

QLx4270-DP DisplayPort Lane Extender

The ever-increasing demand for high-resolution graphics has pushed the Video Electronics Standards Association (VESA) to develop the DisplayPort standard. The higher data rate of this standard puts additional demands on cables, forcing passive cables to fatter gauges and shorter lengths. Q:ACTIVE® Lane Extender technology is the first silicon-based solution developed specifically for copper cable applications. Integrating Q:ACTIVE components into an end of a passive cable assembly boosts the signal and reduces noise to provide a dramatic decrease in cable gauge.

The QLx4270-DP is a settable quad channel receive-side equalizer with advanced protocol support for the DisplayPort 1.1a standard. The equalizer compensates for frequency dependent attenuation of non-return-to-zero (NRZ) data on twin-axial copper cables. The QLx4270-DP is specifically optimized for data at 2.7Gbps and extends the signal reach over ultra-thin 40AWG cable.

The small form factor, highly integrated design is ideal for module applications that enable super-thin and extended-reach active cable assemblies. The QLx4270-DP uses current mode logic (CML) inputs/outputs and is packaged in a 4mm x 7mm 46 lead QFN.

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APPLICATIONS

- DisplayPort Active Copper Cables
- DisplayPort Adapters and Repeaters

FEATURES

- Supports data rates up to 2.7 Gb/s
- Operates over 40AWG cable
- Low power (78mW per channel)
- Low latency (<500ps)
- Quad equalizer in a 4mm x 7mm QFN package
- Settable equalizer boost
- 1.2V supply voltage

