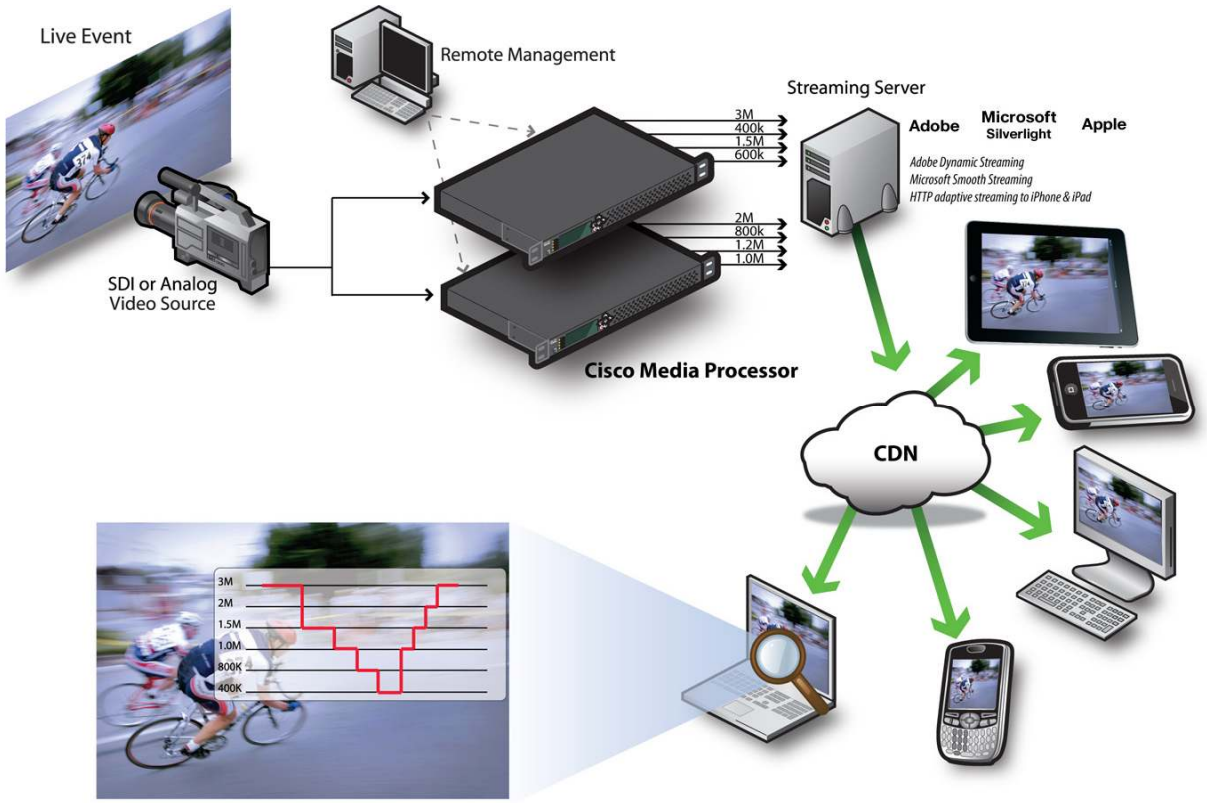
Cisco AS5100 Series Media Processor

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 platform of the Cisco AS5100 Series Media Processor (Cisco AS5100) can stream in multiple formats to any device, including iPhone®, iPad®, feature phones, and smartphones. Cisco Media Processor 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 AS5100 can also 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 AS5100 Series Media Processor workflow example.



Protect Your Infrastructure

Cisco can help you protect your IP video infrastructure investment. The Cisco AS5100 is multiformat from the start—so you do not have to add appliances or licenses every time you add a format, and the Cisco Media Processor Core Software technology allows you to continue to upgrade your existing Cisco encoder with the latest and most innovative technologies.

Why Cisco AS5100?

- Cisco AS5100 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 AS5100 can output multiple formats from one appliance while offering a range of resolutions, from feature phones to smartphones to desktop.
- Designed to be easy to set up and manage, the web-based interface of the Cisco AS5100 gives you the flexibility of controlling the encoder from any networked computer. The Cisco AS5100 also boasts an XML application programming interface (API) that allows you or third-party applications to control the media processor 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 Cisco 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 Processor.
- The Cisco AS5100 supports multiple captioning options, including open captions, closed captions, Synchronized Accessible Media Interchange (SAMI) captions, script streams, cue points, etc. This flexibility gives you multiple ways to reach a broader base of users and meet government or corporate requirements.
- In addition to the captioning data, the Cisco AS5100 also supports the insertion of metadata into a Windows Media or Flash stream. This metadata can be statistics, URLs for advertisements, contextual information, etc.

Features and Benefits of Cisco AS5100

Table 1 lists the features and benefits of the Cisco AS5100 Media Processor.

Table 1. Features and Benefits of Cisco AS5100 Media Processor

Feature	Benefit
New in Cisco Media Processor Core Software Version 5.5	• SCTE 35 pass-through, making automated ad insertion even easier • Improved event logging, allowing you to filter by event • Preset management enhancements • Integration of Verimatrix content protection • 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
Advertising and monetization	• Automate ad insertion with playlists generated by playout servers • Cisco AS5100 supports slate insertion to remove broadcast ads • Remonetize video with Internet ads for browser, mobile, and set-top box • Full support for adaptive bitrate (ABR) streaming includes: ◦ HTTP Live Streaming to iPhone® and iPad® ◦ Microsoft Smooth Streaming, including support for H.264 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

Feature	Benefit
	• Added support for Distribution Format Exchange Profile (DFXP), providing industry-standard solutions for subtitling Smooth and Flash streams
Multiencoder synchronization	• 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 AS5100 is ideal for back-up, failover, and recovery

Specifications of Cisco AS5100

Table 2 lists the specifications of the Cisco AS5100.

Table 2. Specifications of Cisco AS5100

Inputs	
Video	• NTSC and PAL • SD-SDI: SMPTE 259 (BNC connector) • Composite (through one locking BNC) • Component (through three locking BNCs) • S-Video (through two locking BNCs)
Audio	• Four stereo pairs over SDI embedded (BNC) • Stereo Balanced Audio (through two locking XLR connectors) • Advanced Encryption Standard (AES) and stereo through locking XLR
Codecs	
Windows Media	• Smooth streaming to IIS server (H.264/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	• Dynamic Flash streaming to Flash Media Server • Routing Table Maintenance Protocol (RTMP) stream over TCP to Flash Media Server • H.264/AVC: Baseline, Main, and High profiles • AAC audio (low complexity, HE-AAC v1, and HE-AAC v2)
H.264 Multicast MPEG-2 Transport Stream	• Standard or adaptive transport stream • Ability to start or stop archive while encoder is running
H.264 iPhone® and iPad®	• H.264/AVC: Baseline • AAC audio (low complexity, HE-AAC v1, and HE-AAC v2) • Integrated iPhone® segmenter: Streams transport stream segments directly to web server
Third-Generation Partnership Project (3GPP)	• H264/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
Control	• Remote web-based GUI • LCD front panel • Customizable encoding templates • Local user interface • SNMPv2 • XML Simple Object Access Protocol (SOAP) messaging service

Processing	
Preprocessing	• Scaling • Cropping • De-interlacing • Inverse telecine • Adaptive image filtering
Certifications	
Safety	• UL 60950-1:2003 • CAN/CSA—C22.2 no. 60950-1-03
EMC	• FCC (CFR 47, Part 15) Class A • CE marking • C-Tick: According to AS/NZS CISPR 22:2009
Physical and Power	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, 225W Connectivity: Two 10/100/1000BASE-T Ethernet Ambient temperature • Operating temperature: 32 to 113℉ (0 to 45℃) • Non-operating (storage): 14 to 140℉ (-10 to 60℃) Relative humidity • Non-operating: <95% non-condensing

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