

## FEATURES

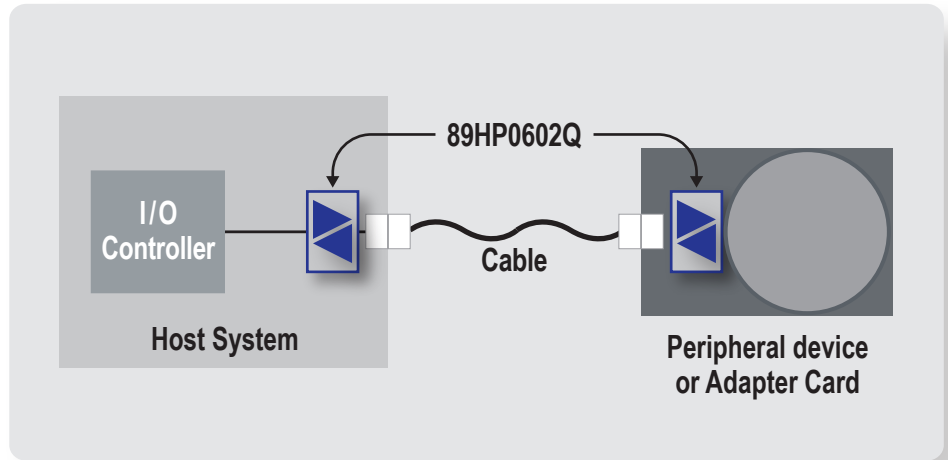
- Compensates for cable and PCB trace attenuation and ISI jitter
- Programmable receiver equalization up to 24dB
- Programmable transmitter swing and de-emphasis
- Recovers data stream even when the differential signal eye is completely closed due to trace attenuation and ISI jitter
- Configurable via external pins
- No external bias resistors or reference clocks required
- Low operating power
- Available in a 20-pin QFN package (4.0 x 4.0mm, 0.5mm pitch)

## BENEFITS

- Extends maximum cable length to over 8 meters and trace length over 48 inches
- Minimizes BER

## APPLICATIONS

- Supports differential signaling to 6.25Gbps
- Systems:
  - Servers, Telecommunications, Storage, Instrumentation, Active Cabling

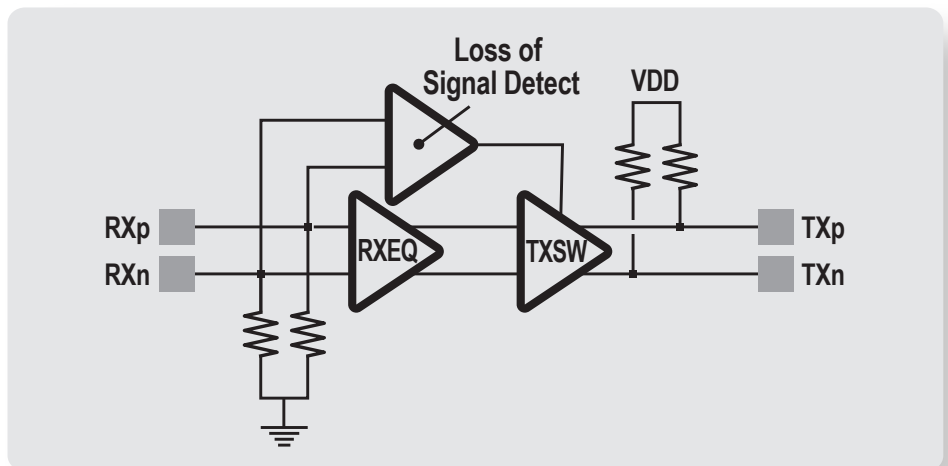


## Device Overview

The IDT 89HP0602Q is a 6.25Gbps Repeater featuring IDT EyeBoost™ technology that compensates for cable and board trace attenuations and ISI jitter, thereby extending connection reach. The device is optimized for differential high speed serial data streams and contains two data channels, each able to process 6.25Gbps transmission rates. Each channel consists of an input equalizer and amplifier, signal detection with glitch filter, as well as programmable output swing and de-emphasis. Allowing for application specific optimization, the 89HP0602Q, with its configurable receiver and transmitter features, is ideal for a variety of applications using a wide combination of cables and board trace materials.

All modes of active data transfer are designed with minimized power consumption. In addition, power is further reduced in the absence of input signals (loss of signal mode).

## 89HP0602Q Channel Block Diagram (one of two shown)



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