

Cisco HD/SD MPEG-4 AVC Contribution Codec

The Cisco® HD/SD MPEG-4 AVC Contribution Codec (Model D9094) delivers superior high-definition (HD) technology to network affiliates that need to add HD contribution capabilities to their satellite news gathering (SNG) operations. The Cisco solution provides MPEG-4 Advanced Video Coding (AVC) and DVB-S2 modulation to enable real-time transmission of HD content using the same satellite infrastructure and bandwidth currently utilized for standard-definition digital content. This allows affiliates to upgrade SNG content to HD to align local news formats with network broadcasts that are increasingly available in HD.

The Need for HD Contribution Feeds

Delivering HD SNG content helps affiliates create a more consistent, high-quality viewing experience for their audiences. This experience can attract new viewers and help with audience retention for existing viewers. Much like the popularity of the digital video recorder experience, the HD video experience is a “once you try it, you never want to go back to ordinary TV” scenario. Adding HD content delivery capabilities provides affiliates with a powerful new opportunity to differentiate their viewing experience and take advantage of the growing popularity and demand for HD service.

Cisco HD/SD MPEG-4 AVC Contribution Codec Solution

The Cisco solution delivers two powerful advanced technologies: MPEG-4 AVC and DVB-S2. The innovative encoding capabilities of MPEG-4 AVC deliver as much as a 50-percent bandwidth improvement over MPEG-2 encoding to provide the bandwidth efficiency to support HD feeds over your existing infrastructure. The added benefit of more efficient satellite transponder utilization delivered by DVB-S2 modulation combines with MPEG-4 AVC encoding to support HD content at bit rates usually associated with SD content. And, these efficiencies come with no degradation of quality to protect the pristine HD video experience for viewers.

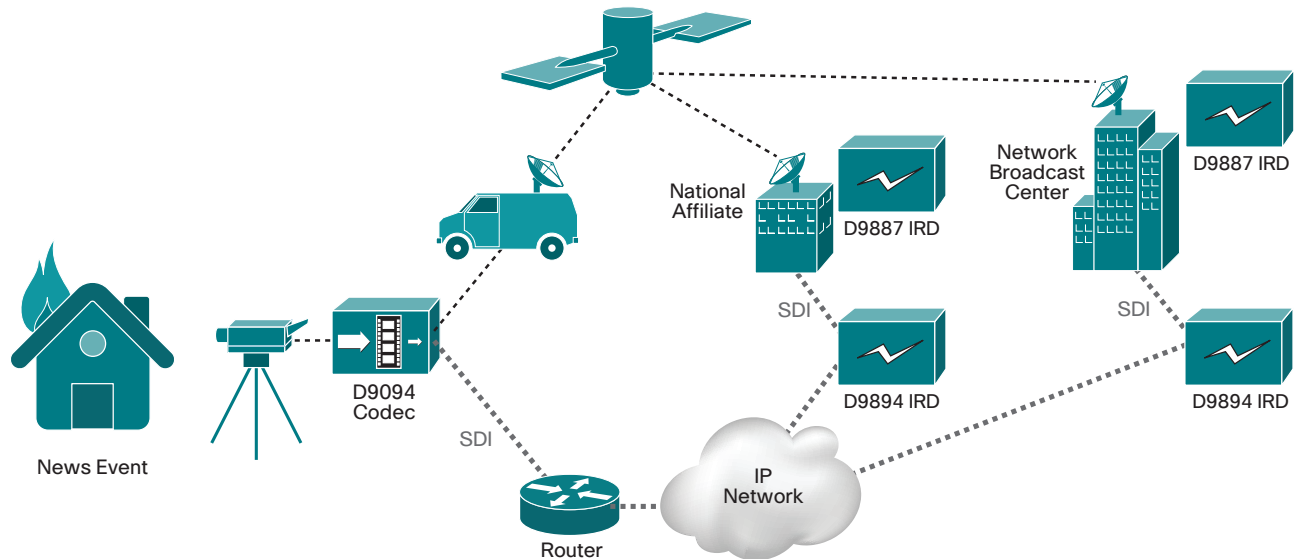
If desired, the Cisco HD/SD MPEG-4 AVC Contribution Codec (Model D9094) can also function as an MPEG-4 decoder, adding to the flexibility of the Cisco solution.



Cisco HD/SD MPEG-4 AVC Contribution Codec (Model D9094)

Dual Path DSNG HD Contribution Solution

MPEG-4 and DVB-S2 – Transmit in HD using existing SD (QPSK) bandwidth



HD and SD DSNG

- Integrated DVB-S2 modulator
- L-Band or IF input

Simultaneous IF or ASI Output

- For terrestrial backup path

Error Correction

- IP FEC and packet retransmission
- Secures an error-free connection for real-time video

The low-delay contribution codec satisfies the critical demands of your contribution operations, including:

- **MPEG-4 AVC real-time transmission** of HDTV at low bit rates and low delays over DVB-S/S2, DVB-ASI, or broadband IP networks
- **Powerful error-correction functions** to help ensure high-quality video over the public Internet by preventing distortion of decoded images, even when network packet losses occur
- **A flexible codec architecture** to allow broadcaster selection between encoder and decoder functionality

To complete the HD solution, the Cisco HDTV Modular Receiver (Model D9887) provides the essential receiving and decoding capabilities for the advanced HD encoded contribution feeds.

This comprehensive Cisco solution delivers a pleasing, compelling HD viewing experience. It provides advanced technology to replace the outdated, lower-quality video delivery techniques that use up-converted 4x3 aspect ratio content with sidebars or low-resolution 16x9 SD signals to fill the viewer's screen.



Benefits of the Cisco HD/SD MPEG-4 AVC Contribution Codec Solution

- **Confidence** — Reliable, high-quality HD video contribution delivery solution:
 - A top-4 North American broadcaster has already conducted a proof of performance for the Cisco solution, and the network has deployed it in multiple markets and is recommending it to its affiliates
 - MPEG-4 AVC and DVB-S2 are proven, stable, widely deployed standards
 - Cisco brings a strong video delivery heritage, commitment to video R&D, decades of support for broadcasters, and complete portfolio of products and services
 - Powerful error-correction functions help ensure high quality of service
- **Efficiency** — Deliver HD contribution feeds using existing infrastructure and space segments:
 - Existing uplink and downlink equipment can be reused.
 - No increase in space segment costs.
 - No changes to operating procedures minimizes operator training.
- **Flexibility** — Tailor the Cisco solution to meet your specific needs:
 - Select the bit rate that matches the desired video quality level.
 - D9094 encodes and modulates MPEG-4 AVC or MPEG-2 content in a single piece of equipment, while D9887 decodes both types of content.
 - The solution supports MPEG-4 AVC encoding and decoding for HD and SD content.

Why Cisco?

- The Cisco solution provides improved picture quality and low delay performance to deliver superior HD contribution and processing, as well as a compelling viewing experience, to allow affiliates to differentiate their on-screen “product” from competitive options.
- Innovative integration of advanced MPEG-4 AVC and DVB-S2 technologies offers the most up-to-date opportunities for more efficient use of satellite space segment to help control operating expense costs.
- Reuse of existing uplink and downlink infrastructure helps to control capital expenditure costs.
- Proof of performance testing by a top-4 North American broadcaster validates the performance and benefits of the Cisco solution.

For more information, visit us at: www.cisco.com/go/dpon