

In-car, safety-critical video routed 15m over twisted-pair cable

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Car telematics systems increasingly depend on real-time, high-resolution video, not only for direct-driver-involved systems such as reversing view displays, but also for automated functions such as lane-departure detection and obstacle avoidance. Buses such as the optical MOST, primarily intended for entertainment systems, are not suitable for this traffic, partly due to a lack of bandwidth to display the required resolution, but also because of the latency in their time-sliced bus architecture. For a point-to-point video link in the automotive environment, Inova Semiconductors is promoting its APIX, Automotive Gbit/sec Pixel Link chip set. APIX uses the company's GigaStar transmission technology, which is based on current-mode logic, to provide full-duplex video, with a bi-directional sideband channel for control signals, over a single twisted-pair cable. Operating range is 15m or more using small profile STP/UTP cables; downstream link bandwidth is up to 1 Gbit/sec to handle up to 24-bit RGB colour video; the sideband channel (for control) supports two streams of data at up to 12 Mbit/sec, while the corresponding upstream sideband link supports two streams at up to 9 Mbit/sec each. A twowire interface configures both transmitter and receiver chips; the current-mode operation gives both low radiated EMI and high immunity to incident EMI.

Inova Semiconductors, www.inova-semiconductors.com.