

## Product Brief : V-by-One®HS IP Core

V-by-One®HS was developed by THine Electronics Inc. to support the higher frame rates and the higher resolutions required by advancing FPD technologies, while reducing costs and time to market.

The V-by-One®HS proprietary encoding scheme and CDR architecture enables transmission of up to 36-bit color depth video data and 24-bit control data at resolutions of 4kx2k at 240 fps. This is achieved via a series of up to 32 high speed lanes running up to 3.75Gbps.

For example, using a traditional interface, a FPD panel requiring 96 LVDS cable pairs would require only 18 pairs of V-by-One®HS. Additionally, the unique variable speed technology, supporting 600 Mbps to 3.75 Gbps, handles widely varying pixel rates seamlessly.

The Bitec Vx1 IP core is designed to run on the Altera range of GX devices. Its scalable architecture allows users to select from 1 to 32 lanes with varying color depths and frame rates.

Bitec also offer a tailoring service for bespoke designs. For more information contact Bitec.

### Features

- Scalable from 1 to 32 lanes
- Selectable color depth from 18 to 36bpp
- Auto pixel clock recovery
- 1 year update & support
- Arria II GX Evaluation kit available

### Package includes

- Encrypted Core with unlimited use
- Reference designs
- 1 year update & support
- Arria II GX Evaluation

### Device compatibility

- Arria II GX
- Stratix II GX
- Stratix IV GX

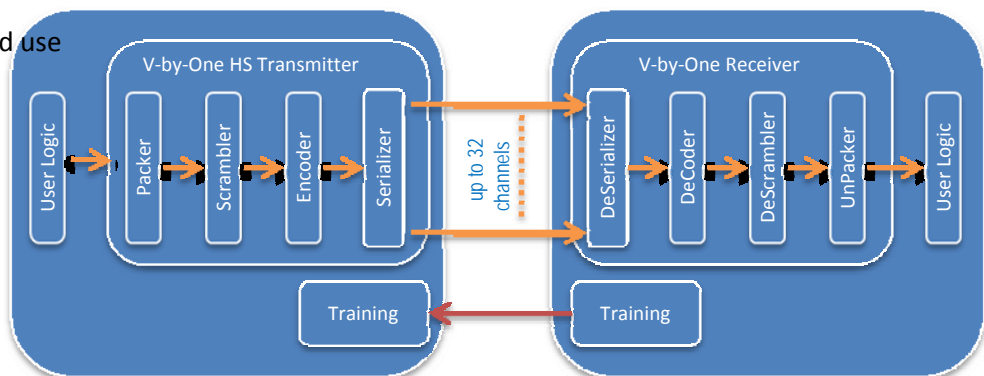


### Key benefits of V-by-One®HS

- High transmission quality in noisy conditions
- High speed Serializer / Deserializer
- Lower EMI
- Seamless transition to V-by-One® HS
- Open standard
- Lower energy consumption
- Ease of use, Plug & Play

## V-by-One®HS

### Block Diagram



Contact [info@bitec-dsp.com](mailto:info@bitec-dsp.com) for more information