



SENSIO®

SENSIO® 3D ENCODER FAMILY

V1.0

MULTI-FORMAT STEREOSCOPIC 3D ENCODING IN ONE

SENSIO® 3D ENCODER FAMILY PROVIDES A SINGLE SOLUTION FOR ENCODING STEREOSCOPIC 3D SIGNALS INTO ALL THE MOST COMMONLY-USED FRAME-COMPATIBLE FORMATS. PACKAGED AND OPTIMIZED FOR FPGA IMPLEMENTATION, IT IS EASY TO INTEGRATE.

The SENSIO® 3D Encoder family can encode stereo 3D and pass-through 2D signals. It supports the award-winning SENSIO® Hi-Fi 3D format, and the generic Side-by-Side (SbS) and Top-and-Bottom (TaB) formats. The SENSIO® 3D Encoder is available in two different versions to fulfill your different needs.

	SENSIO® 3D ENCODER - HF	SENSIO® 3D ENCODER - FFC
SENSIO® Hi-Fi 3D	✓	✓
SbS (Side-by-Side)		✓
TaB (Top-and-Bottom)		✓

MULTI-FORMAT SUPPORT

- Resolution-independent (progressive or interlaced)
- Video-format-independent: HD, SD, HDMI
- All the most commonly-used frame-compatible 3D formats:
 - SENSIO® Hi-Fi 3D
 - Side-by-Side (SbS)
 - Top-and-Bottom (TaB)
- MPEG friendly

EASY INTEGRATION

- Easy FPGA implementation
- Low latency processing
- Tested and proven technology

ABOUT SENSIO® Hi-Fi 3D

The SENSIO® Hi-Fi 3D format provides the highest fidelity to the originally-captured images by comparison to all other formats. The advanced algorithms found in the SENSIO® Hi-Fi 3D processing technique work seamlessly with different video codecs such as MPEG2, H.264 and PRORES, making it the perfect stereo 3D format for content delivery in contribution and/or distribution over cable, satellite and IP delivery. With this proven technology, an output signal is delivered with image quality superior to generic frame-compatible 3D formats.

MARKET SEGMENTS:

- Broadcast
- Professional
- Displays / projection
- Satellite
- IP-based content delivery
- Archives
- Contribution & Distribution
- VOD

APPLICATIONS 3D/2D DEVICES:

- Video processors
- Stereoscopic 3D video encoders / decoders
- MPEG encoders / decoders
- Professional IRDs (integrated receiver-decoders)
- Video servers
- Media players / VTRs
- Production switchers
- Master control switchers
- Graphics processors

SENSIO® 3D ENCODER FAMILY PROVIDES STEREOSCOPIC 3D-ENCODING FLEXIBILITY, AND CAN BE EASILY INCORPORATED INTO BROADCAST EQUIPMENT.

TECHNICAL SPECIFICATION:

- VHDL-based code
- Fully synchronous
- Format- and resolution-independent
- Supported stereoscopic 3D formats:
 - SENSIO® Hi-Fi 3D
 - Side-by-Side (SbS)*
 - Top-and-Bottom (TaB)*
- Selectable 2D pass-through
- Sampling format: YCbCr. 4 :2 :2 / 4 :4 :4 and RGB
- Up to 12-bit processing
- H & V blanking pass-through
- Processing delay: (vactive_length/2 + 4) lines and 4 pixels
- Requires external delay lines and frame buffers
- SENSIO® SSI (standard synchronization interface)
- Optional APB (advanced peripheral bus)

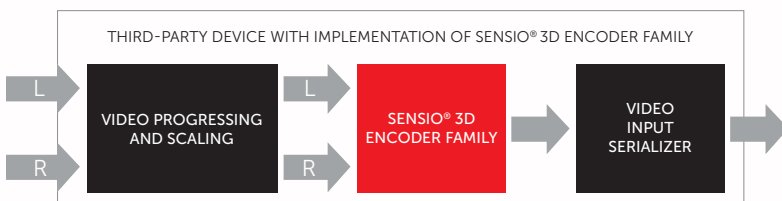
* available with SENSIO® 3D Encoder - FFC only

RESOURCE REQUIREMENTS:

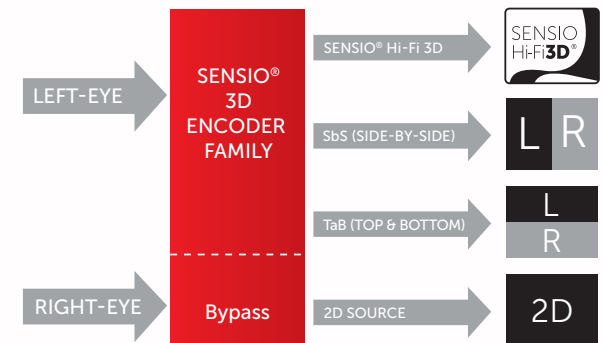
ALTERA STRATIX 3					
FPGA resources	Logic Cells			Block RAM	
	LUT	DFF	RAM	9kb	M144k
3D Encoder - FFC	2033	2495	0	17	1
3D Encoder - HF	1558	1945	0	17	1

XILINX VIRTEX 5					
FPGA resources	Logic Cells			DSP	Block RAM
	LUT	DFF	RAM	25X18	18kb
3D Encoder - FFC	2300	2470	0	0	17
3D Encoder - HF	1711	1860	0	0	17

TYPICAL USE:



SUPPORTED FORMATS:



Application notes available on request.

The SENSIO® 3D Encoder family is part of SENSIO's comprehensive suite of stereoscopic 3D technologies, specially designed to be fully interoperable and easily integrated into broadcasting equipment. Offering an end-to-end response to broadcast production requirements, SENSIO's proven solutions reduce integration for a faster time-to-market.

Contact the SENSIO sales team to discuss your needs: broadcastsales@sensio.tv

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