

## Television Audio Solutions

Televisions with an embedded EMO™ speaker system provide consumers the enhanced performance they want in a more streamlined and attractive enclosure. Patented *Edge Motion™* technology provides superior audio quality and a more natural and enjoyable presentation of multimedia content

### Overview

Compared with traditional speaker solutions for Televisions, EMO™ brand Audio Solutions add value by improving the overall consumer experience without sacrificing size and style. These invisible, “zero footprint” speaker system are capable of delivering the best possible sound quality from a smaller television enclosure. Moreover, the unique design of these embedded systems provides a more natural and realistic presentation by generating sound from the ideal speaker location.

Advances in flat panel displays and electronics have enabled manufacturers to design slimmer, more streamlined television enclosures. However, it is still difficult to design a sleek, attractive TV that sounds as good as it looks. Designs that minimize enclosure dimensions typically require squeezing tiny dynamic drivers into spaces and locations that compromise the system's performance. With diminished acoustic quality, these products may not satisfy consumers unless they are used with external speakers. This is often not practical or acceptable due to the additional expense and space requirements.

### Audio with a Clear Difference

Emo Labs solves this problem with invisible high fidelity speaker systems for televisions. By using our revolutionary *Edge Motion™* audio technology, these embedded solutions make it possible to design slim, stylish flat panel TVs that also offer superior acoustic performance. By delivering full-fidelity stereo sound directly from the display, EMO™ audio solutions provide a truly natural and enjoyable television experience.

### Features

*Edge Motion™* audio solutions create value by delivering excellent audio performance in an attractive form factor that provides tremendous design freedom:

- ◆ The invisible speaker system wraps tightly around the display panel, taking up minimal space while preserving a clean, streamlined look
- ◆ A single, optically transparent membrane is two separate speakers (left and right), and provides full-range, natural sounding stereo reproduction
- ◆ Audio is directed at the listener from the front of the display, unifying the sources of audio and video content for a more pleasing and realistic multimedia experience



*With an EMO™ speaker system, invisible left and right speakers blend in seamlessly with the display. Full-range stereo sound is directed at the viewer from the front of the television, “unifying” the audio and video for a more natural presentation.*

### Consumer Benefits

- ✓ Stylish TV with great audio quality
- ✓ Unified source for sound and video
- ✓ A more realistic A/V experience
- ✓ No need for external speakers



*EMO™ audio systems provide a truly immersive entertainment experience. Everyone will be amazed, whether they are watching a movie, playing games, or enjoying their favorite show.*

### OEM Benefits

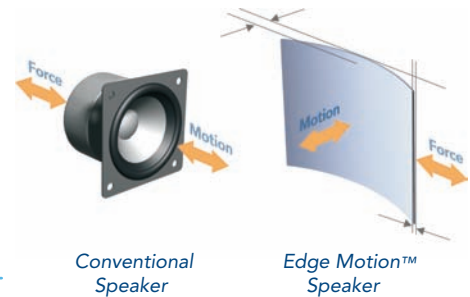
- ✓ Addresses critical market need
- ✓ Distinctive competitive advantage
- ✓ Improved audio performance
- ✓ Smaller, more streamlined products
- ✓ Better overall value

### Applications

- ✓ Small to medium primary TVs
- ✓ Secondary TVs for other rooms
- ✓ TVs optimized for gaming
- ✓ Internet connected TVs

## Edge Motion™ Audio Technology

Edge Motion™ technology fundamentally changes the way that sound is generated. The resulting speaker systems are capable of amazing audio quality and make it possible to design a better class of multimedia CE products.



### A Breakthrough in Speaker Technology

The speaker systems developed by Emo Labs use a revolutionary new technology that fundamentally changes how loudspeakers work. Our patented Edge Motion™ speaker systems generate sound based on a unique mechanical principle. Instead of a motor that pushes from behind, like a traditional cone speaker, Edge Motion™ speakers actuate a thin membrane along the side in a manner that creates an efficient, piston-like motion in front. The resultant speaker system is thin and lightweight, yet it produces full, natural sound across the audio range.

### Ideal for Integration with Displays

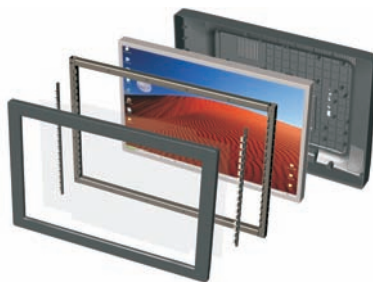
Edge Motion™ audio systems do more than simply produce exceptional sound in a completely new way. They also enable manufacturers to transform the screen of a flat panel display product into a fully-integrated, high-fidelity stereo loudspeaker. Using optically transparent materials for the membrane (the radiating part of the speaker), the entire speaker system can be made invisible by building it around a display panel.



With Edge Motion™ technology, highly controlled pressure is applied along the side of a transparent membrane. This force generates sound waves that radiate perpendicular to the plane of that surface.

### Small Footprint, Big Sound

Although these thin and lightweight EMO™ loudspeaker systems produce rich, full-range audio, the sound-producing motion of the "micro-flexing" membrane is not visible. This unique ability to effectively integrate a zero-footprint, high-quality audio solution with flat panel displays also unifies the source of both the video content and the stereo audio content. This "unification" of sound and image dramatically enhances the multimedia user experience; this is a significant benefit since consumers of all ages have access to more high-quality audio and video content than ever before.



Each EMO™ stereo speaker assembly consists of a membrane, a frame and arrays of miniature motors. As a single unit, this assembly is designed to fit tightly around the display panel, enabling it to virtually disappear into the enclosure.

### Advantages

The unique benefits of Edge Motion™ audio technology include:

- ☑ True "zero footprint" form factor means smaller, more streamlined products
- ☑ Speakers oriented towards the listener produce a more natural, full-range, high-fidelity sound and stereo imaging
- ☑ "Unifying" the sound and images provides the optimal integration of audio and video for multimedia
- ☑ Products are simpler and easier to use, with no set-up required and no additional boxes or wires

Emo Labs is a leader in the development of innovative audio technologies designed to change the way people look at speakers.

For more information on Emo Labs embedded audio solutions for display-based products, please visit our website:

[www.emolabs.com](http://www.emolabs.com)

Product inquiries may be directed to:

[BusinessDevelopment@emolabs.com](mailto:BusinessDevelopment@emolabs.com)