

Digital Automotive Pixel Link Receiver

INAP125R12 INAP125R24

The INAP125R12/24 is a receiver for the new Automotive **PIXel** (APIX) link for display and camera based point-to-point applications. The APIX link features an uni-directional pixel and full-duplex sideband data transmission over one single pair of shielded twisted pair (STP) copper cable. The upstream sideband can also be transmitted over a separate pair of wires to serve the requirements for automotive applications. In addition this wire may be used for power supply.

The INAP125R12 video interface supports color widths of 10 and 12bit, the INAP125R24 widths of 10, 12, 18 and 24bit. The interface can be configured individually to match all popular display and image sensor interfaces. The pixel interface is able to handle a wide spread pixel clock for lowest EMI.

The INAP125R12/24 transmitter features dedicated high-speed outputs with adjustable drive current and pre-emphasis to facilitate the adaptation to different link distances and cable qualities while offering maximum data integrity and full EMI compliance.

Packages:

- 52 pin QFN (Quad-Flat No-Leads)
- 64 pin QFN

Features:

- Up to 1 GBit/s Downstream Link
- Up to 62.5 MBit/s Upstream Link
- Low EMI, Two- or Four-Wire Full Duplex Link
- Accepts wide spread spectrum pixel clock
- +15 m Distance with low profile STP cables
- 10/12/18/24 bit pixel Interface
- Configurable sampling edge for pixel data
- DC-balanced line coding to support AC coupling
- Upstream nominal drive current configurable
- Integrated configurable equalizer
- Extended Temp. Range: -40 to +105°C
- AEC-Q100

Applications:

- Automotive Infotainment Displays
- Automotive Dashboard Displays
- Head-Up Displays
- Rear-Seat Entertainment Systems
- Automotive Driver Assistance
- Surveillance Systems
- Machine Vision
- Inspection Systems

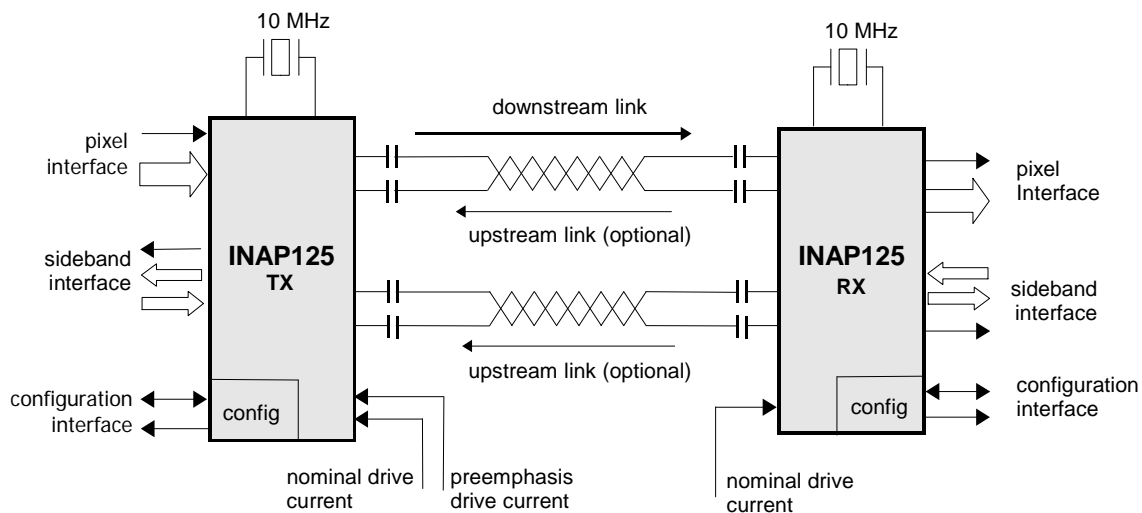


Figure 1: APIX system overview