VideoMaster ST2110 IP Virtual Card

DELTACAST software network stack

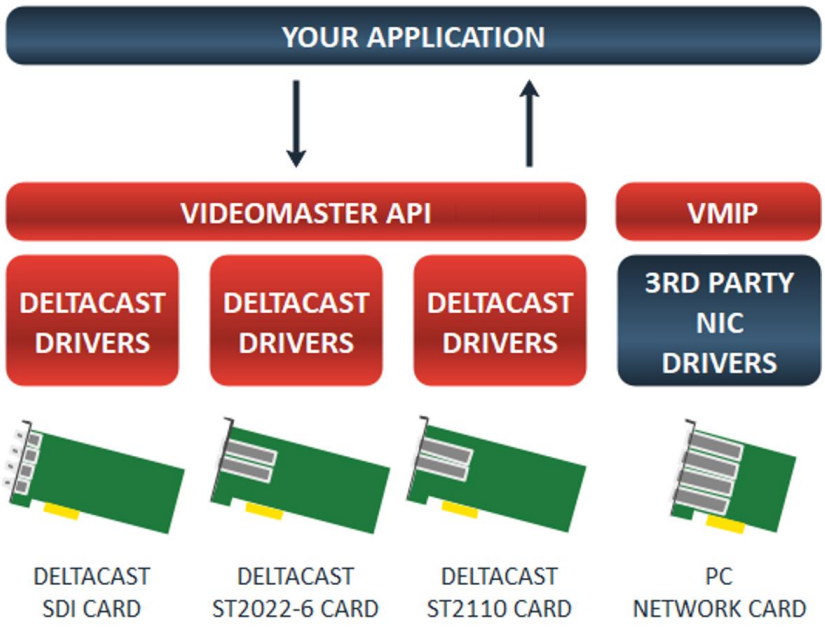
ST2110 capture and playout with a standard NIC

The broadcast industry lives a major transition, with the move away from baseband video to adopt IP-based video contribution workflows.

This move is linked to a transition to IT-centric infrastructures, with the goal of optimizing broadcast infrastructures and production costs. It implies using traditional IT equipment and computer-based solutions where dedicated electronics was needed before.

DELTACAST commits itself to providing the industry with innovative solutions for future workflows, and proposes new software frameworks to perform ST2022-6 and ST2110 video transmission and reception using traditional NIC (Network Interface Cards).

Besides the well-known **VideoMaster SDK**, the DELTACAST portfolio now includes a new component called the IP Virtual Card – aka **VideoMaster IP**. The IP Virtual Card is a new videoframe-based API allowing the use of 3rd-party computer network cards to capture and stream out video just like you are used to do over any DELTACAST card.



The first implementation of this new framework, introduced in 2016, was dedicated to ST2022-6.

The VideoMaster Virtual Card now supports the ST2110 ecosystem, allowing reception and transmission of video, audio and ancillary data essences whilst respecting the system timings and elements as well as the traffic shaping requirements of the norm.

The VideoMaster Virtual Card transmits accurate, PTP locked, media streams on virtually any network interface and speed, and offers many features and configuration options.

Thanks to an optimized software processing pipe, VideoMaster allows transmitting and receiving multiple feeds on a properly tuned network card, while keeping reasonable CPU usage. As an option, optimal performances are reached when activating the kernel bypass mode based on DPDK.

This approach also opens new doors such as the deployment of your VideoMaster-based application in virtualized video infrastructures.

SMPTE standards

- ✓ ST2022-6 (HBRMT)

- ✓ ST2110-10 (system timing)
- ✓ ST2110-20 (uncompressed active video)
- ✓ ST2110-30 (PCM digital audio)
- ✓ ST2110-40 (ancillary data)
- ✓ ST2110-21 (traffic shaping)

- ✓ ST2059 (PTP)

- ✓ Contact us if you need support for :
  - ST2022-5 (FEC)
  - ST2022-7 (protection switching)
  - NMOS

Features

- ✓ Run-time licenses
- ✓ Full access to video, audio and ancillary data essences
- ✓ Encoding and decoding services for most ANC data types (timecode, captions, …)
- ✓ ST2110-21 type W sender and receiver
- ✓ Basic version based on Linux sockets
- ✓ Optimized version based on DPDK

Video formats

- ✓ SD : NTSC 525i59.97, PAL 625i50
- ✓ HD : 720p 23.98/24/25/29.97/30/50/59.94/60
- ✓ HD : 1080i/p/psf 23.98/24/25/29.97/30/50/59.94/60
- ✓ HD : 2048p 23.98/24/25/29.97/30/47.95/48/50/59.94/60
- ✓ UHD : 2160p 25/29.97/30/47.95/48/50/59.94/60