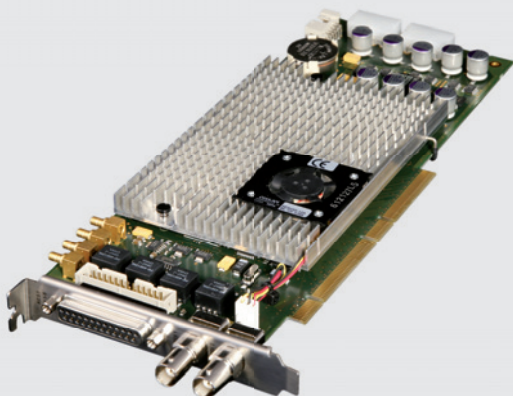**MVC200-DC**
Digital Cinema Decoder

TURNING
TECHNOLOGY
INTO PRODUCTS

The MVC200-DC is a high-end hardware decoder targeting
the professional applications Digital Cinema and Postproduction.

Based on re-programmable (FPGA-)hardware and a powerful
on-board microprocessor the MVC200-DC is designed for decoding
JPEG2000 and MPEG-2 MP@HL files to support different
types of content from a single server: Blockbuster, advertisement
and alternative content.

For Digital Cinema the MVC200-DC complies to the Digital Cinema
System Specification V1.0. The whole Secure Media Block (SMB)
functionality is integrated on the MVC200-DC card itself, making it
a very strong and safe component in terms of content protection.

The first version has a 64bit/66MHz PCI-bus interface, a later
version is planned for PCI-Express. The card comes with a
Software Development Kit (SDK), consisting of driver, API and
sample application for both Linux and Windows.

KEY FEATURES

JPEG2000 decoding, 2K, 24/48 fps,
DCI-compliant

MPEG-2 MP@HL decoding, 2K, 30 fps

Uncompressed 16ch audio, 96 kHz,
Downmix to 5.1 and stereo

Bitstream decryption up to 250+ Mbps

Audio / Video Forensic Marking,
Video Link encryption (CineLink II)

Full-resolution graphic overlay,
SubPicture overlay w/ Alpha-channel

Unique API for Windows and Linux

Optional: Frame-accurate,
multi-channel synchronization

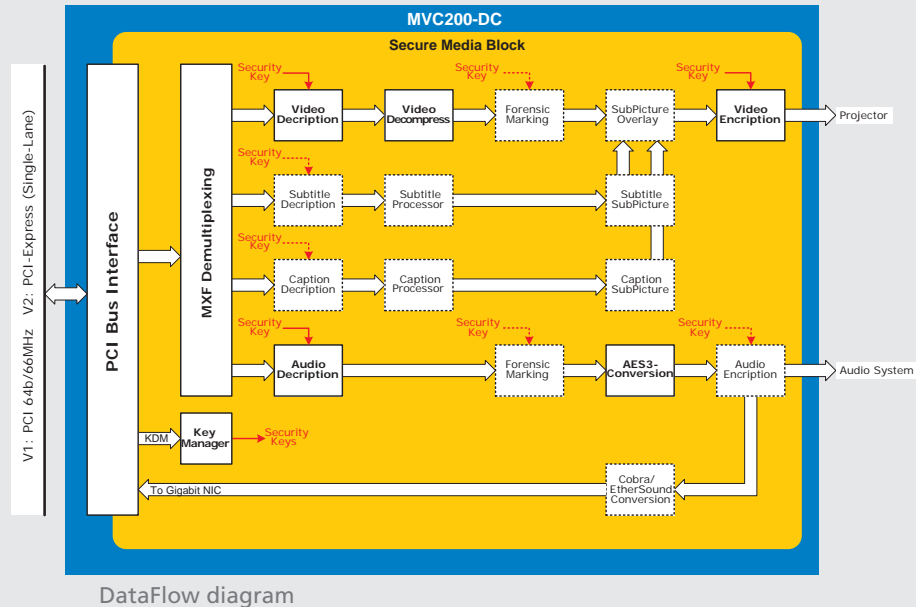Optional: Genlock IN, LTC IN/OUT

APPLICATIONS

D-Cinema, E-Cinema

Cinema Advertisement

3D Play-out

Postproduction

DataFlow diagram

TECHNICAL SPECIFICATION

VIDEO DECODING AND FORMATS

JPEG2000 (ISO/IEC 15444-1), 2048x1080, 24/48 fps, 12 Bit, X'Y'Z', DCI-compliant

MPEG-2 MP@HL (ISO/IEC 13818-2), 2048x1080 Pixel, 30fps, 8 Bit, 4:2:0 YUV

Automatic decoder reconfiguration (MPEG/JPEG) with seamless transition

AUDIO PROCESSING/DECODING

16ch PCM audio, 24 Bit, 96 kHz

Downmix to 5.1 and Stereo

MPEG-1 Layer II Stereo Audio Decoder (optional Dolby AC-3, AAC)

BITSTREAM PROCESSING

MXF Demultiplexing & AES128-Decryption

MPEG-2 TS/PS Demutiplexing

250+ Mbps bitstream data rate

CONTENT PROTECTION

Physical and logical security according to FIPS 140-2 level 3

Audio/Video Forensic Marking

Video Link Encryption (CineLink II)

Embedded Security Manager (DCI-compliant Security)

Bitstream Decryption (AES128)

INPUT

64b/66MHz PCI (Version 2.0: PCI-Express)

OUTPUT

Digital Video Output: Quad HD-SDI (SMPTE292M, SMPTE372M), BNC/SMB

Digital Audio Output: 16ch Audio, AES3 and I²S

Digital Audio Output: 8ch TASCAM Digital interface, DB25

VIDEO OVERLAY

Subtitle/Caption SubPicture overlay w/ Alpha-channel

Full-resolution true-color graphic overlay

PHYSICAL

Dimensions (PCB): 270x98 mm, Weight: 410 g/0.9 lbs

OPERATING CONDITIONS

Temperature: 0 °C to 40 °C (32 °F to 104 °F)

Rel. Humidity: 20 to 80 % (non-cond.)

COMPLIANCE

CE, CSA, FCC, RoHS, WEEE

FIPS 140-2 level 3, DCI Version 1.0