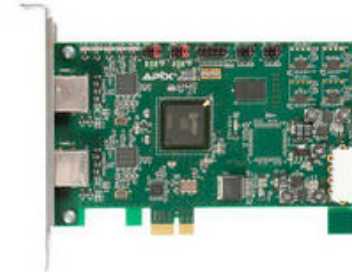


APIX

Automotive Pixel Link – Low Price and robust solution for remote terminals

Ideal for industrial applications

Via the use of a normal network cable, it's possible to transmit pixel data, a return data channel (e.g. serial touch signals) and the necessary operating power.



- PCI Express x1 expansion card
- 2 APIX channels
- Resolution 800x600 pixel
- Configurable power transmission (power over APIX)

The complete APIX Design Kit enables a quick and easy evaluation of the APIX Display Interface, a definition of Inova Semiconductors. This interface was originally designed for the automotive sector but it's also perfect for industrial applications.

The APIX Design Kit contains a PCI Express add-on card including operating system drivers and a remote display unit with integrated touch screen. In addition to the hardware, the design kit also features comprehensive documentation complete with schematics. Now it's possible to easily implement a customized solution.

The APIX PCI Express card features two independent APIX interfaces via RJ45 connectors. This allows for the operation of two independent display units each with a resolution of 800x600 pixels through the use of conventional CAT 5 cables. When using multiple cards in a system, up to 8 APIX channels can be operated in parallel. For automotive applications, the APIX PCI Express card can also be equipped with rugged Rosenberger HSD connectors.

The sideband signals of the APIX channels offer the possibility to transmit UART signals, which can be used for touch screen or keyboard applications. More complex, or encrypted, communication can be accomplished using the MB88F332 (Indigo) Graphic Display Controller from Fujitsu Microelectronics as a receiver at the display unit side.

The corresponding graphic data and protocols are processed by a PCI Express connected FPGA chip, which passes the RGB data to the APIX transmitters. The physical transfer is handled by the APIX channels. The power transmission to the display units is configurable. The APIX card supports "Power over APIX" but can also provide 3.3V power from the PCI Express interface or can transmit external 5V or 12V power sources.

The congatec Dual APIX PCI Express Card is a plug&play card and includes the necessary operating system drivers.

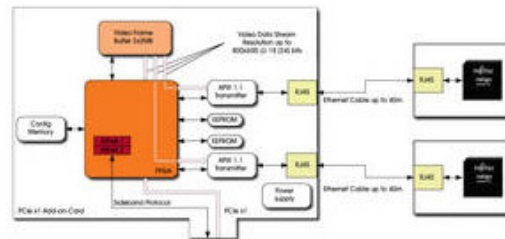
Applications:

The low cost and robust APIX technology has been developed especially for the automotive industry. Industrial applications that have similar requirements can also benefit from this technology.

Within the automation industry it's quite common to use remote displays or control units. APIX can be a very economic replacement for rather expensive thin client solutions.

APIX 1 Specifications

- Excellent EMC behavior, full duplex connection (one or two pairs of wires)
- Downstream up to 1 Gbit/s
- Upstream up to 62.5 Mbps
- 15m distance with STP/UTB cables small cross-section (1Gbit/s)
- 40m distance with STP / UTP cables small cross-section (500Mbit/s)



APIX 1.1. Interface Card Block Diagramm (FPGA with PCIe core)

