

General Description

ATLab's GMDX (Gigabit Multimedia Data eXpress) supports a very high-speed digital data link performing simultaneous transmissions of digital video, audio and bi-directional sideband data. The transceivers support VESA standard video formats ranging from VGA to XGA (ATA4315/ATA4316) or from VGA to SXGA (ATA4325/ATA4326). The sideband channels provide both high-speed (50Mbps, 1 or 2-channel) and low-speed (1Mbps, 5-channel) interconnections for peripheral components like keyboard, mouse, disc drive and audio devices. The audio channel can transfer up to 4-port SPDIF format audio data with 44.1 KHz and 48 KHz clock frequencies.

Downstream/Upstream Interface

The transmitter (ATA4315/ATA4325) serializes video, audio, and sideband data using MUX and sends them to the receiver (ATA4316/ATA4326). The receiver in turn de-serializes the incoming data and recovers the original data. The receiver can also transmit sideband data to the transmitter.

ATA4315/ATA4316 support 1-channel downstream data link, whereas ATA4325/ATA4326 provide 2-channel downstream data link. They all support 1-channel upstream data link.

Video Interface

The transmitter's video interface receives parallel pixel data with pixel clock frequency of 25~65MHz (ATA4315) or 25~108MHz (ATA4325) from digital devices such as PC, graphics cards, HD TV, and digital camera. After the receiver de-serializes the data, it transfers the parallelized pixel data and clock to digital graphics device like graphic cards, flat panel TFT displays.

ATLab's GMDX is designed to accommodate 24-bit or 18-bit mode for increasing data transfer bandwidth and also support "Camera Link" mode for vision applications. In 18-bit mode, 8-bit RGB data is downscaled to 6-bit by eliminating the LSB 2 bits. In "Camera Link" mode, pixel data can be transferred during h-sync signal is "high" without data enable signal. Audio and sideband data also can be transferred in "Camera Link" mode.

Sideband Interface

ATLab's GMDX supports bi-directional sideband data transition. The transceivers contain 5-channel low speed sideband interface (1Mbps per each channel) and 1 or 2-channel high-speed sideband interface (50Mbps, 1-channel for ATA4315/ATA4316, 2-channel for ATA4325/ATA4326). Sideband interface provides low- and high-speed clock outputs to synchronize sideband data.

Audio Interface

Audio interface can transfer up to 4 channels of SPDIF audio data simultaneously and supports sampling frequencies of 44.1 KHz and 48 KHz. If audio data and clock are provided to the transmitter, the transmitter uses the received clock to serialize the audio data. On the other hand, if audio data only is provided to the transmitter, it uses an internal clock to serialize the audio data.

Applications

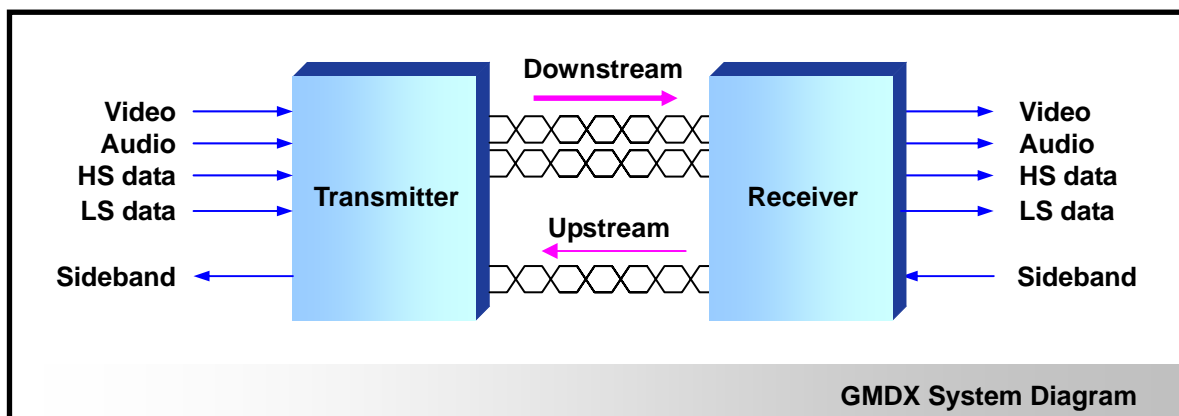
- High definition TV
- Home theater
- Car navigation and telematics system
- Digital video broadcasting system
- Camera Link

Features of ATA4315/ATA4316

- Supports VESA standard video formats ranging from VGA to XGA (XGA is available only in 18-bits mode)
- Provides 1-channel downstream link and 1-channel upstream link
- Supports video data transfer in 24-bit and 18-bit modes
- Supports "Camera Link" mode for vision applications
- Supports pixel clock frequencies ranging from 25MHz to 65MHz
- Provides up to 4 channels of audio data links in SPDIF format
- Provides 1-channel high-speed sideband link and 5-channel low speed sideband link
- 3.3V power supply for I/O and 1.8V power supply for the core
- Packaged in 100QFP

Features of ATA4325/ATA4326

- Supports VESA standard video formats ranging from VGA to SXGA (SXGA is available only in 18-bits mode)
- Provides 2-channel downstream link and 1-channel upstream link
- Supports pixel clock frequencies ranging from 25MHz to 108MHz
- Provides 2-channel high-speed sideband link and 5-channel low-speed sideband link



ATLab (www.atl21c.com/www.atlab.co.kr)

Headquarter

3rd Fl SeogAm Bldg. 1082-12 PoongDuckChun-dong, YoungIn-shi, KyungGi-do, South Korea
Tel: 82-31-266-3082 Fax: 82-31-266-3083

China Office

Rm518-519, Block A, Hailun Complex 6021Shen Nan Blvd. Shen Zhen
Tel: 86-755-3333-9445~6 Fax: 86-755-3333-9447
Sales & Marketing: Louie Wang (louiewang@atl21c.com)

Sales Representative

Act-On (www.acton-usa.com)

2000 Wyatt Drive, Suite 1, Santa Clara, CA 95054, USA
Tel: 1-408-748-7600 Fax: 1-408-748-3566
Sale & Marketing: tishim@acton-usa.com

Online Help Desk for GMDX
gmdx@atlab.co.kr