Exar adds seamless redundancy for system clocking

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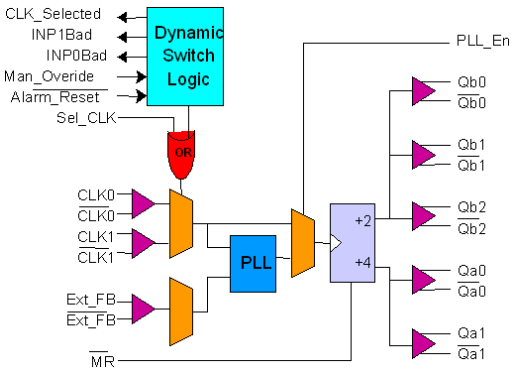
FREMONT, California - Exar Corp. is adding three failsafe devices to its portfolio of clock drivers. The XRK7988, XRK7955, and XRK7933 parts embody a technology it calls Intelligent Dynamic Clock Switch (IDCS), an "integrated redundancy" that switches clocks with a minimum of skew for mission-critical applications. The devices target next-generation wireless base stations, network switches, routers, and storage.

Claims a Growing Product Portfolio

Exar has a large portfolio of analog and Phase Lock Loop (PLL) devices. The current announcement represents the third clock and timing introduction in the past year; the earlier devices included the XRK499x portfolio of 3.3/2.5 volt programmable skew clocks (XRK4991, XRK4991A, XRK49911 and XRK4993), and the IDCS products XRK79993 and XRK79892. Clocks perform the vital function of producing a timing reference and repeated impulses for synchronizing the overall system.



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Product Highlights

The XRK7933, XRK7955 and XRK7988 are cost-effective, low-skew 400 MHz clock generators for applications with redundant clock tree requirements. Each device is capable of generating five LVPECL outputs from two LVPECL inputs. Two of the output pairs regenerate the input signal frequency and phase, while the other three pairs generate 3x (for XRK7933), 5x (for XRK7955) and 8x (for XRK7988), phase aligned clock outputs. Whenever the built-in IRCS detects a failure on one of the two clock inputs, it automatically switches the PLL reference clock to the other input while minimizing the output phase transient.

Additionally, the external PLL feedback can be used to provide zero delay buffer performance.

All three devices have a Dynamic Clock Switch (DCS) circuit that continuously monitors both input CLK signals. If the primary clock fails, the DCS will switch to a secondary clock that completes the phase and frequency alignment with minimum output phase disturbance.

Suggested applications

The XRK7933 with its 33.3 to 100MHz capacity targets a wide range of computing applications

The XRK7955 at 25 to 125 MHz targets 10/100 Ethernet applications.

The XRK7988, with a 19.44 to 155.52 MHz range, is ideal for OC-3 environments.

Packages, Prices, Availability and Additional Information

In 1,000 piece quantities, for commercial temperatures the XRK7933 is $8.75, the XRK7955 is $8.75, and the XRK7988 is $8.75. Samples of all three devices are available now in 32-pin, LQFP packages.

Click here for the XRK7933 datasheet.

Click here for the XRK7955 datasheet.

Click here for the XRK7988 datasheet.