

# Infinium™ CT1 | Controller & Transmitter Package

## Auracast™ Broadcast Audio System



### Description

Infinium™ by Williams AV is a professional Auracast™ broadcast audio solution that redefines assistive listening and real-time audio distribution. Designed for commercial AV environments, it delivers low-latency, high-fidelity audio to unlimited Auracast™ supported devices—including hearing aids, cochlear implants, headphones, and Infinium™ receivers.

Ideal for lecture halls, transportation stations, theaters, and other large venues, the Infinium™ CT1 is a modular system with a discreet transmitter and a rack-mount-ready controller.

The controller integrates smoothly into AV networks, with an analog input and one Dante® input supporting

two Dante® channels. It supports stereo and mono transmission, and users can easily configure, monitor, and troubleshoot via the front panel or web interface.

The transmitter is engineered for effortless installation, requiring just a single CAT5 cable for power, audio, and control. Its compact, low-profile design preserves room aesthetics without compromising performance, and a 100-meter (328 ft) broadcast range with Infinium™ receivers ensures reliable coverage while secure channel creation protects audio integrity.

With Infinium™, reliable coverage and seamless AV integration deliver professional-grade, inclusive audio for any space.

### Features

- **Real-Time Management** – Configure and monitor at the controller or remotely via a web interface.
- **Seamless Transmitter Deployment** – A single CAT5 cable for both power and audio.
- **Versatile Transmitter Mounting** – Ceiling, wall, or podium installation with omnidirectional audio coverage
- **Multi-Device Compatibility** – Works with Auracast™ enabled hearing aids, cochlear implants, headsets, and Infinium™ handheld receivers.
- **Dante® Integration** – Effortlessly connects with professional AV networks.

### Applications

- Assistive/Augmented Listening
- Language Interpretation
- Audio Description

### Markets

- Theater/Performing Arts
- Education - classrooms & lecture halls
- Transportation - airports, train stations
- Fitness Centers & Gyms



## Infinium™ Controller – Smart System Management

Effortless local or remote management of your Infinium™ system.

- **Flexible Monitoring & Network Management** – Program and monitor in real-time directly at the controller or remotely via online access.
- **Integrated Dante® Connectivity** – Ensures seamless AV network integration.
- **Secure Channel Creation** – Provides controlled and reliable audio distribution.
- **Rack-Mount Ready** – Designed for professional installation and easy monitoring.



## Infinium™ Transmitter – Discreet Form Factor

The Infinium™ transmitter delivers unmatched audio clarity in a compact design, integrating discreetly into any environment for exceptional broadcast performance.



- **Low-profile design** blends discreetly into any space, preserving room aesthetics without disruption.
- **Plug & Play Simplicity, Effortless Setup** – Single CAT cable delivers power and audio, simplifying setup.
- **100-meter (328 ft) broadcast range** with the Infinium™ receiver; range may vary for other devices
- **Compatible with Auracast™ enabled headphones, cochlear implants, and earphones** for versatile listening.
- **High-quality, Low-Latency Audio** – Supports stereo and mono transmission.

## Infinium™ Receiver – Ergonomic, Intuitive Design

*(Not included in Infinium CT1 Package)*

Designed for ease of use, the Infinium™ receiver provides a superior listening experience with an intuitive interface.

- **Largest display in its class** for improved visibility and channel selection.
- **Balance control** for enhanced speech clarity
- **Ergonomic design** with a large display and easy access buttons with tactile feedback.
- **Secure or open audio modes** – Choose public or private broadcast channels.
- **Compatible with** neckloops, headphones, and earphones for versatile listening.
- **All-day power** with a rechargeable lithium-ion battery.
- **Convenient charging** via USB or multi-unit charging docks.



## Specifications | Infinium™ CT1 Controller and Transmitter Package

<b>System Components</b>	<ul style="list-style-type: none"> <li>• Controller</li> <li>• Transmitter</li> <li>• Ethernet Cable</li> </ul>
<b>Network Connection</b>	<ul style="list-style-type: none"> <li>• Ethernet with digital audio, control and PoE.</li> <li>• Supports direct or network connection with transmitter.</li> </ul>

GENERAL	
<b>Wireless Connection</b>	Auracast™
<b>Bluetooth Version</b>	5.4 LE
<b>Codec</b>	LC3
<b>Operating Frequencies</b>	<ul style="list-style-type: none"> <li>• 2400 to 2483.5 MHz</li> <li>• (ISM spectrum band)</li> </ul>
<b>Range</b>	<ul style="list-style-type: none"> <li>• Up to 328 ft (100 m)</li> <li>• in open space using the Infinium BA R1 Receiver</li> </ul>
<b>Latency (End to End)</b>	<ul style="list-style-type: none"> <li>• &lt; 40 ms using Infinium BA-R1. Other receivers may vary</li> </ul>
<b>Channels</b>	2 Mono, 1 Stereo
<b>Channel Security</b>	Open or Password protected
<b>Encryption</b>	AES128-CCM with 128 bit key

<b>User Interfaces</b>	<ul style="list-style-type: none"> <li>• (1x) Hosted Web page via Ethernet Control Port</li> <li>• (1x) 3.12" High Resolution Front Panel OLED Display with push navigation and entry</li> </ul>	<b>DSP Programmable Audio Processor Functions</b>	<ul style="list-style-type: none"> <li>• Compression</li> <li>• High-pass Filter Frequency</li> <li>• Low-pass Filter Frequency</li> <li>• Audio Presets</li> </ul>
<b>Audio Input Types</b>	<ul style="list-style-type: none"> <li>• Mic In (Combination XLR &amp; 1/4", Terminal Block)</li> <li>• Line In (Terminal Block x 2, Combination XLR &amp; 1/4")</li> <li>• Dante (Dante Source)</li> </ul>	<b>Compression</b>	Off, 1:1, 1.5:1, 2:1
<b>Audio Output</b>	(1x) 1/4" Headphone/Audio Output jack	<b>High-pass Filter Frequency control</b>	Adjustable Step functions
<b>Sample rates</b>	<ul style="list-style-type: none"> <li>• 16 kHz (Auracast™ Standard)</li> <li>• 24 kHz (Auracast™ Standard)</li> <li>• 48 kHz (Auracast™ High)</li> </ul>	<b>Low-pass Filter Frequency control</b>	Adjustable Step functions
<b>Frequency Response (+/- 3 dB relative to 1 kHz)</b>	40 Hz to 16 KHz	<b>Audio Presets</b>	Music, Voice, and Hearing Assistance

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CONTROLLER	
Dimensions	<ul style="list-style-type: none"> <li>8.45" W x 5.75" D x 1.72"H</li> <li>(21.5 cm x 14.6 cm x 4.4 cm)</li> </ul>
Weight	2.3 lbs (1.04 kg)
Color	Black
Installation Configurations	<ul style="list-style-type: none"> <li><b>Rack Mount:</b> Standard 19" Rack, one EIA rack space high, 1/2 space wide. 1–2 units can be mounted in a single rack space with optional RPK 005 (single) or RPK 006 (double) Rack Mount Kits</li> <li><b>Shelf:</b> Can sit on shelf, table, podium, etc.</li> </ul>
Temperature Range - Operating	<ul style="list-style-type: none"> <li>+32° F to +122° F</li> <li>(0° C to 50° C)</li> </ul>
Temperature Range - Storage	<ul style="list-style-type: none"> <li>-4° F to +158° F</li> <li>(-20° C to 70° C)</li> </ul>
Power Button	Push On/Push Off latching power button.
Ethernet Control Port	<ul style="list-style-type: none"> <li>(1x) RJ-45 used for web UI, programming, and status display. Supports CAT 5e cable lengths up to 328 feet (100 meters); 10/100 Base-T</li> </ul>
Front Panel Display	<ul style="list-style-type: none"> <li>3.12" High Resolution OLED Direct Entry UI with button entry programming and status indicator selections.</li> </ul>
Dante	(1x) RJ-45 jack
Power Supply	<ul style="list-style-type: none"> <li>Desktop Power Supply;</li> <li>Input: 100-240 VAC, 50/60 Hz.</li> <li>Output: 24 VDC, 750 mA, 18W.</li> <li>2.5mm ID center positive barrel connector</li> </ul>
PoE Power Out	PoE
Compliance Approvals	<ul style="list-style-type: none"> <li>FCC, RoHS3, WEEE, Industry Canada/ISED, CE, UKCA, RCM, CB Scheme</li> </ul>
Warranty	2-year parts and labor

TRANSMITTER	
Dimensions	<ul style="list-style-type: none"> <li>4.7" W x 5.0" D x 1.19"H</li> <li>(11.9 cm x 12.7 cm x 3 cm)</li> </ul>
Weight	0.4 lbs (0.18 kg)
Color	White
Installation Configurations	<ul style="list-style-type: none"> <li>Ceiling Mount</li> <li>Wall Mount</li> <li>Shelf</li> </ul>
Temperature Range - Operating	+32° F to +122° F (0° C to 50° C)
Temperature Range - Storage	<ul style="list-style-type: none"> <li>-4° F to +158° F</li> <li>(-20° C to 70° C)</li> </ul>
Power	PoE (Input)
Connection	RJ-45 (1x) for audio, control and PoE
Power ON Indicator	Programmable LED
Transmitter Power Output	Programmable
Compliance Approvals	<ul style="list-style-type: none"> <li>FCC, RoHS3, WEEE, Industry Canada/ISED, CE, UKCA, RCM, CB Scheme, Gitecki (Japan)</li> </ul>
Warranty	2-year parts and labor

Cable	
Ethernet Cable	<ul style="list-style-type: none"> <li>10' - CAT 5e Ethernet; 10/100 Base-T IEEE 802.3 compliant</li> </ul>

**NOTE: SPECIFICATIONS ARE SUBJECT TO CHANGE WITH OUT NOTICE**