Audio, Video & IoT

At Cardinal Peak, we provide contract design engineering services. We offer leadership in audio, video, and Internet of Things (IoT) products. Our team includes hardware, firmware, cloud and mobile development engineers along with an extensive QA team. From initial architecture through product release, we are there to support you.

HARDWARE	EMBEDDED SOFTWARE	CLOUD SERVICES	MOBILE & WEB APPS
USER EXPERIENCE			
SYSTEM INTEGRATION (ARCHITECTURE & DEBUG) AND QA TESTING			
APPLE MFI, AMAZON AVS, GOOGLE HOME, DSP CONCEPTS PRODUCT ENABLEMENT			

120+
EMPLOYEES

17
YEARS
IN BUSINESS

2
TIME MAGAZINE'S 2018
TOP 50 PRODUCTS

WHY VOICE-ENABLE YOUR PRODUCT?

According to Juniper Research, "Voice Assistants Used in Smart Homes to Grow 1,000%, Reaching 275 Million by 2023." With recent technical advances, adding high quality voice control to a product can be done with minimum impact to your BOM impact, especially if redundant controls and remotes are eliminated at the same time. This means voice control is suitable for consumer appliances (not just for smart speakers like Amazon's Echo or Google Home).

Voice control is:

- Easier for the whole family to share control (no passwords or sharing settings to configure)

- Faster to use than app-based solutions (no phone to unlock and no apps to install)

- More natural to operate (no remotes to find)

These advantages make voice control compelling enough for consumers to upgrade from their current model device.

CARDINALPEAK

CLIENT BENEFITS

- Bring products to market quicker

- Lower development risk

- Offload your internal management

- Add the right experience to your team
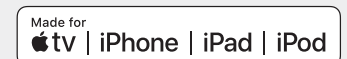
- Get CTO level input

KEY PARTNERSHIPS

amazon alexa
ENABLED

System Integrator

Design Partner

DSP CONCEPTS

Design Partner

Made for
tv | iPhone | iPad | iPod

MFi Licensed Developer

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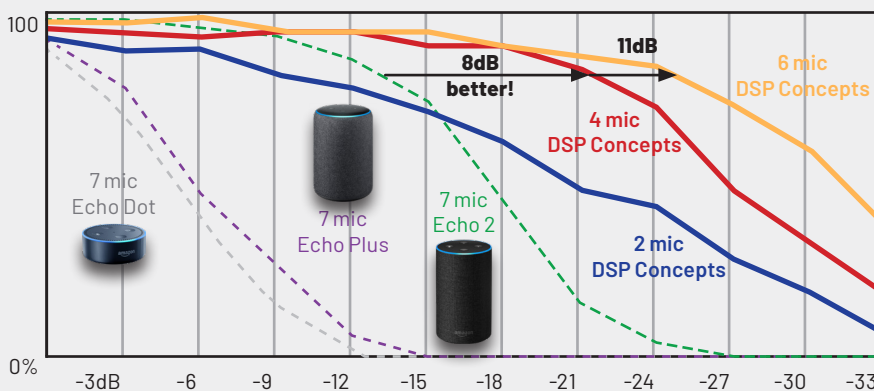pfrench@cardinalpeak.com
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Why voice-enable your product?

Cardinal Peak has developed both Amazon Alexa and Google Home products for our customers. We have partnered with the best in class voice detection/recognition software provider, DSP Concepts. This solution is roughly twice as good as an Amazon Echo device (better detection at twice the range or equivalent detection with a fraction of the microphones). The BOM is minimized as this is a 100% software solution that is suitable for battery operated devices and can be run on a number of processors.

Keyword Detection in the presence of Interfering Noise
DSPC Far-Field Reference Integrations vs. Status-quo

Why does your product require better performance than Alexa? First, voice is more challenging for devices that are not smart- speakers or TVs as they need to distinguish between voice commands and the background music/ TV. Second, you need 5 star reviews so you crush your competition.

At present, there are ODMs that have developed modules and their own voice processing software. These solutions are simply not as good. While they promise short development timelines, they do not optimize your BOM nor do they offer great voice recognition. Considering that whatever voice solution you choose, you are likely to re-use it in all your products for several years, it could prove to be a costly mistake that will negatively affect your product reviews and be a sore point for years to come. We would be happy to talk with you about your voice options, and demo solutions for you so you can hear the benefits.

OUR EXPERIENCE

Alexa- and Google Home-enabled products

Soundbars & smart speakers

Select Wi-Fi connected products

- Thermostat,
- Tankless hot-water heater,
- Water softener, water purifier,
- Lighting products,
- Air conditioner, air purifier,
- Automated window coverings,
- Portable recording studio,

Secure products

- Cryptocurrency wallet,
- Building access control,

Headphones, headsets and ear buds:

- ANC and non-ANC,
- Independently wireless earbuds,
- Gaming headset with MS GIP support for Xbox,

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