

UR-D1/D2 | UHF DIVERSITY DIGITAL WIRELESS MICROPHONE SYSTEM




wireless management system



The UR-D series is Relacart's latest fully self-developed digital architecture wireless microphone system. Combining powerful functionality with operational flexibility, it features a 64MHz(region-dependent) operating bandwidth and low intermodulation distortion, enabling 20 simultaneously active transmitters within an 8MHz bandwidth and supporting over 60 compatible channels in a single frequency band. This ensures stable wireless transmission even in crowded RF environments. With 24-bit/48kHz digital audio quality, the system accurately reproduces sonic details beyond the capabilities of analog systems. A total system latency of <3ms and a flat frequency response across 20Hz–20kHz ensure precise vocal reproduction—from deep resonances to high-frequency nuances—delivering transparent, high-fidelity sound. A dynamic range exceeding 120dB provides exceptional signal-to-noise performance. Designed for easy installation and integration, the system can be seamlessly expanded via existing Dante networks, scaling from small conference rooms or classrooms to large campus and enterprise installations. Advanced features enable detailed configuration management while simplifying complex channel and audio setups. Additionally, the WireMicX Wireless management system supports remote system maintenance, monitoring, and control for streamlined operation.

Product Specification



UR-D1
Single Channel Wireless Receiver



UR-D2
Dual Channel Wireless Receiver

- The system incorporates intelligent predictive diversity reception technology, which preemptively assesses signal quality and uses algorithmic optimization to maintain stable transmission. It fully meets the complex demands of multi-channel, large-scale audio applications.
- For secure transmission needs, AES-256 encryption is available—ideal for confidential meetings—ensuring privacy protection. This encryption also eliminates RF interference by allowing only encrypted signals to be received.

Chassis Specification:	1U Half-Rack(UR-D1) EIA Standard 1U(UR-D2)
Reception Method:	Diversity Single-Channel Reception(UR-D1) Diversity Dual-Channel Reception(UR-D2)
Frequency Stability:	±0.005%
Carrier Frequency Range:	470MHz–936MHz
Operating Range:	100 meters (open area)
Sampling Rate:	24-bit/48kHz
Frequency Response:	20Hz–20kHz ±1dB
Modulation Method:	Relacart Patented Digital Technology
Bandwidth:	64MHz (region-dependent)
Overall S/N Ratio:	>110dB
Total Harmonic Distortion (T.H.D.):	<0.1% @1kHz
RF Tuning Step:	25kHz
Image Rejection:	>70dB (typical)
RF Sensitivity:	-98 dBm @ 10 BER
Latency:	<3ms
Audio Dynamic Range (A-weighted, typical, system gain @ +10):	>120dB
Total Harmonic Distortion (-12dBFS input, system gain @ +10):	<0.1%
Operating Temperature Range:	-10°C to 50°C
Storage Temperature Range:	-20°C to 70°C
Power Supply:	DC 12V/1A
Antenna Interface:	Dual BNC, Supports +12V/150mA Output
Audio Output Interfaces:	6.3mm Unbalanced Audio Output, 2× XLR Balanced Audio Output
Dimensions (mm):	UR-1D:205 (L) × 206 (W) × 43 (H) UR-2D:410 (L) × 206 (W) × 43 (H)
Weight(Approx):	UR-D1:1kg UR-D2:2kg

Key Features

64MHz System Bandwidth

- With an ultra-wide 64MHz system bandwidth — broader than most comparable products on the market — the system offers abundant frequency options even in large-scale events requiring multiple devices. This makes it easier to avoid interference and ensure stable performance.

AES-256 Encryption

- Equipped with AES-256 high-level encryption suitable for any scenario requiring secure transmission, such as confidential meetings. This ensures privacy protection while simultaneously eliminating RF interference by allowing only encrypted signals to reach the receiver.

Dante Network Audio Protocol

- UR-D2 Features Dante network audio output, which automatically identifies the product's Dante channels. Audio signals can be seamlessly routed to any Dante-compatible audio device.

Intelligent Predictive Diversity Reception

- Utilizing intelligent predictive diversity reception technology, the system preemptively gathers signal quality data and employs algorithmic optimization to maintain consistent transmission stability. It fully meets the complex demands of multi-channel and large-scale audio transmission.

WireMicX Wireless Management System

- Compatible with Relacart's professional WireMicX Wireless management system, enabling computer connectivity for remote monitoring, management, and control of the system — simplifying operation and maintenance.

High-Fidelity Sound Quality

- Incorporates lossless audio transmission technology with 24-bit/48kHz sampling and total system latency below 3ms. Delivers a flat frequency response across 20Hz–20kHz, accurately reproducing the full spectrum of vocal details — from deep resonances to high-frequency nuances.



UR-D1H
Wireless Handheld Microphone

- UR-D1H Wireless Handheld Microphone Crafted from durable alloy with a sleek and modern design, the UR-D1 wireless handheld microphone is fully compatible with the Relacart UR-D Series Digital Wireless Microphone System. It features a cardioid pickup pattern that effectively suppresses ambient noise from the sides and rear.
- Equipped with a high-quality dynamic microphone capsule, it delivers an extended frequency response and captures rich, detailed sound with exceptional clarity. Ideal for high-fidelity studio recording and premium live performances where superior audio quality is essential.

Carrier Frequency Range:	470MHz–936MHz
Audio Frequency Response:	20Hz–20kHz ±1dB
Harmonic Radiation:	>45dB below carrier
Bandwidth:	64MHz (region-dependent)
Modulation:	Relacart Patented Digital Technology
Occupied Bandwidth:	200kHz
Impedance:	50Ω
RF Output Power:	High / Medium / Low (selectable)
Gain Adjustment Range:	+15dB to -5dB (1dB steps)
Battery:	2×AA
Current Consumption:	270mA (typical)
Battery Life:	Approx. 8 hours (alkaline)
Dimensions (mm):	55(Φ) × 269 (L)



UR-D1B
Wireless Bodypack Transmitter

- The UR-D1B is an ultra-compact, exquisitely designed bodypack transmitter. Crafted from high-quality magnesium alloy, it offers an ultra-lightweight and comfortable wearing experience while providing exceptional strength and durability. Its superior vibration-damping capability effectively reduces resonance within the housing, helping to minimize noise interference. Finished with a dual-layer anti-rust coating, it offers a refined metallic finish. Powered by two AA batteries, precision-engineered circuitry enables up to 8-hour battery runtime.

Carrier Frequency Range:	470MHz–936MHz
Audio Frequency Response:	20Hz–20kHz ±1dB
Harmonic Radiation:	>45dB below carrier
Bandwidth:	64MHz(region-dependent)
Modulation:	Relacart Patented Digital Technology
Occupied Bandwidth:	200kHz
Audio input:	4-pin mini XLR connector
Impedance:	50Ω
RF Output Power:	High / Medium / Low (selectable)
Gain Adjustment Range:	+15dB to -5dB (1dB steps)
Battery:	2×AA
Current Consumption:	270mA (typical)
Battery Life:	Approx. 8 hours (alkaline)
Dimensions (mm):	65 (L)×21.3 (W)×75.5 (H)