

# JPEG 2000

Reference Application

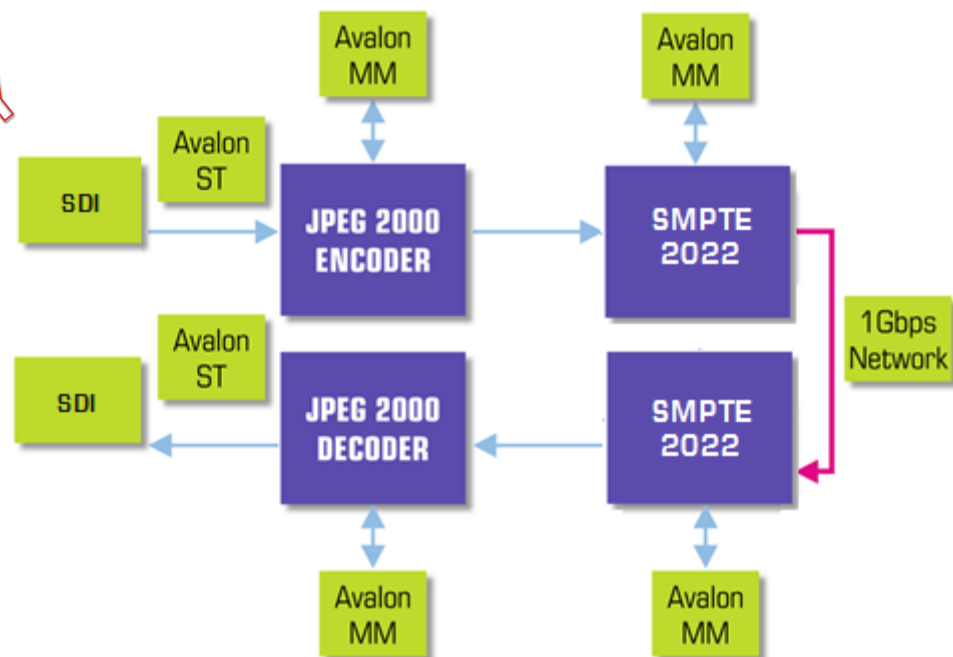
# SMPTE 2022

Altera Stratix® V Neo

## SUMMARY

The SMPTE 2022 JPEG 2000 application features a full chain of video over IP transmission using the Altera Stratix V Advanced Systems Development Kit, intoPIX JPEG2000 powerful and flexible codec IP-cores and Macnica SMPTE 2022 IP-cores.

**PRELIMINARY**  
NAB SHOW 2013



## BENEFITS

- intoPIX JPEG 2000 IP-cores for any Altera FPGAs
- Macnica Americas SMPTE2022 standard for encapsulation over IP – IP-cores
- **Powerful and flexible codec – HD & Ultra HD 4K - Visually Lossless compression**
- **Optional Ultra Low Latency option (to go down to 5ms)**
- Standard Interfaces to connect to VIP (Video & Image processing suite) for fast prototyping
- Reference application and IP-cores available from Macnica and intoPIX

**ALTERA**®

**MACNICA**  
AMERICAS

**intoPIX**  
secure image technology

## JPEG 2000 ENCODER + SMPTE2022

3G-SDI inputs



RJ45 out

1 Gbps



## JPEG 2000 DECODER + SMPTE2022

3G-SDI outputs



RJ45 in

## APPLICATIONS

- Live High quality Contribution
- Live Compression and Streaming in Cameras

## STANDARDS REFERENCE

Once the JPEG 2000 is encapsulated as a TS, the user can employ SMPTE 2022-2 to map the stream onto an IP network. Alternatively, the JPEG 2000 video plus audio as ancillary data could be mapped into an MXF wrapper. Once wrapped, it is conceivable that this stream could be transported using SMPTE 2022-6.

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