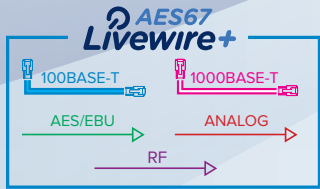# Before AES67, There Was Livewire

Way back in 2003, Axia Audio, the studio audio division of the Telos Alliance®, invented Audio over IP for Broadcast. We did what no one had ever done before—create professional radio gear that networks using standard Ethernet, for use in digital audio routing, mixing, and distribution systems for Broadcast and other Pro Audio applications.
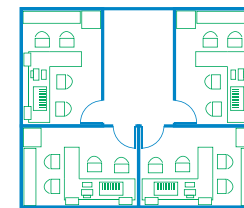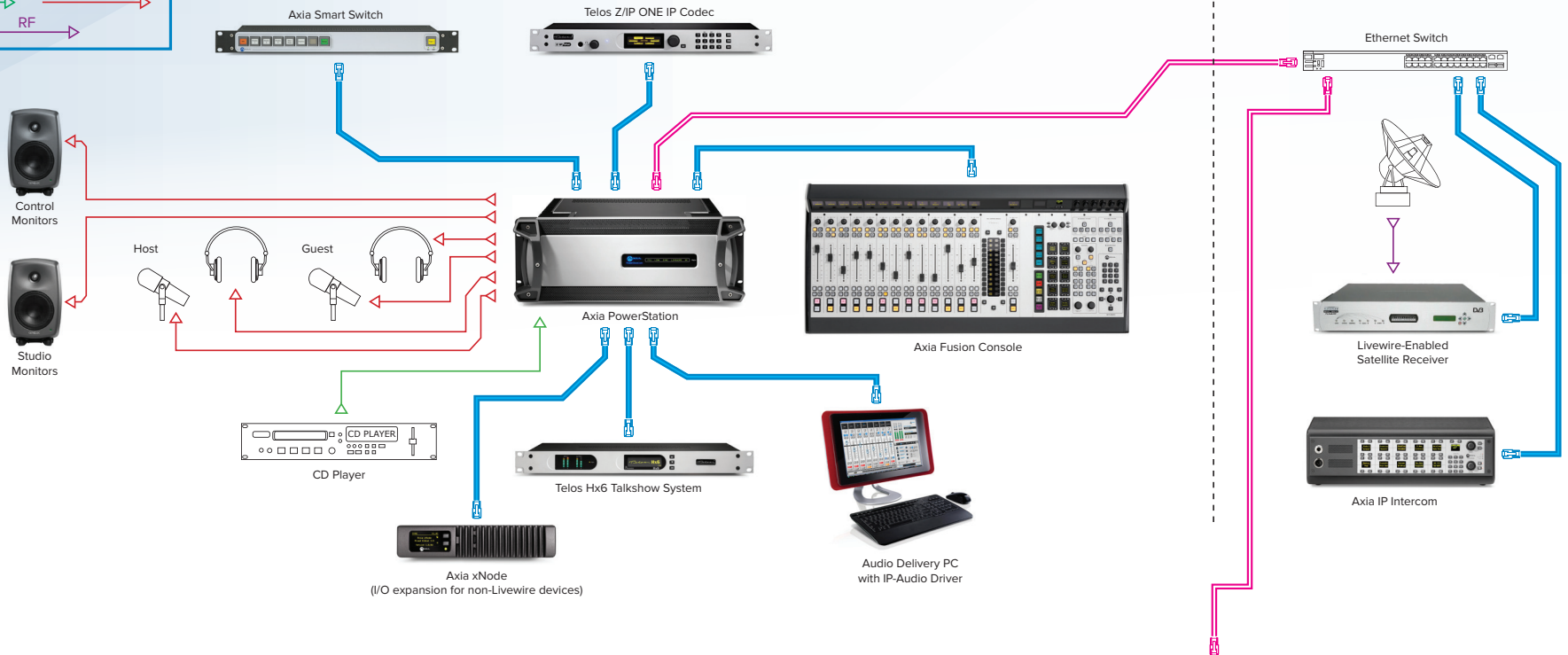
The foundational technology in all Axia products is Livewire plus AES67— we call it Livewire+, an AoIP protocol that enables high-reliability, low-delay uncompressed digital audio over Ethernet, including audio, logic, control, and program associated data (PAD). Axia Livewire+ has built-in compliance with the AES67 standard. Axia and the Telos Alliance are committed proponents of AoIP interoperability—first as charter, supporting members of the X192 Working Group that defined AES67, and now as founding members of the Media Networking Alliance, a group of prominent equipment manufacturers formed to actively promote the adoption and implementation of the AES67 standard.

Today, Axia mixing consoles, digital audio routers, broadcast intercom systems, and routing control software—along with other Telos brands and 85+ partners—are powering broadcast studios around the globe.

AES67
Livewire+
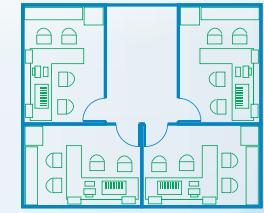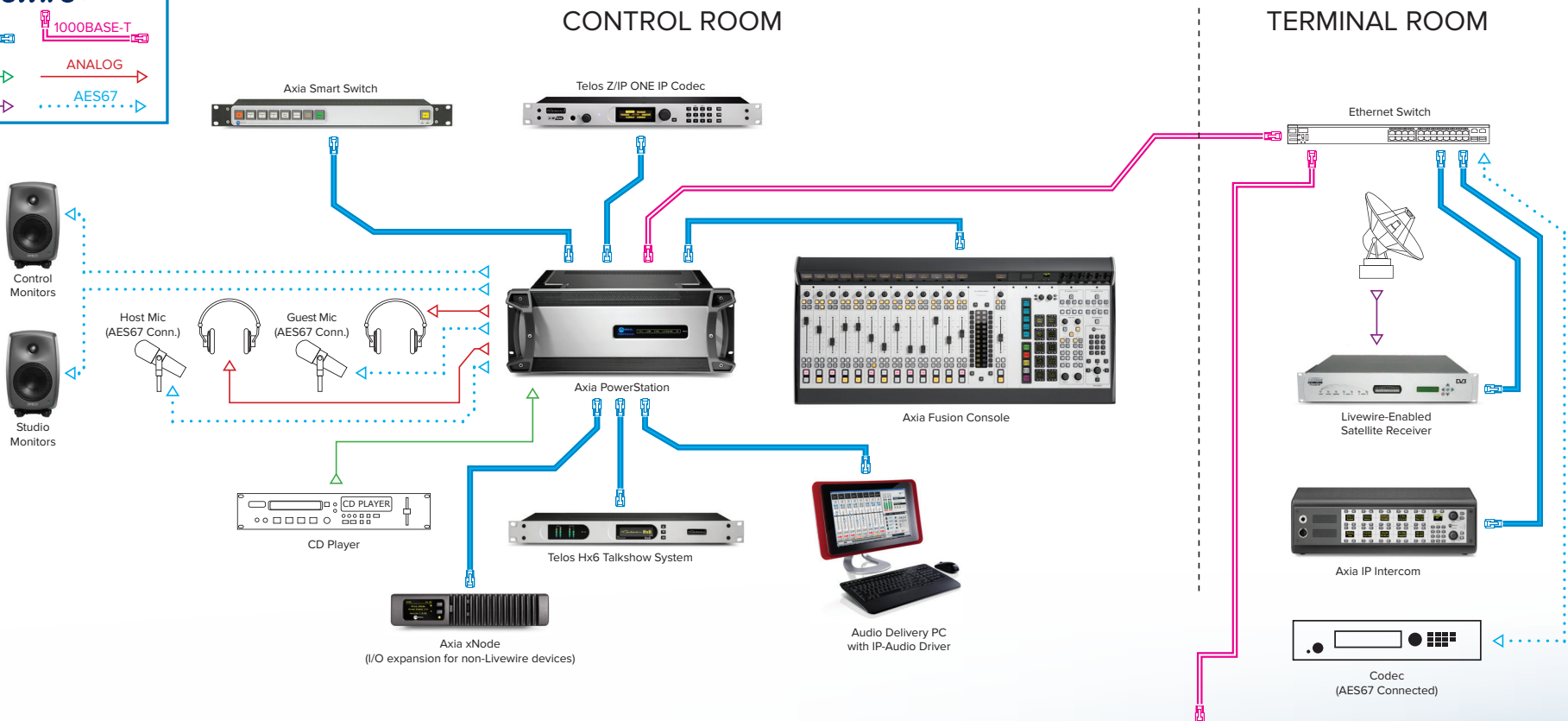
100BASE-T   1000BASE-T

AES/EBU   ANALOG

RF

CONTROL ROOM

TERMINAL ROOM

Axia Smart Switch

Telos Z/IP ONE IP Codec

Ethernet Switch

Control
Monitors

Host   Guest

Studio
Monitors

Axia PowerStation

Axia Fusion Console

Livewire-Enabled
Satellite Receiver

CD PLAYER

CD Player

Telos Hx6 Talkshow System

Audio Delivery PC
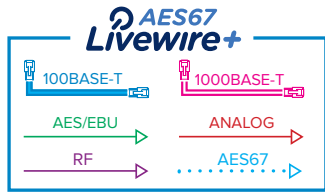with IP-Audio Driver

Axia IP Intercom

Axia xNode
(I/O expansion for non-Livewire devices)

All-Livewire Studio

The advantage of an all-Livewire system is full support of advertising/discovery, GPIO, and Program Associated Data throughout every link in the system.

OTHER STUDIOS

AES67 Livewire+

100BASE-T
1000BASE-T
AES/EBU
ANALOG
RF
AES67

CONTROL ROOM

Axia Smart Switch

Telos Z/IP ONE IP Codec

TERMINAL ROOM

Ethernet Switch

Control Monitors

Studio Monitors

Host Mic (AES67 Conn.)

Guest Mic (AES67 Conn.)

Axia PowerStation

Axia Fusion Console

Livewire-Enabled Satellite Receiver

CD PLAYER

CD Player

Telos Hx6 Talkshow System

Audio Delivery PC with IP-Audio Driver

Axia IP Intercom

Axia xNode (I/O expansion for non-Livewire devices)

Codec (AES67 Connected)

OTHER STUDIOS

Livewire with AES67 Studio

Here, the microphones, speakers, and codecs are interconnected using AES67 instead of Livewire. While these devices can coexist within the Livewire system, with only an AES67 connection, they do not have the ability to support advertising/discovery, GPIO, and Program Associated Data (PAD) as Livewire does today.

AES67 Livewire+ ™

**2003: Livewire Becomes First
Broadcast AoIP Protocol**

**7,000 Consoles
On-Air Worldwide**

**70,000+ Livewire Connected
Devices Installed**

**85+ Livewire Partners
and Counting**

**Charter Member of
AES67 Working Group**

**Founding Member of
Media Networking Alliance**