

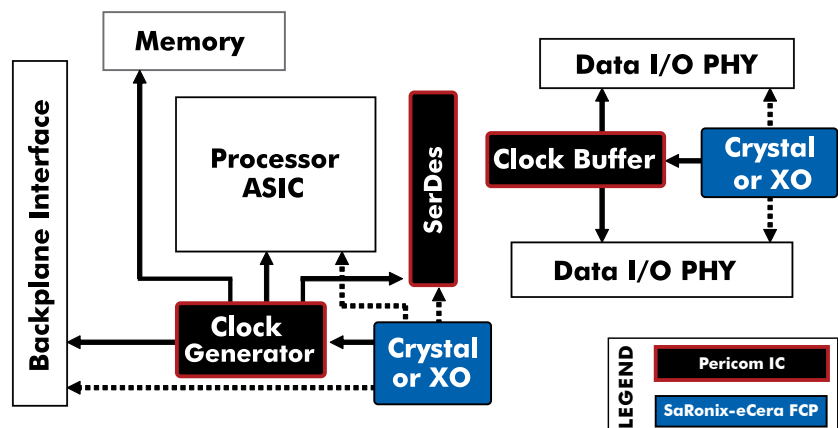
# FREQUENCY CONTROL

## saRonix-eCera™

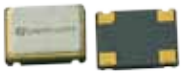

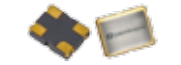

SaRonix-eCera™ Frequency Control Products (FCP) are part of Pericom Total Timing Solutions<sup>SM</sup>. Pericom silicon combines with SaRonix-eCera quartz to serve a full range of timing requirements.

- Leading-edge LVCMOS, LVPECL, LVDS, and HCSL Oscillators
- Output frequencies extend to 670MHz
- Voltage options ranging from 3.3V to 1.8V
- Fundamental, 3rd Overtone, XP, Spread Spectrum, and PLL types of devices are all supported
- Unprecedented lowest phase noise, lowest jitter and highest power supply noise rejection capability
- Virtually any timing requirement can be met by combining Pericom Timing IC products
- Oscillators available in packages from 2.0 x 1.6mm to 7.0 x 5.0mm
- Crystals available in packages from 2.0 x 1.6mm SMD to HC49 Metal Can

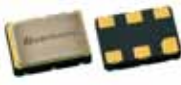

### SaRonix-eCera Enables Total Timing Solutions



## CMOS Crystal Oscillators

Product Image	Product Series	*SaRonix Reference P/N	Package Size (mm)	Output Logic	Supply Voltage	Package Type	Pads/Pins	Frequency Range (MHz)	Jitter
	FN	S1612	7.0 x 5.0	CMOS	1.8V	SMD Ceramic	4	1~166	<1 ps RMS
		S1614	7.0 x 5.0	CMOS	2.5V	SMD Ceramic	4	1~166	<1 ps RMS
		S1613	7.0 x 5.0	CMOS	3.3V	SMD Ceramic	4	1~166	<1 ps RMS
	SX	S1614XP	7.0 x 5.0	CMOS	2.5V	SMD Ceramic	4	100~160	<1 ps RMS
		S1613XP	7.0 x 5.0	CMOS	3.3V	SMD Ceramic	4	100~160	<1 ps RMS
	FD	S1632	5.0 x 3.2	CMOS	1.8V	SMD Ceramic	4	1~133	<1 ps RMS
		S1634	5.0 x 3.2	CMOS	2.5V	SMD Ceramic	4	1~133	<1 ps RMS
		S1633	5.0 x 3.2	CMOS	3.3V	SMD Ceramic	4	1~133	<1 ps RMS
	FK	S1642	3.2 x 2.5	CMOS	1.8V	SMD Ceramic	4	1~106.25	<1 ps RMS
		S1644	3.2 x 2.5	CMOS	2.5V	SMD Ceramic	4	1~106.25	<1 ps RMS
		S1643	3.2 x 2.5	CMOS	3.3V	SMD Ceramic	4	1~106.25	<1 ps RMS
	FJ	N/A	2.5 x 2.0	CMOS	1.8V	SMD Ceramic	4	1~75	<1 ps RMS
		N/A	2.5 x 2.0	CMOS	2.5V	SMD Ceramic	4	1~75	<1 ps RMS
		N/A	2.5 x 2.0	CMOS	3.3V	SMD Ceramic	4	1~75	<1 ps RMS

## Differential Crystal Oscillators

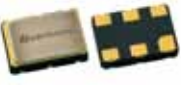



Product Image	Product Series	*SaRonix Reference P/N	Package Size (mm)	Output Logic	Supply Voltage	Package Type	Pads/Pins	Frequency Range (MHz)	Jitter
	PX	SDS382	7.0 x 5.0	LVDS	2.5V	SMD Ceramic	6	38.88~162	<1 ps RMS
		SDS383	7.0 x 5.0	LVDS	3.3V	SMD Ceramic	6	38.88~162	<1 ps RMS
	LN	N/A	7.0 x 5.0	LVDS	3.3V	SMD Ceramic	6	1~800	<0.9 ps RMS
	SH	N/A	7.0 x 5.0	HCSL	3.3V	SMD Ceramic	6	100	<2.5 ps RMS <sup>(1)</sup>
	SN	SEL382	7.0 x 5.0	PECL	2.5V	SMD Ceramic	6	50~220	<1 ps RMS
		SEL383	7.0 x 5.0	PECL	3.3V	SMD Ceramic	6	50~220	<1 ps RMS
	SN RateSelect™ <sup>(2)</sup>	SRS383	7.0 x 5.0	PECL	3.3V	SMD Ceramic	6	50~220	<1 ps RMS
	PN	SEL381	7.0 x 5.0	PECL	3.3V	SMD Ceramic	6	1~800	<4 ps RMS
	PB	N/A	7.0 x 5.0	PECL	2.5V	SMD Ceramic	6	38.88~162	<1 ps RMS
		N/A	7.0 x 5.0	PECL	3.3V	SMD Ceramic	6	38.88~162	<1 ps RMS
	SD	N/A	5.0 x 3.2	PECL	2.5V	SMD Ceramic	6	50~220	<1 ps RMS
		SEL503	5.0 x 3.2	PECL	3.3V	SMD Ceramic	6	50~220	<1 ps RMS

Notes:

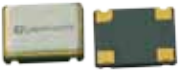


1. Using PCIe® 2.0 ("Gen 2") jitter filter 2. RateSelect™ function toggles output frequency between primary and primary/2.

\*These are SaRonix part numbers for reference only. Please refer to the Product Series two-letter code for any new orders. N/A = not applicable

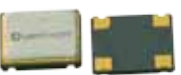

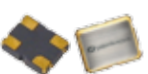
## VCXO Crystal Oscillators

Product Image	Product Series	*SaRonix Reference P/N	Package Size (mm)	Output Logic	Supply Voltage	Package Type	Pads/Pins	Frequency Range (MHz)	Jitter
	PR	S1577	7.0 x 5.0	PECL	2.5V	SMD Ceramic	6	19.44~800	<3 ps RMS
	LR	N/A	7.0 x 5.0	LVDS	3.3V	SMD Ceramic	6	19.44~800	<3 ps RMS
	FR	ST1307	7.0 x 5.0	CMOS	3.3V	SMD Ceramic	6	1~32	<2 ps RMS
	YN	ST1317	7.0 x 5.0	CMOS	3.3V	SMD Ceramic	6	32~125	<2 ps RMS
	YD	N/A	5.0 x 3.2	CMOS	3.3V	SMD Ceramic	4	1~32	<2 ps RMS
	YK	N/A	3.2 x 2.5	CMOS	3.3V	SMD Ceramic	4	1~32	<2 ps RMS
	YJ	N/A	2.5 x 2.0	CMOS	3.3V	SMD Ceramic	4	1~32	<2 ps RMS

## Spread Spectrum Crystal Oscillators (Down-spread &amp; center-spread options available)










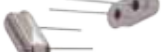


Product Image	Product Series	Package Size (mm)	Output Logic	Supply Voltage	Package Type	Pads/Pins	Frequency Range (MHz)	Jitter
	MN	7.0 x 5.0	CMOS	2.5V	SMD Ceramic	4	16~67	<200 ps cy-cy
		7.0 x 5.0	CMOS	3.3V	SMD Ceramic	4	16~67	<200 ps cy-cy
	MD	5.0 x 3.2	CMOS	2.5V	SMD Ceramic	4	16~67	<200 ps cy-cy
		5.0 x 3.2	CMOS	3.3V	SMD Ceramic	4	16~67	<200 ps cy-cy
	MK	3.2 x 2.5	CMOS	3.3V	SMD Ceramic	4	16~67	<200 ps cy-cy
		3.2 x 2.5	CMOS	3.3V	SMD Ceramic	4	16~67	<200 ps cy-cy

## Crystal Oscillators (kHz)





Product Image	Product Series	Package Size (mm)	Output Logic	Supply Voltage	Package Type	Pads/Pins	Frequency Range (kHz)
	KN	7.0 x 5.0	CMOS	2.5V	SMD Ceramic	4	32.768
		7.0 x 5.0	CMOS	3.3V	SMD Ceramic	4	32.768
	KD	5.0 x 3.2	CMOS	2.5V	SMD Ceramic	4	32.768
		5.0 x 3.2	CMOS	3.3V	SMD Ceramic	4	32.768
	KK	3.2 x 2.5	CMOS	2.5V	SMD Ceramic	4	32.768
		3.2 x 2.5	CMOS	3.3V	SMD Ceramic	4	32.768

**NOTE:** As of 2007, A new part numbering system has been adopted to merge SaRonix and eCera ComTek brands under Pericom. The products and manufacturing processes have not changed, but the ordering part numbers has transitioned to a new format for new applications. Please consult your local sales representative for additional products or frequencies not listed here.

## Quartz Crystals (MHz)

Product Image	Product Series	*SaRonix Reference P/N	Package Size (mm)	Pads/Pins	Description	Frequency Range (MHz)
	FW	N/A	2.0 x 1.6	4	Seam Sealed SMD Ceramic	24~54
	FH	NKS2	2.5 x 2.0	4	Seam Sealed SMD Ceramic	16~66
	FL	NKS3	3.2 x 2.5	4	Seam Sealed SMD Ceramic	12~66
	FF	N/A	4.0 x 2.5	4	Seam Sealed SMD Ceramic	12~66
	F9	NES5	5.0 x 3.2	2	Glass Sealed SMD Ceramic	8~125
	FY	NKS5	5.0 x 3.2	4	Seam Sealed SMD Ceramic	8~125
	F6	NES6	6.0 x 3.5	2	Glass Sealed SMD Ceramic	6~125
	FX	NKS6	6.0 x 3.5	4	Seam Sealed SMD Ceramic	6~125
	FP	NKS7	7.0 x 5.0	4	Seam Sealed SMD Ceramic	6~125
	F8	N/A	8.0 x 4.5	2	Glass Sealed SMD Ceramic	6~125
	GB GG	49S	11.2 x 5.0 x 3.5 11.2 x 5.0 x 2.5	2	Metal Can Through-Hole	3.2~125
	GC GF	49SMLB	11.5 x 4.5 x 4.0 11.5 x 4.5 x 3.0	2	Metal Can SMD	3.2~125
	GA	NYP	11.2 x 4.8 x 13.5	2	Metal Can Through-Hole	1.8432~150

## Tuning Fork Quartz Crystals

Product Image	Product Series	*SaRonix Reference P/N	Package Size (mm)	Pads/Pins	Description	Frequency Range (kHz)
	G1	N/A	8.0 x 3.0	2	Tubular Tuning Fork, Through-Hole	32.768 kHz
	G2	N/A	6.0 x 2.0	2	Tubular Tuning Fork, Through-Hole	32.768 kHz
	G3	N/A	6.0 x 2.0	2	Tubular Tuning Fork, SMD	32.768 kHz
	G4	32S12C-F	8.0 x 3.8	4	Plastic Molded Tuning Fork, SMD	32.768 kHz

\*These are SaRonix part numbers for reference only. Please refer to the Product Series two-letter code for any new orders. N/A = not applicable