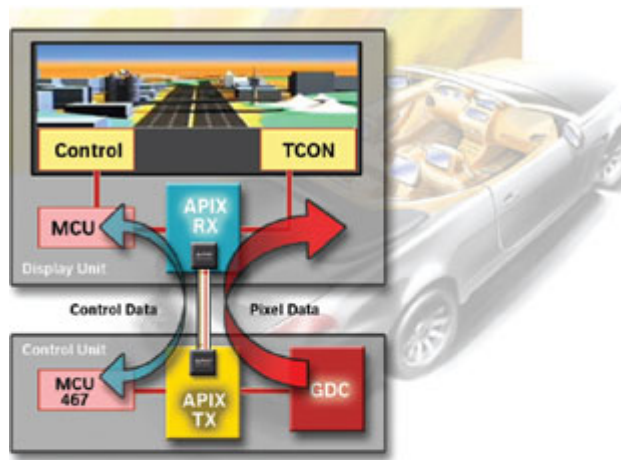


Inova, Fujitsu propose serial-data standard for automotive video

by Graham Prophet -- EDN Europe, 01 Oct 2007



An automotive-display concept with discrete Apix transceivers; Fujitsu will also integrate the Apix blocks—with SERDES functions—into graphics controllers.

Under an IP (intellectual property) deal, Munich-based chip designer Inova Semiconductors will provide its Apix serial-data link to Fujitsu for incorporation into that company's automotive graphics controllers and microcontrollers. At the same time, the two companies are bidding to make Apix an open standard for transmitting highspeed media data—especially video—around vehicles. The proposal is to have an open standard in the sense that Inova will license the technology to anyone who wants it; there is—as yet—no proposal for formal independent oversight of the standard by a new—or existing—body.

Inova build chips and offers IP for serial data links using differential current-mode signalling. Earlier—and still current—product names include the GigaStar offering. As well as high-speed duplex data transmission, the architecture supports secondary channels for control and other secondary functions; accordingly, Apix provides 1 Gbit/sec on its main channel, with 18 Mbit/sec available in a “sideband” channel for control. Apix transceivers transmit this data over ranges of tens of metres of range over lowcost twin shielded-twisted-pair cable. EMI performance meets all automotive standards: the technology uses adjustable drive current and pre-emphasis techniques, plus dynamic scrambling of content.

Fujitsu says it opted for Apix because there was essentially no other non-custom solution available for the video channel in the automotive environment. Gigabit data rates are needed because of the increasing number of video signals controllers must route around the car—both for safety and for “infotainment” purposes. Blind-spot and reversing cameras, in particular, need to transmit with no latency for safety reasons, so compressing the video stream is not an option. Inova is already looking towards a 2-Gbit/sec version of Apix and also envisages a product with a high-data-rate main serial channel that will support USB on the sideband channel.

Fujitsu Microelectronics, <http://emea.fujitsu.com/microelectronics>

Inova Semiconductors, www.inova-semiconductors.com.