Assistive listening, compared.

Auracast™, infrared, FM, Wi-Fi and hearing loop side by side, from the team that builds and supports all five.

Made in USA

Technology	Auracast™	Infrared	FM*	Wi-Fi	Hearing loop
How it works	Infinium® Auracast™ over Bluetooth® LE Audio	Audio on invisible infrared light	Radio on dedicated channels ***Not available in all countries**	Streams over the venue's Wi-Fi	Magnetic field straight to T-coils
At a glance					
Coverage	**328–49,200 ft** 100–15,000 m with a 150-unit ESM array	**32,000 ft²** 2,972 m² per emitter, one channel	**1,000 ft** 300 m; passes through walls	**Venue-wide** Wherever your Wi-Fi reaches	**30,000 ft²** 2,786 m² per DL207 (3:1 room)
Listeners	**Unlimited** Every Auracast™ device in range	**Unlimited** Every receiver in coverage	**Unlimited** Every receiver in range	**1,500** Multicast (45 unicast)	**Unlimited** Every T-coil in the loop
Channels	**20 streams** **in an overlapping space** 2 per transmitter; up to 300 per VLAN	**4 at once** 2 per emitter	**8 channels** Non-overlapping, 72.1–75.9 MHz; Europe: 5 channels at 863–865 MHz	**Up to 64** 1 or 8 per unit; up to 64 if stacked, per VLAN	**1 channel** DL207 drives 2 loops
Latency	**< 40 ms** End to end with receivers	**Near-zero** Analog infrared	**Near-zero** Analog radio	**Variable** Network, phone and earbuds	**Near-zero** Analog magnetic field
Dante®	**Standard** Dante/AES67	**Add-on option**	**Add-on option**	**Add-on option**	**Add-on option**
Listening experience					
Audio quality	16, 24 or 48 kHz; mono or stereo	40 Hz–16 kHz, 67 dB SNR; stereo on paired carriers	31 Hz–16 kHz	48 kHz stream, 31 Hz–16 kHz, 64 dB SNR	45 Hz–9 kHz ±2 dB
Audio immersion	**Straight to the ear**	**Stereo, in the room**	**Clean mono, anywhere**	**On your own phone**	**In the hearing aid**
Stereo	● 48 kHz stereo	● Paired carriers	○ Mono	○ Mono	○ Mono
Lip sync	● Under 40 ms	● Near-zero delay	● Near-zero delay	◐ Varies by device	● Near-zero delay
Hearing aids	● Direct to Auracast™ device	◐ Neckloop (T-coil)	◐ Neckloop (T-coil)	◐ Phone Bluetooth	● Direct via T-coil
Own device	● Hearing aids, buds, phones	○ Venue receiver	○ Venue receiver	● Phone + earbuds	◐ T-coil hearing aids or venue receiver
Immersion is the stereo image, the timing and how directly sound reaches the ear.					● Full ◐ Partial ○ None
How listeners connect	Auracast™ hearing aids, implants, earbuds and phones join; others use Infinium receivers	Venue IR receivers with earphones; T-coil users add a neckloop	Venue FM receivers (current or legacy 72 MHz) with earphones or a neckloop	Free WaveCAST app or a WAV Pro receiver; relays to Bluetooth-paired hearing devices	T-coil hearing aids and implants hear it directly; others use loop receivers

Continued on reverse: security, install effort, cost, ADA and best fit by venue

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Plan the install. Pick the fit.

Technology	Auracast™	Infrared	FM	Wi-Fi	Hearing loop
Deployment	Bars show install effort, 1 to 5; $ shows total project cost				
Privacy & security	Open or password-protected; AES-128 CCM encryption	Light stays in the room; ideal for confidential audio	Passes through walls; anyone tuned in can listen	Open or passcode; your network only; segment by SSID/VLAN	Field spills past the loop; phased arrays contain it
Watch-outs	Shares 2.4 GHz with Wi-Fi; plan with a heatmap	Needs line of sight; not ideal in sunlit areas	Spills into nearby rooms	Depends on network load, multicast and AP isolation	Metal in buildings can cause artifacts
Installation	■■□□□	■■□□□	■□□□□	■■■□□	■■■■■
Total cost Product and deployment	$$	$	$	$$$	$$$$
Control & scale	Built-in web UI manages controller and transmitters; Q-SYS plugin available; open API	Web UI, Dante® input (IR M1 D), carrier shut-off; streams to WaveCAST	Web UI + Telnet, optional Dante; FM+ C also sends WaveCAST Wi-Fi	Front panel, web UI + Telnet; optional Dante	Windows PC app over Ethernet; Dante on NET D; phased-array mode
Expandability	**Scales furthest** **150-transmitter mesh** **49,200 ft (15,000 m)** **300 audio channels**	Up to 16 emitters; 4 channels total, 2 per emitter	Add a transmitter per channel, up to 8 non-overlapping	4 stackable units, up to 64 audio channels	Add a driver per zone; dual-output drivers feed 2 loops
ADA compliance	**Every option qualifies.** All five meet the 2010 ADA Standards (§219, §706) when the venue supplies the required receivers — at least 25% hearing-aid compatible, a requirement waived where a loop covers every seat — plus signage. Phones and earbuds add convenience but don't replace receivers; Williams AV ADA kits bundle receivers, neckloops and a wall plaque.				

Best fit by venue — ● Recommended ◐ Workable with planning ○ Not advised

Venue	Infinium	Infrared	FM	Wi-Fi	Hearing loop
Courtrooms	●	●	○	◐	◐
Corporate offices	●	◐	●	●	◐
Theaters & cinemas	●	●	●	◐	●
Music clubs	●	○	●	◐	◐
Houses of worship	●	◐	●	●	◐
Event spaces	●	◐	●	●	●
K–12 & higher ed	●	●	●	●	●
Stadiums & arenas	●	○	●	●	○
Outdoor	●	○	●	◐	○
Transit hubs	●	○	○	◐	◐
Sports bars	●	○	○	●	○
TV audio & gyms	●	○	○	●	◐

Not sure which fits? Let us design it.

Send a floor plan to Williams AV Technical Services for coverage heatmaps, loop designs, device placement and a complete equipment list.

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