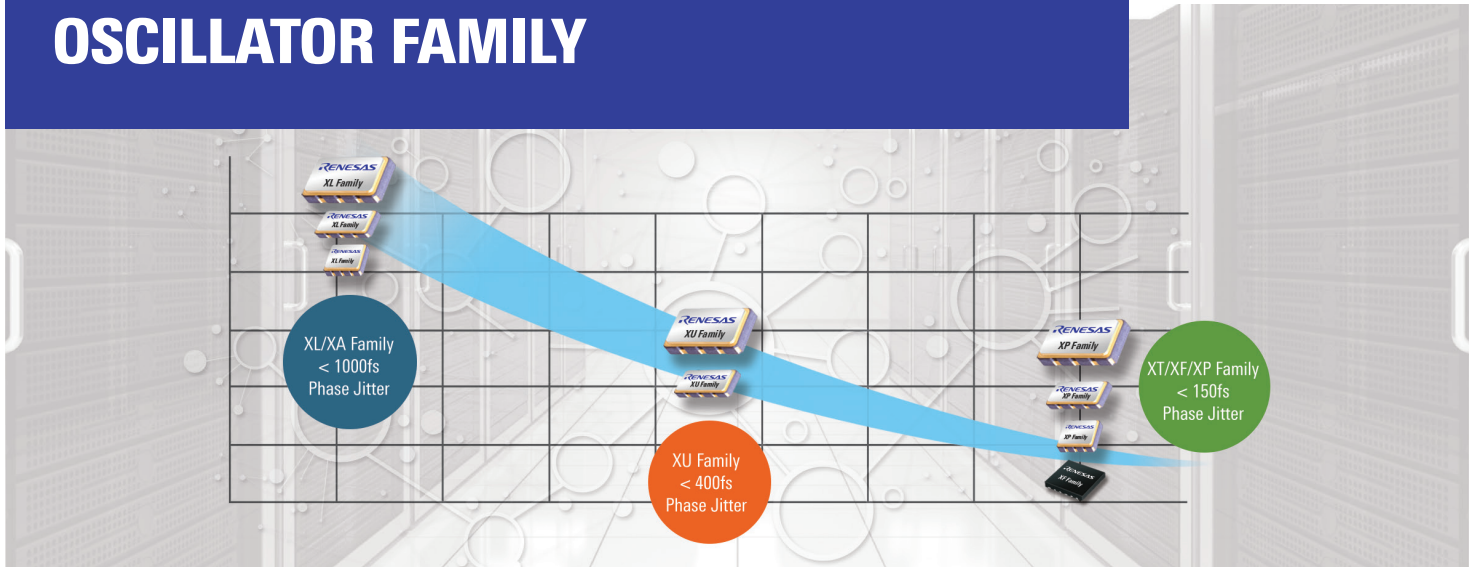# HIGH-PERFORMANCE CLOCK OSCILLATOR FAMILY

Renesas' family of clock oscillators offers designers a reliable on-time solution. Short lead-time, low noise, wide frequency range, excellent temperature versus frequency performance, and very little engineering effort for design in, makes them an excellent choice over conventional technology solutions. The clock oscillator families have stabilities as tight as ±3ppm, a range of phase jitter options, and temperature capabilities up to +105°C. These devices also offer extremely quick delivery for both standard and custom frequencies (16kHz to 2.1GHz).

Renesas advantages

- Configurable output type
  – LVCMOS (HCMOS), LVPECL, LVDS, HCSL, and CML
- Phase jitter options
  – 150fs, 400fs, and 1000fs
- 1.8, 2.5, and 3.3VDC voltage options
- Frequency stability options from ±3ppm to ±100ppm

Applications

- Networking
- Industrial
- Low power consumption
- Technical support resources

Configurable PLL Oscillator Family

Model	ProXO+ XT	ProXO XF & XP	XU	XL	XA (AEC-Q200)
Package Options	3.2 x 2.5 mm	2.5 x 2.0 mm 3.2 x 2.5 mm 5.0 x 3.2 mm 7.0 x 5.0 mm	5.0 x 3.2 mm 7.0 x 5.0 mm	3.2 x 2.5 mm 5.0 x 3.2 mm 7.0 x 5.0 mm	3.2 x 2.5 mm 5.0 x 3.2 mm
Voltage Options	1.8V, 2.5V, 3.3V		1.8V, 2.5V, 3.3V	2.5V, 3.3V	2.5V, 3.3V
Phase Jitter (12 kHz to 20 MHz)	< 150fs		< 400fs	< 1000fs	< 1000fs
Outputs	LVDS, LVPECL, HCSL, CML		LVDS, LVPECL, HCSL, LVCMOS	LVDS, LVPECL, LVCMOS	LVDS, LVPECL, LVCMOS
Frequency Range	15 to 2100 MHz		0.016 to 1500 MHz	0.75 to 1350 MHz	0.75 to 1350 MHz
VCXO option	Yes (analog and I2C)		—	Yes (analog) +/-50ppm APR	—

HIGH-PERFORMANCE CLOCK OSCILLATOR FAMILY

Need to request a sample or determine an orderable part number?

Please use Renesas' on-line tool for clock oscillators
renesas.com/customxo

Need to build a configurable part number?

General Configuration
Configuration complete!

Progress 8 / 8

Temperature ℹ️
- ☐ -20°C to +70°C
- ☑ -40°C to +85°C
- ☐ -40°C to +105°C

Stability ℹ️
- ☐ ± 100 ppm
- ☐ ± 50 ppm
- ☐ ± 50 ppm APR (VCXO)
- ☑ ± 25 ppm
- ☐ ± 20 ppm
- ☐ ± 3 ppm (TCXO)

OE Position ℹ️
- ☑ Pin 1
- ☐ Pin 2
- ☐ Pin 5

Package ℹ️
- ☐ 7 x 5 mm
- ☐ 5 x 3.2 mm
- ☑ 3.2 x 2.5 mm
- ☐ 2.5 x 2 mm

Jitter ℹ️
- ☐ < 1 ps (AEC-Q200)
- ☐ < 1 ps
- ☐ < 400 fs
- ☑ < 150 fs

Voltage ℹ️
- ☐ 3.3 V
- ☑ 2.5 V
- ☐ 1.8 V

Output Type ℹ️
- ☑ LVDS
- ☐ LVPECL
- ☐ CML
- ☐ HCSL
- ☐ HCMOS
- ☐ HCMOSD, 2 outputs, 180° out of phase

Frequency (MHz) ℹ️

837.500000

Min: 15
Max: 2100

Reset Form

Need to check and see if an orderable part number exists?

Submit by Part Number (Optional)
Users who wish to submit a request and generate a datasheet addendum based on a part number, may do so here. The part number must be a valid part number. An entry here will overide the selections in the General Configuration above. Leave this field blank to use the selection above.

XLL535312.500000I

To request samples, download documentation or learn more, visit: **renesas.com/xo**

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