



## GS2011M HD 1080p Video + Full Duplex Audio Application Development/Evaluation Kit



### PRODUCT OVERVIEW

The GainSpan GS2011M HD Video + Audio Application Development Kit (ADK) is a complete reference design that demonstrates a video + full duplex audio streaming product application hosted on the GainSpan GS2011M Wi-Fi module, and associated demo application software that runs on a mobile device. The video demo application software renders streamed video and audio from the ADK to the mobile device screen and enables 2-way voice communication on both Android and iOS devices. The Video ADK supports Wi-Fi end product applications such as battery-powered video doorbells, baby monitors, and Wi-Fi IP cameras for home security/surveillance systems.

The ADK includes the video + audio application board and external speaker, a hardware design package, a complete software suite including GainSpan embedded software and mobile demo applications for iOS- and Android-based smartphones. An evaluation version of the ADK, the Video + Audio Application Evaluation Kit (AEK) is also available, which includes the application hardware and binary-only software.

The video + audio application board features the GainSpan Wi-Fi module, the GEO Semiconductor 1080p video compression chip, and ON Semiconductor AR0330 HD imaging sensor and lens module. The board also features a single motion detector, event trigger buttons, and various LEDs to indicate modes of operation. The embedded software package includes the video + audio application software, Wi-Fi and networking stacks and mDNS/DNS-SD-based discovery methods to discover devices and services available on the wireless network. The mobile device application software features an RTP/RTSP-based video and audio player. The software provides customers a foundation to rapidly build custom features suited to their end application.

### BENEFITS:

- Complete Video reference design that allows users to experience real-time video and full-duplex audio streaming from a camera to their iOS- and Android-based smartphones
- Accelerated time-to-market for development of new wireless video streaming applications such as Wi-Fi doorbells, security/surveillance cameras, and baby monitors
- Quick and easy way to integrate video streaming services into end products using GainSpan Video Application board and embedded/mobile software suite
- Mobile device applications for Android and iOS platform as well as APIs and reference source code to facilitate customized video application development

### FEATURES:

- Video + Audio ADK consisting of the hardware application board and an external audio speaker, complete hardware design package, complete software suite, including embedded source code and mobile reference apps
- Video + Audio AEK consists of the hardware application board and an evaluation, binary-only version of the embedded software
- The Video + Audio embedded software application operates in both Limited AP and Infrastructure client modes. The Video embedded application advertises itself and allows automatic discovery by clients using mDNS/DNS-SD discovery methods
- Mobile Demo Applications for iOS and Android devices, which feature a dashboard for easy setup and camera selection and use an open source, RTP/RTSP-based video player
- The Video + Audio Evaluation board supports H.264 video compression, a 1080p imaging sensor, an audio processor with dual microphone inputs and full echo cancellation and event trigger buttons, plus LEDs to indicate status and mode of operation

## GAINSPAN 1080p VIDEO + 2-WAY AUDIO HARDWARE COMPONENTS

The GainSpan Video + 2-Way Audio ADK uses a GS2011M Wi-Fi module- based Video Application Board that features the following components.

Components	Description
GainSpan Wi-Fi Module	GS2011M module streams video + audio data over Wi-Fi
GEO Semiconductor MAX64380	Video processor chip; supports H.264, 1080p 30 fps HD resolution
ON Semiconductor AR0330 Image Sensor	ON Semiconductor 1080p HD image sensor and lens module; supports 2304x1296 video resolution
External Audio Output Jack	
PIR Motion Event Sensor	Additional event trigger pushbuttons
Firmware	
LEDs	Indicates power-on, operation mode (limited AP or client) and Run/Program mode
USB port	Used to power the board and upgrade firmware on the Wi-Fi module

## VIDEO ADK AND AEK CONTENTS

Components	ADK	AEK
Video Embedded Firmware Application	Binary and source	Binary only
Video Mobile Application for iOS/Android Smartphones	Mobile application and source	Mobile application
GainSpan Video Application Board	Hardware	Hardware
USB Cable	Hardware	Hardware
External Audio Speaker	Hardware	Hardware

## VIDEO APPLICATION DEVELOPMENT MINIMUM REQUIREMENTS

Requirements	Type
GainSpan SDK	Software source, tools
iOS and Android Based Smart Device and Mobile Development Tools	Client device, tools

## VIDEO ADK/AEK ORDERING INFORMATION

Item	Part Number	Description
<b>GainSpan Video ADK</b>	GS-ADK-Video+FD Audio-GEO1080p	GainSpan Video ADK based on GS2011M Wi-Fi modules
<b>GainSpan Video AEK</b>	GS-AEK-Video+FD Audio-GEO1080p	GainSpan Video AEK based on GS2011M Wi-Fi modules