WILLIAMS SOUND ®

Typical applications: Fitness Centers, Sports Books, Restaurants, Bars, Waiting Areas, Stadiums, Auditoriums, Conference Centers, Transportation Facilities, Language Interpretation events.

HHS 108, HHS 116, HHS 124, HHS 132, HHS 132 D
Hearing HotSpot™ 8,16,24,32-channel analog or 32-channel Dante™ Servers

The Hearing Hotspot® Server permits mono or stereo audio from multiple video or live audio sources to be streamed in real-time via Wi-Fi to users' mobile devices running the Hearing Hotspot App. With an appropriate LAN, the system can be scaled to any size venue or number of users. Typical applications include transmitting live audio from video walls in fitness centers, restaurants and bars, waiting and reception areas, gaming casinos, stadiums and arenas, auditoriums and conference centers, museums, and transportation facilities. For simultaneous language interpretation, up to 32 languages can be streamed in meetings and conferences.
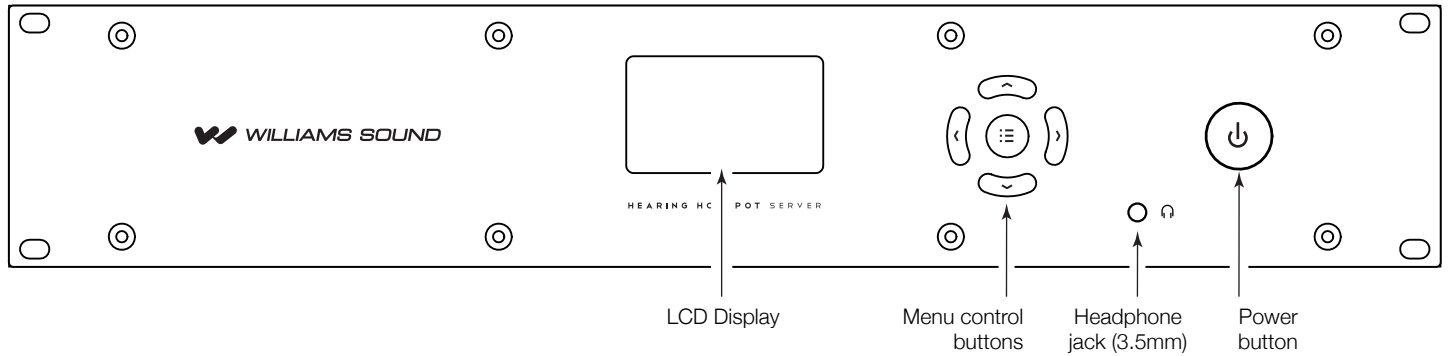
FEATURES / BENEFITS

• One-box solution provides up to 32 mono/16 stereo channels of audio

• Front LCD display and easy-to-use menu

• Adjustable input levels (via front menu)

• Expandable 8/16/24/32 analog audio input channels (with 8-channel analog input modules)

• Choice of analog or Dante™ input configurations

• Standard 2 RU 19" rackmount

• Compatible with most Apple® and Android® based smartphones and tablets

• In-app links offer each venue the option of customizable advertising banners, customer surveys, PDF documents and scrolling ticker

• Works on existing networks when network requirements are met. See "Network Requirements" in these specifications.

• End user downloads free app from Google Play or Apple store to hear content on Android or iOS portable device
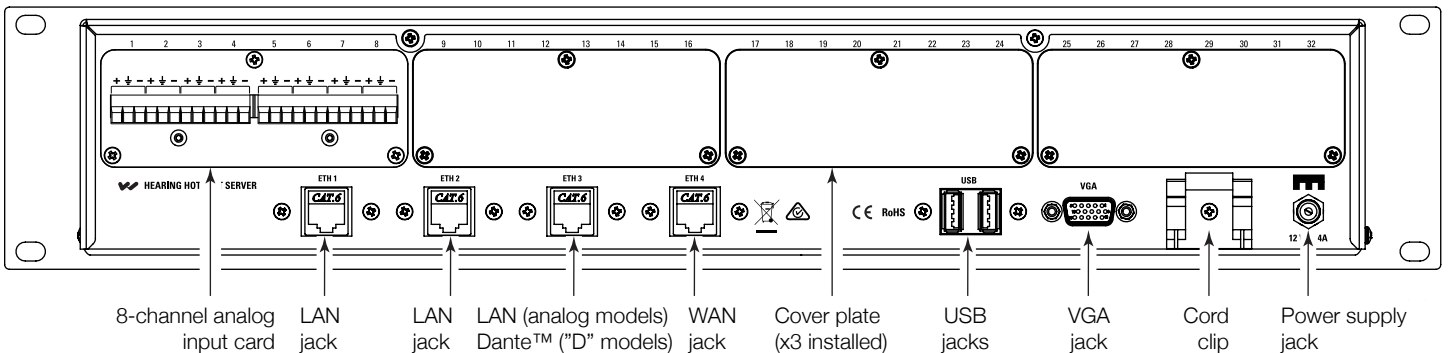
SYSTEM INCLUDES

• Hearing Hotspot® Server unit

• Analog input modules as required (8/16/24/32 channels)

• Proprietary Hearing Hotspot® software

• Content management through Venue Portal

MCAT 233F

Hearing HotSpot™ Server

Front view:

LCD Display

Menu control buttons

Headphone jack (3.5mm)

Power button

Rear view (HHS 108 shown):

8-channel analog input card

LAN jack

LAN jack

LAN (analog models) Dante™ ("D" models)

WAN jack

Cover plate (x3 installed)

USB jacks

VGA jack

Cord clip

Power supply jack

Architectural/Engineering Specifications

The unit shall have the ability to broadcast audio over ethernet to a WLAN access point. Mobile devices will be able to receive the audio with a proprietary app. The app shall be free (no charge) for users to download and use.

It shall be offered in two models - one with analog audio input capability and the other with Dante™ virtual sound card capability.

It shall have four internal card slots, each able to accept one 8-channel mono/4-channel stereo analog expansion module, making it expandable up to 32 mono/16 stereo channels.

One model shall have the ability to live stream up to 32 mono/16 stereo analog channels. Another model shall have the ability to live stream up to 32 Dante™ channels.

It shall have a 3.5 mm stereo headphone jack.

It shall have an external universal power supply for use in multiple countries with the appropriate line cord.

It shall use no more than 8 kBps ethernet (wired), and 12 kBps Wi-Fi, of bandwidth per mono channel, for audio packets.

The unit shall provide extremely low audio latency, on the order of μs. The server shall allow for packet buffer adjustment (60 ms typical). Optimum latency experienced by mobile devices shall be 100 ms or less, depending on mobile device.

The unit shall support 48, 44.1 kHz sampling rates at 24-bit resolution.

It shall have a front user control interface consisting of an LCD screen and Left, Right, Up, Down, and Select buttons.

It shall have the ability to push advertising and other content to mobile devices through an online provider/management website. Content includes: customer-supplied background, customer-supplied banners that hyperlink to websites, coupons based on user-defined conditions, ticker (scrolling text), and pdf's (such as a restaurant menu, venue schedule, etc).

The venue management portal will have the capability to name channels for display on mobile device. The venue management portal shall have the capability of pushing remote updates to the unit.

The unit configured with **8 analog audio inputs** shall be Williams Sound model **HHS 108.**
The unit configured with **16 analog audio inputs** shall be Williams Sound model **HHS 116.**
The unit configured with **24 analog audio inputs** shall be Williams Sound model **HHS 124.**
The unit configured with **32 analog audio inputs** shall be Williams Sound model **HHS 132.**
The unit configured with **32-input Dante™ virtual sound card capability** shall be Williams Sound model **HHS 132 D**.

Hearing HotSpot™ Server

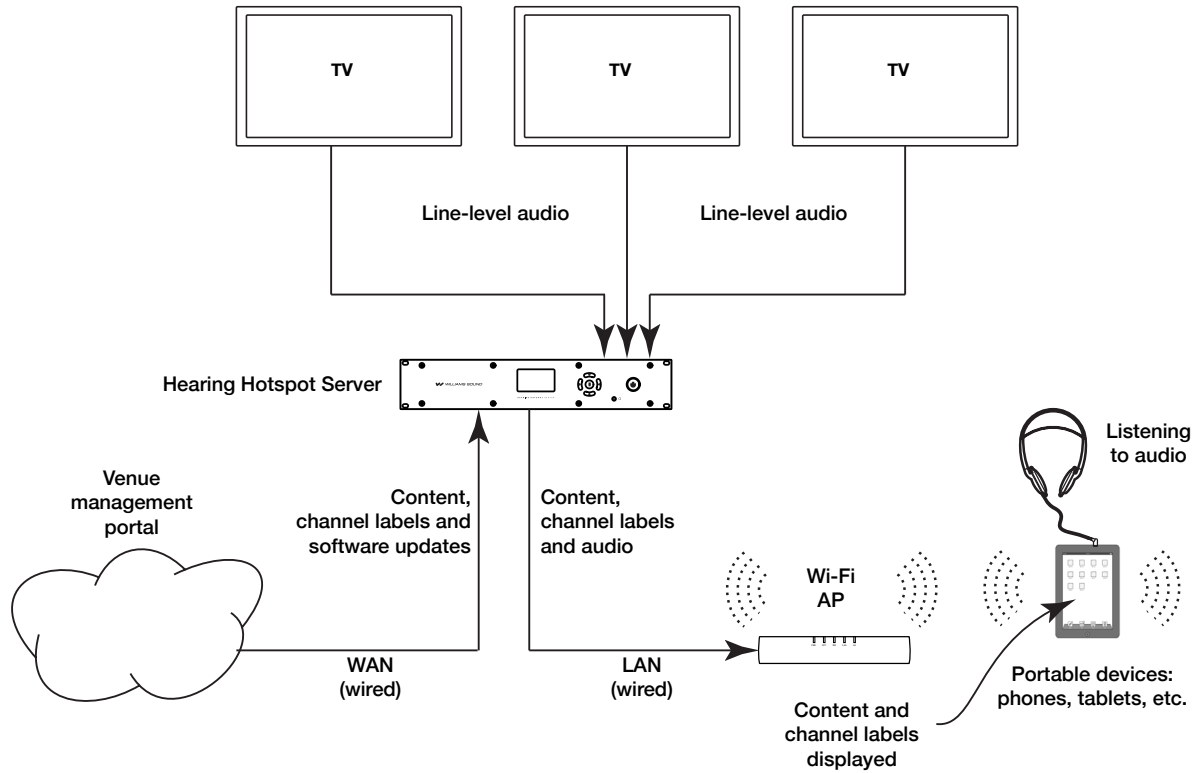## HHS 108/116/124/132 and HHS 132 D System Specifications

Physical	Standard 2 RU 19" rackmount, 13" D (deep rack required). Weight: 14.0 lbs (6.4 kg). Color: black brushed aluminum face, case is textured black. Blue backlit LCD Screen with dark blue text. Power and control buttons backlit blue.
Environment	Storage: -40° F to 150° F (-40° C to 65° C) Operating: 30° F to 110° F (0° C to 45° C)
Cooling fan	26 dB(A), variable speed, temperature controlled.
Network requirements	Network hardware must support IGMP, IGMP Snooping, multicast (multiple simultaneous multicast clients), voice or higher QOS, and have available bandwidth. Internet access for maintenance updates and content management through venue portal.
Mobile device requirements	Apple iOS 6 minimum, Android 4.2 minimum
Expansion slots	(4x) sled style, to accept one 8-channel analog input expansion module (HHS CH8) each. Unused slots have blank plates installed.
Audio inputs	**HHS 108/116/124/132**: Analog only. Accepts balanced or unbalanced line level. Input range -10 dBV to +8 dBu. Inputs provided by 8-channel audio input expansion module HHS CH8. One module provides 8 mono inputs, and each input has a 3-position terminal block configured as +,C,-. Each server unit can accept up to 4 expansion modules or 32 mono/16 stereo input channels total. **HHS 132 D**: Dante™ (virtual sound card) only. Up to 32 Dante™ channels per server. Expansion card slots have (4x) blank plates installed.
Ethernet jacks	(4x) RJ-45 jacks, 10/100/1000 Mbps, provided by internal router, configured as the following: **HHS 108/116/124/132**: (3x) LAN, (1x) WAN. (See rear diagram for location) **HHS 132 D**: (2x) LAN, (1x) Dante™, (1x) WAN. (See rear diagram for location)
USB port	Version 2.0 supported.
VGA port	Supported resolutions up to 2560 x 1600.
Headphone jack	3.5 mm stereo jack, 35 mW, 33 Ω load.
Data transmission method	Proprietary Hearing Hotspot software; Live streaming IP
Latency	Server native: μs range. Packet buffer configured for 60 ms. Receiving devices: 100 ms optimum.
Sampling rates supported	48, 44.1 kHz at 24-bit resolution
Audio bandwidth used	Ethernet (wired): No more than 8 kBps, per stream Wi-Fi: No more than 12 kBps Wi-Fi, per stream
Power	External desktop power supply required (TFP 051). Input: Universal 90-240 VAC, 50/60 Hz, 60 Watt. Output:12 VDC, 4 A, 2.1 mm plug, center positive.
User control interface	LCD screen with Left, Right, Up, Down and Select buttons. Each input can be adjusted for pad (preset attenuation level), trim, level (volume), and type (balanced mono, unbalanced mono, unbalanced stereo). Output selectable as stereo or mono. Input attenuation range adjustment ± 6 dB.
Application features	Channel naming, coupons, advertising banners, scrolling ticker, custom background, downloadable pdf's.
Warranty	2 years
Approvals	FCC, IC, CE, RCM, RoHS, WEEE. Safety certifications: UL, (CB scheme pending),

NOTE: SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

Note: The Hearing HotSpot™ Server is designed to operate on a typical ethernet network. Except for the internal router, no other network hardware is included with the server. Each network has several factors that can affect performance of the Server. Each *mobile device* can also have characteristics that can affect performance. Maximum of 249 user devices (IP addresses) per server when internal router is used (one subnet). Some enterprise networks may be able to be configured to have more. Please consult your Williams Sound representative or call our Tech Blue Team for more information about optimizing a network and devices for best possible performance. If no network exists, our Tech Blue Team can help you design one to optimize performance of the Server.

How the Hearing Hotspot system works

TV

TV

TV

Line-level audio

Line-level audio

Hearing Hotspot Server

Listening
to audio

Venue
management
portal

Content,
channel labels and
software updates

Content,
channel labels
and audio

Wi-Fi
AP

WAN
(wired)

LAN
(wired)

Content and
channel labels
displayed

Portable devices:
phones, tablets, etc.

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HELPING PEOPLE HEAR

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