

Infinium[®] CT1 | Controller & Transmitter

Auracast™ Broadcast Audio System



Description

Infinium[®] is a professional Auracast™ broadcast audio system built for inclusive, multi-stream audio in large commercial and public spaces. It delivers low-latency, high-fidelity audio to unlimited Auracast-compatible devices—including hearing aids, cochlear implants, and headphones—while supporting disability compliance with dedicated handheld receivers. Audio description, multilingual content, and program audio are easy to deliver across the same system.

Designed for lecture halls, transportation facilities, theaters, corporate and government environments, and other large venues, Infinium features a patented modular architecture with a discreet remote transmitter and rack-ready controller. This flexible design makes it easy to deploy in a single space or scale across entire facilities.

The controller integrates into AV networks with analog and native Dante[®] inputs, supporting mono and stereo transmission. Each transmitter supports two channels of audio, with up to 20 coexisting channels available across a space. Setup, monitoring, and control are available via the front panel or web interface. With Enhanced Scale & Management (ESM) features, teams can manage up to 150 transmitters directly from the rack or web interface—and scale to larger deployments as needed.

Installation is streamlined with a single CAT5 cable from controller to transmitter, delivering power, audio, and control. The low-profile transmitter blends into the space while providing up to 100 meters (328 ft) of coverage. Infinium scales easily across complex environments, with secure channel creation ensuring reliable, interference-free audio.

Features

- **Single-Cable Deployment** – Power, audio, and control delivered via a single CAT5 cable.
- **Native Dante Integration** – Seamless, plug-and-play AV networking.
- **Enterprise-Scale Control** – Web-based GUI for remote control and organization of large-scale transmitter deployments.
- **Flexible Receiver Tuning** – Option to scan for all Auracast streams or Infinium priority mode for simplified user experiences.
- **Open API** – Support for integration with third-party Pro AV and smart-building systems.

Applications

- Assistive/Augmented Listening
- Program & Entertainment Audio
- Audio Description
- Language Interpretation

Markets

- Educational Campuses
- Multi-Room Facilities
- Entertainment Venues
- Convention Centers

Infinium Controller – Smart System Management

Effortless local or remote management of your Infinium system.

- **Patented Modular Design** – Rack-mount controller provides convenient system access via front panel or web interface, while remote transmitters allow flexible, discreet placement throughout the venue.
- **Scalable System Control** – Manage up to 150 transmitters via controller or web interface; larger deployments supported through network segmentation and additional controllers.
- **Spaces-Based Organization** – Group and manage transmitters by room, zone, or location.
- **Open API** – Integrates with third-party AV control and smart-building systems.
- **Professional Range** – Delivers up to a 100-meter (328 ft) broadcast range with high-quality, low-latency audio.



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.



**Also available in black*

- **Single-Cable Installation** – Power, audio, and control delivered over one CAT5 cable between the controller and transmitter.
- **Coordinated Transmitter Coverage** – Array-based architecture enables receivers to seamlessly move between transmitters across large spaces.
- **Dante Connectivity** – Seamless integration with professional AV networks.
- **Low-Profile Form Factor** – Compact design blends into ceilings, walls, or podiums with minimal visual impact.
- **Secure Audio Distribution** – Managed channel creation ensures private audio through 6-digit PIN code protection.

Infinium Receiver – Ergonomic, Intuitive Design

(Receiver sold separately and in system packages)

The industry's only dedicated handheld receiver with integrated balance control for a customized listening experience.



- **Large, Easy-to-Read Display** – Simplifies channel selection with enhanced visibility.
- **Custom Audio Balance** – Adjust sound to match individual hearing needs for improved speech clarity.
- **Flexible Receiver Tuning** – Scan all Auracast™ audio streams or simplify listening by only scanning for Infinium audio streams.
- **Ergonomic Design** – Intuitive layout with tactile buttons for easy, confident use.
- **Secure or Open Listening Modes** – Select public or private broadcast channels.
- **Versatile Connectivity** – Compatible with neckloops, headphones, and earphones.
- **All-Day Battery Life** – Rechargeable lithium-ion battery for extended use.
- **Flexible Charging Options** – Charge via USB or multi-unit docking stations.

Specifications | Infinium® CT1 Controller and Transmitter Package

System Components	<ul style="list-style-type: none"> • Controller • Transmitter • Ethernet Cable • Receivers are optional, but are required for disability compliance
Network Connection	<ul style="list-style-type: none"> • Ethernet with digital audio, control and PoE. • Supports direct or network connection with transmitter.

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

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

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CONTROLLER	
Dimensions	<ul style="list-style-type: none"> 8.45" W x 5.75" D x 1.72"H (21.5 cm x 14.6 cm x 4.4 cm)
Weight	2.3 lbs (1.04 kg)
Color	Black
Installation Configurations	<ul style="list-style-type: none"> Rack Mount: 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 Shelf: Can sit on shelf, table, podium, etc.
Temperature Range - Operating	<ul style="list-style-type: none"> +32° F to +122° F (0° C to 50° C)
Temperature Range - Storage	<ul style="list-style-type: none"> -4° F to +158° F (-20° C to 70° C)
Power Button	Push On/Push Off latching power button.
Ethernet Control Port	(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
Front Panel Display	3.12" High Resolution OLED Direct Entry UI with button entry programming and status indicator selections.
Dante	(1x) RJ-45 jack
Power Supply	<ul style="list-style-type: none"> Desktop Power Supply; Input: 100-240 VAC, 50/60 Hz. Output: 24 VDC, 750 mA, 18W. 2.5mm ID center positive barrel connector
PoE Power Out	PoE
Compliance Approvals	FCC, RoHS3, WEEE, Industry Canada/ISED, CE, UKCA, RCM, CB Scheme
Warranty	2-year parts and labor
Transmitter Management and Monitoring	<p>Up to 150 transmitters can be controlled from the controller's front panel or web interface, with firmware version 2.0 or higher.</p> <p>NOTE: The number of transmitters which can co-exist on the same network may be limited by network factors. To support very large deployments, transmitters may be separated into VLANs and managed by adding additional controllers.</p>

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

Cable	
Ethernet Cable	10' - CAT 5e Ethernet; 10/100 Base-T IEEE 802.3 compliant