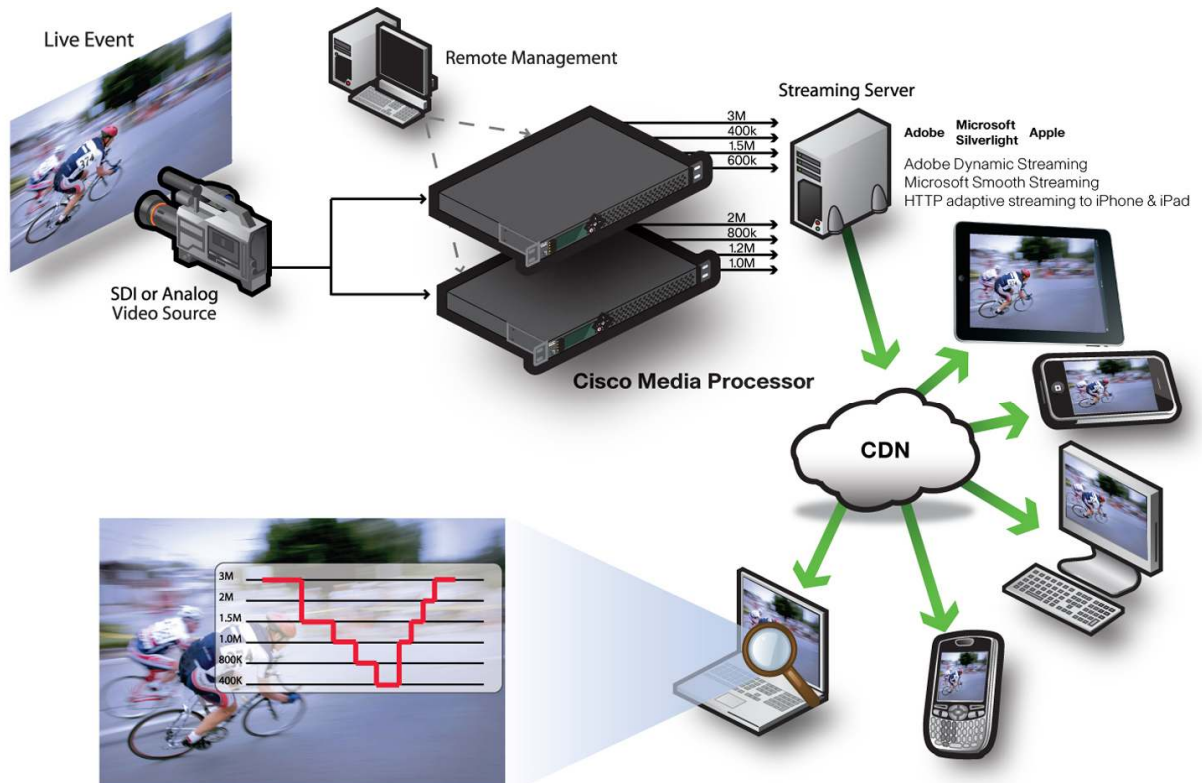


Cisco AS7100 Series Media Processor

The Cisco® Media Processor Family of advanced, live standard- and high-definition (SD and HD, respectively) encoding solutions is redefining the online video experience with best-in-class quality for live media delivery applications such as live sports and other web streaming, broadband TV, IPTV, enterprise, education, or government video.

The robust, reliable Cisco Media Processor platform can stream in multiple formats to any device, including iPhone®, iPad®, feature phones, and smartphones. Cisco was the first to offer full support for and continues to lead the market in adaptive bitrate (ABR) streaming, including Apple® HTTP Live Streaming (HLS), Microsoft Internet Information Server (IIS) Smooth Streaming, and Adobe HTTP Dynamic Streaming. The Cisco Media Processor also can detect broadcast cue messages and translate critical ad metadata into ad markers appropriate for the Flash and Silverlight platforms as well as Apple iOS devices.

Figure 1. Cisco AS7100 Series Media Processor workflow example.



Protect Your Infrastructure Investment

Cisco can help you protect your IP video infrastructure investment. Even if you are streaming only in SD today, the Cisco AS7100 Series Media Processor (Cisco AS7100) protects your investment. When you are ready to add HD resolutions such as 960 x 540 or 720p, the Cisco AS7100 is ready to deliver, and it is multiformat at the start—so you do not need to add appliances every time you add a format. The Cisco patent-pending software technology allows you to continue to upgrade your existing Cisco encoder with the latest and most innovative technologies.

Why Cisco AS7100?

- Cisco AS7100 offers full support for adaptive streaming, including Apple® HLS iPhone® and iPad® streaming, Microsoft Smooth Streaming and Adobe Dynamic Flash Streaming.
- The powerful and flexible core software platform of the Cisco AS7100 can output multiple formats from one appliance while offering a range of resolutions, from feature phones to smartphones to SD to HD.
- Designed to be easy to set up and manage, the Cisco AS7100 web-based interface gives you the flexibility of controlling the encoder from any networked computer. Its scheduling capabilities allow you to set up future one-time or recurring events. It also boasts an XML application programming interface (API) that allows you or third-party applications to control the encoder with automated commands.
- In order to provide the highest-quality video, Cisco starts with a high-end video capture card, adds multiple preprocessing options and powerful Intel Quad Core processors, uses patent-pending Dynamic Complexity balancing, and exposes one of the most comprehensive list of advanced compression settings. No other encoder allows you to customize your settings like the Cisco Media Processors.
- The Cisco AS7100 supports multiple captioning options, including open captions, closed captions, Synchronized Accessible Media Interchange (SAMI) captions, script streams, and cue points. This flexibility gives you multiple ways to reach a broader base of users and meet government or corporate requirements.
- The Cisco AS7100 also supports the insertion of metadata into a Windows Media or Flash stream. This metadata can be statistics, URLs for advertisements, or other information.

Features and Benefits of Cisco AS7100

Table 1. Features and Benefits of Cisco AS7100

Feature	Benefit
The Cisco Media Processor Core Software Version 5.5	<ul style="list-style-type: none">• SCTE 35 pass-through, making automated ad insertion even easier• Integration of Verimatrix content protection for Apple® iOS• Support for closed captioning in Smooth Low Latency mode• Simple Network Management Protocol Version 2 (SNMPv2), with support for all channels and improved alarms and reporting
Other Key Features	<ul style="list-style-type: none">• The latest Intel Quad Core i7 processor, meaning 20 percent more performance, making it ideal for more complex encoding projects• Integrated Linear Time Code Reader (LTC) for adaptive streaming synchronization across multiple Cisco encoders; no “Little Red” device or other time-code reader is required

Feature	Benefit
Advertising and monetization	<ul style="list-style-type: none"> Automate ad insertion with playlists generated by playout servers Support for slate insertion to remove broadcast ads Ability to remonetize video with Internet ads for browser, mobile, and set-top box Full support for ABR streaming: <ul style="list-style-type: none"> HTTP live streaming to iPhone® and iPad® Microsoft Smooth Streaming, including support for H264 PlayReady DRM, enabling secure live publishing solutions Adobe HTTP Dynamic Streaming, with built-in content-delivery-network (CDN) authentication Support for Low-Latency Live Smooth Streaming and Multilanguage Smooth Streaming Added support for Distribution Format Exchange Profile (DFXP), providing industry-standard solutions for subtitling Smooth and Flash streams
Multienncoder synchronization	<ul style="list-style-type: none"> Allocate two or more Cisco AS5100 processors to a single event, and generate up to four streams per processor, providing multiple available bitrates Synchronize discrete encoders on frame boundaries, eliminating pauses and skips when switching between streams on different encoders Cisco AS7100 is ideal for back-up, failover, and recovery

Specifications of Cisco AS7100

Inputs	
Video	<ul style="list-style-type: none"> NTSC and PAL
High-Definition	<ul style="list-style-type: none"> HD-SDI: SMPTE 292/296 (BNC connector)
Standard-Definition	<ul style="list-style-type: none"> SD-SDI: SMPTE 259 (BNC connector) Composite (through one locking BNC) Component (through three locking BNCs) S-Video (through two locking BNCs)
Audio	<ul style="list-style-type: none"> Four stereo pairs over system diagnostic interface (SDI) embedded (BNC) Stereo Balanced Audio (through two locking XLR connectors) Advanced Encryption Standard (AES) and stereo through locking XLR
Codecs	<ul style="list-style-type: none"> Windows Media Smooth Streaming to IIS server (H.264 or VC-1) H.264 PlayReady DRM support Windows Media 9 (WMV3): Simple and Main profiles VC-1 (WVC1): Simple, Main, and Advanced profiles Windows Media Audio and Audio Professional VC-1 and Windows Media ASF file (.wmv) VC-1: Push or Pull mode from encoder
H.264 Flash	<ul style="list-style-type: none"> Dynamic Flash streaming to Flash Media Server Routing Table Maintenance Protocol (RTMP) stream over TCP to Flash Media Server H.264 and AVC: Baseline, Main, and High profiles AAC audio (low complexity, HE-AAC v1, and HE-AAC v2)
H.264 Multicast MPEG-2 Transport Stream	<ul style="list-style-type: none"> Standard or adaptive transport stream Ability to start or stop archive while encoder is running
H.264 iPhone® and iPad®	<ul style="list-style-type: none"> H.264/AVC: Baseline AAC audio (low complexity, HE-AACv1, and HE-AACv2) Integrated iPhone® segmenter: Streams transport stream segments directly to web server
Third-Generation Partnership Project (3GPP)	<ul style="list-style-type: none"> H264 and AVC Baseline AAC audio (low complexity, HE-AAC v1, and HE-AAC v2) H.263 Profile 0,3; levels 10, 20, 30, and 45 AMR-NB Audio Real Time Streaming Protocol (RTSP), Real-Time Transport Protocol (RTP), and Secure Device Provisioning (SDP) output Raw RTP output

Inputs	
Control	<ul style="list-style-type: none"> • Remote web-based GUI • LCD front panel • Customizable encoding templates • Local user interface • SNMPv2 • XML Simple Object Access Protocol (SOAP) messaging service
Processing	
Preprocessing	<ul style="list-style-type: none"> • Scaling • Cropping • De-interlacing • Inverse telecine • Adaptive image filtering
Certifications	
Safety	<ul style="list-style-type: none"> • UL 60950-1:2003 • CAN/CSA—C22.2 no. 60950-1-03
EMC	<ul style="list-style-type: none"> • FCC (CFR 47, Part 15) Class A • CE marking • C-Tick: According to AS/NZS CISPR 22:2009
Physical and Power	<ul style="list-style-type: none"> • Dimensions (H x W x D): 1.72 x 17.0 x 18.21 in. (4.37 x 43.18 x 46.25 cm) (1 rack unit [1RU]) • Power: 100-240 VAC full range, 290W • Connectivity: Two 10/100/1000BASE-T Ethernet
Ambient temperature	<ul style="list-style-type: none"> • Operating temperature: 32 to 113°F (0 to 45°C) • Nonoperating (storage): 14 to 140°F (-10 to 60°C)
Relative humidity	<ul style="list-style-type: none"> • Nonoperating: <95% noncondensing



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