

Cisco Simplifies Digitization of Audio Video Networks with IEEE Audio Video Bridging

Open-Standard Ethernet Infrastructure from Cisco Supports Interoperability of Multivendor AV Hardware

Audio Video (AV) equipment deployments have traditionally been single-purpose, analog, point-to-point connections with one-way links. As AV deployments migrate to digital, they have continued to retain this inflexible point-to-point architecture. This dedicated connection model also results in a mass of cabling that is difficult and costly to manage. In contrast, an **open-standards based Ethernet infrastructure** enables flexibility and transparent interoperability of multi-vendor AV equipment and integration of new services.

The IEEE 802.1 Audio Video Bridging (AVB) standard enables this digital transition and accelerates the adoption of Ethernet-based AV deployments that are interoperable. The IEEE 802.1 AVB defines a mechanism whereby the endpoints and the network function as a whole. This allows high-quality AV streaming of professional AV over an Ethernet infrastructure. Instead of one-to-one, the network transport enables many-to-many seamless plug-n-play connections for multiple AV endpoints including talkers and listeners. This helps corporations lower total cost of ownership through fewer cables (CapEx) and no license fees for any proprietary technologies (OpEx). It also provides higher quality, time-synchronized AV with more scalability. This scalability includes a more efficient deployment, installation and management enabling new capabilities.

Cisco simplifies digitization of AV networks with AVB support on industry-leading switches. With Cisco IOS® XE Software Release 16.3, Cisco introduced support for the IEEE 802.1 AVB standard on select Cisco® Catalyst® 3850 and 3650 Series Switches. Cisco IOS XE Software Release 16.8 introduced support for the 802.1 AVB standards on the Cisco Catalyst 9300 Series and on select Cisco Catalyst 9500 Series Switches.

Benefits

- Improves quality of experience by delivering low jitter and low latency
- Helps scale applications across networked deployments
- Lowers total cost of ownership with no license fees and reduced cabling complexity

Next steps

Learn more about the Cisco Audio Video Bridging solution at: <https://www.cisco.com/go/avb>

For early field trial requests, send an email message to: avb-interest-external@external.cisco.com



The Cisco Unified Access® Data Plane Application-Specific Integrated Circuit (ASIC) powers the switches and can enable uniform wired and wireless policy enforcement, application visibility and control (AVC), flexibility, and application optimization.

The Cisco Catalyst 9300 Series is the industry's first optimized platform for 802.11ac Wave 2, offering the highest density of 48 access ports. The Catalyst 9300 Series has the most flexible uplink architecture, with support for 1G, Multigigabit, 10G, 25G and 40G. The Cisco Catalyst 9300 Series also has a highly resilient and efficient power architecture with Cisco StackPower®, which delivers a high density of Cisco Universal Power over Ethernet (Cisco UPOE®) and Power over Ethernet Plus (PoE+) ports.

The Cisco Catalyst 9500 Series is the industry's first purpose-built 100G and 40G switch, offering nonblocking 100G (QSFP28), 40G (QSFP+), 25G (SFP28) and 10G (SFP+) switches with granular port densities. The platform also supports all the foundational high availability capabilities, such as hot patching, Stackwise® Virtual Graceful Insertion and Removal (GIR), Nonstop Forwarding (NSF)/Stateful Switchover (SSO), and redundant Platinum-rated power supplies and fans.

Cisco Catalyst 9300, 9500, 3850, and 3650 Series switches are designed to deliver a comprehensive set of features to provide the best application experience, the highest levels of security, precise control and management of the network. They offer industry-leading security, programmability, resiliency and scalability in the fixed configuration category of switches. As a result, they can be deployed as aggregation or access switches in large networks or as core switches in smaller networks.

Cisco has also added rich next-generation capabilities to this platform. Some examples include:

- Programmability
- AVB
- MPLS
- Services discovery gateway
- Network as a sensor and enforcer
- Encapsulated remote switch port analysis

AVB is one of the newer feature enhancements on the Cisco Catalyst 9300, 9500, 3850, and 3650 Series. AVB has huge deployment potential in enterprises, hospitality, government, and education for installed audio and video deployments in auditoriums, conference rooms, casinos, courtrooms and more.