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Multirate 16 Gbps 4-Channel Adaptive Channel Extender with All-Rate CRU

The VSC7223 device is a 4-channel unidirectional lane adaptive channel extender with a CRU. It incorporates input equalization, clock and data recovery, and output de-emphasis. VSC7223 supports data rates up to 16 Gbps. The VSC7223 device is a simple-to-use copper media receiver and driver that provides electrical compensation to cable, copper, and backplane environments to increase system margin and media driving distances. It equalizes greater than 65 inches of FR-4 at 10 Gbps and greater than 15 meters of 24AWG of SFP+ copper direct-attached cable at 10 Gbps. The VSC7223 device can be used either on its own or with an external microcontroller to control, monitor, and enhance system performance. The VSC7223 device uses advanced technology to equalize deteriorated input signals while dissipating the lowest possible power. A low-cost 25 MHz crystal, along with an on-chip frequency synthesizer, allows for CRU operation at any data rate. Its three-tap FIR output driver architecture enables up to 18 dB of de-emphasis at 10 Gbps. The VSC7223 device includes Vitesse's patented VScope™ input signal monitoring integrated circuit waveform viewing technology. The VSC7223 device is available in a compact 5 mm x 9 mm 48-pin QFN package. The device operates on a single supply of 1.2 volts.

Product Variants	Description
VSC7223XJV	48-pin 5 x 9 mm QFN lead-free second-level interconnect

— Key Features

- World-class adaptive equalization
- Up to 16 Gbps operation
- 18 dB input equalization
- Retimer and re-driver modes
- Built-in VScope
- On-chip frequency synthesizers

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