RENESAS
BIG IDEAS FOR EVERY SPACE

BROADEST CLOCK BUFFER, DIVIDER AND MULTIPLEXER PORTFOLIO

Renesas clock distribution products are used to condition, manipulate and distribute clock signals within a system, with or without the use of a phase-locked loop (PLL). These devices are well-suited for most applications where the input signal is of good quality, and the goal is to buffer, fan-out, divide, or multiplex the input signal. A single-output clock buffer is also useful for translating a clock from one signaling standard to another, such as LVCMOS-in to LVPECL-out.

As the industry leader in timing solutions, Renesas offers a rich portfolio of clock buffer, clock distribution and multiplexer solutions to meet the needs of virtually any application. Renesas has the largest portfolio of clock distribution devices that support differential signals. LVDS, LVPECL, HCSL, LVCMOS, CML, HSTL, SSTL are some of the most common I/O levels supported by these devices.

Product categories

- Fanout Buffers
- Zero-Delay Buffers
- Multiplexers

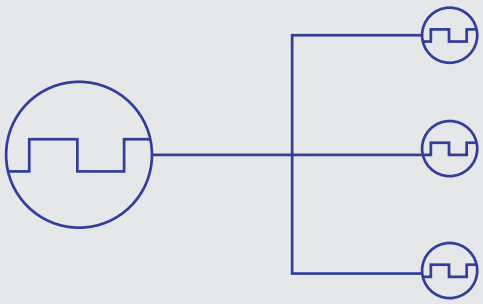
Benefits

- Low additive jitter/skew that lower system noise floor
- Programmable output clock type for design flexibility
- Wide operation voltage for design compatibility
- High integration reduces BOM cost, saves board space
- Re-use in different design base on built-in multiple OTP configuration

Features

- High-performance 2-20 output clock buffers
- Individually selectable output voltage 1.8V-2.5V-3.3V
- PCI Express buffers with Gen5 performance
- Programmable crystal load capacitance achieve high accuracy

Typical Application Needs



Clock Dividers and Fanout Buffers
Clock Building Blocks

Zero-Delay Buffers (ZDB)
Input-to-Output or Input-to-Destination

Multiplexers and Fanout Multiplexers
Selectable Inputs

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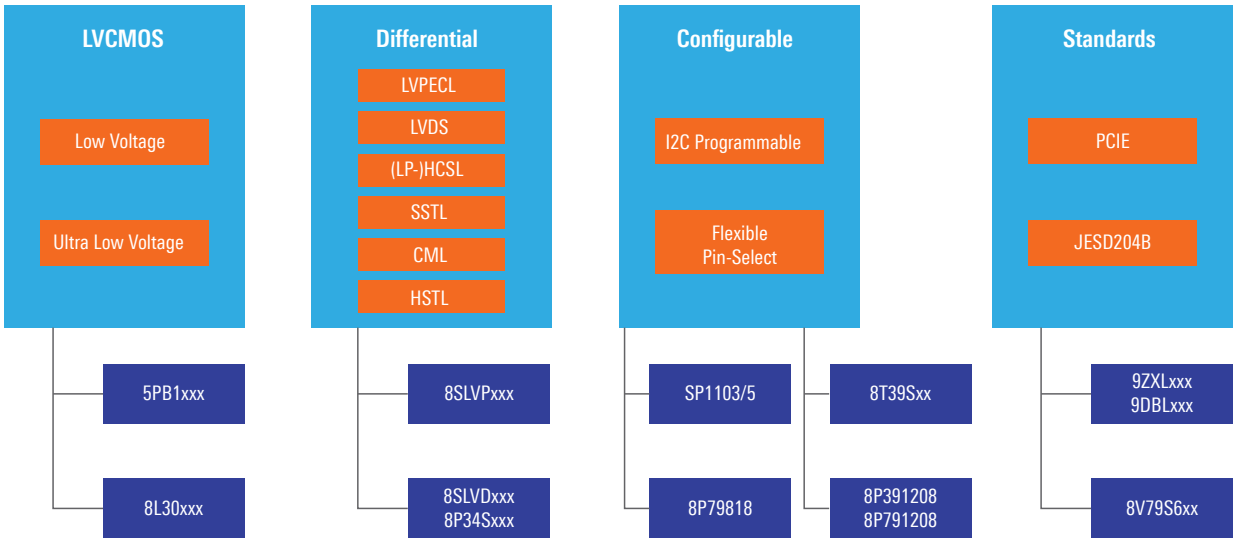
Buffer Summary by Functionality



Buffer Family Selection Guide

	5PB	9DB/9ZXL	8SLVP	8SLVD	8P34S	8T39S	8V79S6
Characteristics	Low Additive Jitter	PCIe Gen5	Simple and Low Noise		Low Power	Flexible	JESD204B
I/O	LVCMOS	LPHCSL	LVPECL	LVDS	LVDS	Universal	LVDS, LVPECL
Features	1~10 outputs,	2~20 outputs, OE	Single, dual functions and matched pinout			S/E, OE, 2 banks, XTAL I/F	Dual, Delay
fmax	200 MHz	100 MHz, 125 MHz	2 GHz	2 GHz	1.3-2.0 GHz	2 GHz	3 GHz
Supply	1.8V - 3.3V	1.8V - 3.3V	2.5V - 3.3V	2.5V	1.8V	2.5V, 3.3V, Mixed	3.3V

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

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