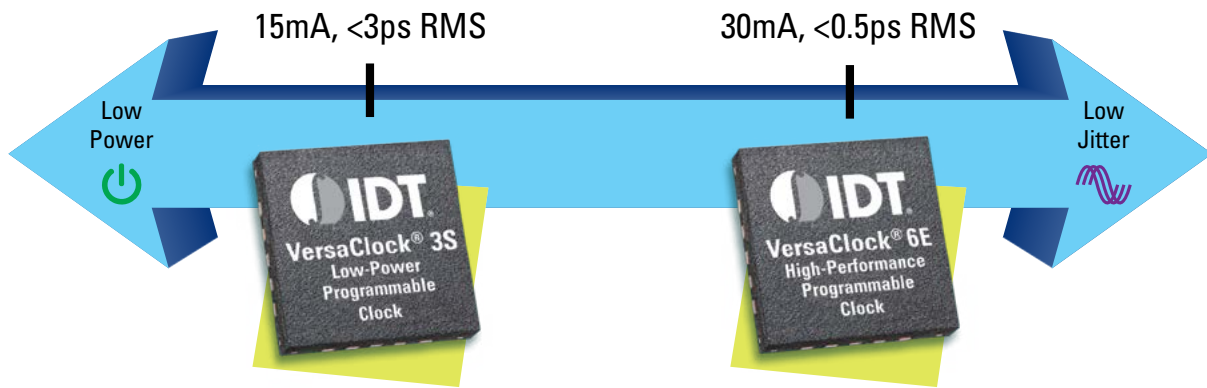


VersaClock Family Overview



EASE OF USE

- Online configuration tool
- Two week delivery for custom factory programmed samples
- Timing Commander™ software to configure, program, and monitor sophisticated timing devices

FLEXIBILITY

- I²C configuration for instant customization
- Configurable output types
- One-time programmable (OTP) memory

APPLICATIONS

- Computing
 - Servers
 - PCIe® Gen 1/2/3
 - Embedded systems
 - USB 3.0/Thunderbolt™/RapidIO®
- Consumer
 - Smart devices
 - Set top boxes
- Communications
 - Broadcast video
 - Gigabit Ethernet
- Industrial
- Medical
- Automotive

IDT's VersaClock® family offers an industry leading portfolio of more than 20 programmable clock generators.

VersaClock® devices offer a combination of low power, flexibility and performance for a wide range of applications. These features make them ideal candidates for simplifying system design by replacing multiple discrete timing components and reducing bill of materials (BOM).

The VersaClock product family supports operating voltages from 1.8 to 3.3 V, differential (LVPECL/HCSL/LVDS/LP-HCSL) and LVCMOS output types, up to 3 PLLs and multiple fractional dividers to accurately generate virtually any frequency. Products satisfy system requirements from oscillator replacement to PCIe® Gen 1/2/3 and to communications applications, while consuming very little power.

Key Specifications	VersaClock® 3S	VersaClock® 6
Core Power (mA)	15	30
RMS Phase Jitter (ps) (12k to 20M)	1.5	0.5
Output Frequency Range (Mhz)	1 to 500	0.001 to 350
Architecture	2 Fractional PLL 1 Integer Low Power PLL DCO	1 PLL with 4 Fractional Output Dividers
Package Size	3 x 3 mm 20-QFN 4 x 4 mm 24-QFN	4 x 4 mm 24-LGA 4 x 4 mm 24-QFN 5 x 5 mm 40-QFN 6 x 6 mm 48-QFN
VDD	1.8 2.5 3.3V Supported by different product options	1.8 2.5 3.3V



VersaClock Family Selector Guide

VersaClock 3S Family

Part Number	# of Outputs [†]	VDD Core	VDD IO	Output Frequency	Output Types	Package
5P35021	2 Universal Pairs* 1 LVCMOS	3.3V	1.8, 2.5, 3.3V (LVCMOS)	LVCMOS: 1 to 160 MHz Differential: 1 to 500 MHz	LVCMOS LVPECL LVDS LPHCSL	3 x 3 mm 20-QFN
5P35023	2 Universal Pairs* 3 LVCMOS					4 x 4 mm 24-QFN
5L35021	2 LPHCL Pairs 1 LVCMOS	1.8V	1.8V	1 to 125 MHz	LVCMOS LPHCSL	3 x 3 mm 20-QFN
5L35023	2 LPHCL Pairs 3 LVCMOS					4 x 4 mm 24-QFN

VersaClock 6E Family

Part Number	# of Outputs [†]	VDD Core VDD IO	Output Types Frequency	Output Types	Package
5P49V6965	4 Universal Pairs*	1.8 to 3.3V	LVCMOS: 0.001 to 200 Mhz Differential: 0.001 to 350 Mhz	LVCMOS LVPECL LVDS HCSL	4 x 4 mm 24-QFN
5P49V6967	3 Universal Pairs* 4 LPHCSL Pairs				5 x 5 mm 40-QFN
5P49V6968	3 Universal Pairs* 8 LPHCSL Pairs			6 x 6 mm 48-QFN	

VersaClock with Integrated Crystal

Part Number	# of Outputs [†]	VDD Core	VDD IO	Output Frequency	Output types	Package
5X35023	2 Universal Pairs* 3 LVCMOS	3.3	1.8, 2.5, 3.3V (LVCMOS) 2.5, 3.3 (LVPECL, LVDS, LPHCSL)	LVC MOS: 1 to 160 MHz Differential: 1 to 500 MHz	LVC MOS, LVPECL LVDS, LPHCSL	4 x 4 mm 24-QFN
5P49V6975	4 Universal Pairs*	1.8 to 3.3V		LVC MOS: 0.001 to 200 MHz Differential: 0.001 to 350 MHz	LVC MOS, LVPECL LVDS, HCSL	4 x 4 mm 24-LGA

[†]All devices have one reference output *Configurable to differential or LVCMOS

To request samples, download documentation or learn more visit: idt.com/versaclock