

Compatible



## Ecreso FM - AiO Series up to 1kW

Efficient. Scalable. Rock-Solid.

The AiO Series 100W-1kW is the latest generation of low-power FM transmitters from WorldCast Systems. Its cutting-edge design empowers broadcasters with the lowest Total Cost of Ownership achievable in FM today.

In its standard operations, broadcasters benefit from up to **76% efficiency** and when the patented SmartFM technology is activated, they can further reduce their **energy consumption by up to 40%**.

The AiO Series also brings together the expertise of APT and Audemat into a compact **2U chassis**, resulting in a unique **APT IP Decoder** and a **full RDS encoder**.

Additional features such as the direct-to-channel digital modulator and a 5-band sound processor complete this flagship FM transmitter.



## Benefits



### Best Total Cost of Ownership On The Market

The new AiO Series delivers the highest efficiency on the market: up to 76% before a SmartFM boost. With its extensive list of built-in features to reduce on-site equipment, its planar design, and hot swappable architecture, this new range of FM transmitters is proof that aligning cutting-edge innovation with the best Total Cost of Ownership is possible. Thanks to its rock-solid design, broadcasters also benefit from an unrivalled 10-year warranty.



### Easy Migration To An All-IP Broadcast Chain

Enable a more seamless operation with less equipment: the AiO Series includes a 5-band sound processor, a stereo encoder, digital modulator, and a full RDS encoder with UECP capabilities from WorldCast's Audemat range. This unique set of features is complemented by a software-based APT IP decoder that directly ingests audio and MPX over IP to the direct-to-channel digital modulator, fully compatible with SureStream and APTmpX.



## Designed to operate REMOTELY

The AiO Series provides advanced remote configuration and control. A user-friendly web and mobile GUI includes advanced troubleshooting tools:

- Functional diagrams
- Advanced Measurement interface
- Spectrum analyzers
- 7-day Graphical History with 20 different sensors!

It also includes full SNMP management with 4 independant SNMP "manager" configurations, control and monitoring of all transmitter parameters, and alarm notifications by SNMP traps and e-mails.



Ecreso transmitters are among the most cost-competitive on the market, and thanks to the worldwide patented SmartFM technology, broadcasters can tackle rising energy costs while meeting their sustainability goals:

- Reduces electricity costs by up to 40%
- Lowers carbon footprint of FM broadcast



## Built-in APT IP DECODER

In line with the market transition to an all-IP broadcast chain, the embedded APT IP Decoder directly ingests audio / MPX over IP to the Direct-to-Channel Digital Modulator.

It supports:

- SureStream, redundant & low-latency streaming solution over public IP links
- APTmpX, the highest quality MPX compression algorithm
- SynchroStream, the must-have solution for content time-synchronization over IP links

This software feature helps broadcasters looking to modernize their network with a transition to all-IP broadcast chain!



## 10-Year Warranty



WorldCast Systems offers a warranty of up to 10 years on the AiO Series. No other FM transmitter manufacturer even comes close to that commitment or confidence! This 10-year warranty, unique on the market, is possible thanks to:

- Exceptional product design
- Outstanding transmitter efficiency
- Advanced diagnostic capabilities



## Built-in 5-Band SOUND PROCESSOR

Embedded into the FM digital modulator, the software sound processor offers an outstanding reliability and the highest signal quality.

You can choose from:

- A wide-band version to finalize the audio processed at your studio
- A multi-band version to achieve the level of processing required for your station

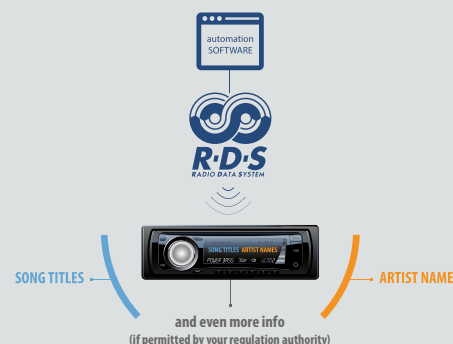
The processor is supplied with a full set of presets.



## Integrated dynamic & FULL RDS ENCODER

After the worldwide success of Audemat RDS Encoders, WorldCast Systems has integrated its RDS expertise into the AiO Series resulting in 2 RDS software options:

- The Dynamic RDS encoder equivalent to the previous Ecreso transmitters range
- The Full RDS encoder by Audemat, a software version of the flagship Audemat RDS Encoder



## Highest AUDIO QUALITY



- Direct-to-channel digital modulator
- Digital stereo encoder
- Digital MPX over AES
- Silence detectors & automatic switching inputs
- Local files and web streaming as backup

## Fully CONTROLLED



- Scheduler & preset management
- Automation engine based on alarms detection
- Email notifications
- Event log

## Designed to OPERATE FOR DECADES



- Hot-swappable PSU & fan
- Internal RF switch for Dual Drive operation
- 1+1 & N+1 solutions

## SFN COMPATIBILITY



- 10MHz & 1PPS inputs
- Built-in GPS receiver
- RF carrier synchronization
- Configurable audio fixed delay
- Dynamic audio delay with SynchroStream



## Monitor your FM transmitters for FREE with Kybio



FREE during 1 year! Discover the benefits of monitoring your FM transmitter network with Kybio! From a single screen, visualize the status of your FM programs over the different transmission sites and optimize your services to maximize the ON-AIR time.

# Technical Specifications

ECRESO FM AiO Series	100W	300W	600W	1kW
Frequency Range	87.5 to 108MHz in 10kHz steps			
Frequency Stability	< 10 <sup>6</sup> per year			
HF Output	N type, 50 ohm		7/16 type, 50 ohm	
Power range	5 - 100W	20 - 300W	50 - 600W	50 - 1000W
Power settings	0 - 110W	0 - 350W	0 - 700W	0 - 1100W
VSWR	< 1.35, optimal performance: <1.1, protection: >1.5			
Spurious and harmonic suppression	> 75dBc			
Efficiency	Up to 57%	Up to 70%	up to 72%	up to 76%
Voltage	100VAC to 264VAC, 47Hz - 63Hz		184VAC to 264VAC, 47Hz - 63Hz Hot swappable PSU	
Analog input (LINE1)	2 XLR connectors, balanced, > 10 kΩ (600 Ω jumpers selectable), Software adjustable level (-18/+18 dBu range)			
AES Input (LINE2)	2x XLR connector, balanced, > 110 Ω, software adjustable level (-20 to 0dBFS range), AES 16, 24, 32 bits, up to 192 kHz			
2 Composite (MPX/SCA/RDS) inputs	=2 BNC type, unbalanced, > 5 kΩ, Software adjustable level (-18/+18 dBu range)			
<b>Composite operation</b>				
Bandwidth	> 40 Hz to 53 kHz @ 0.1 dB, > 20 Hz to 60 kHz @ 0.2 dB, > 60 kHz to 80 kHz @ 0.4 dB			
Intermodulation distortion	< 0.05%			
FM S/N ratio	> 80 dB RMS @ 75 kHz deviation			
AM noise	> 55 dB, weighted/unweighted, sync/async, RMS/CCIR (20-20 000 Hz)			
<b>Stereo operation</b>				
Bandwidth	> 20Hz to 15kHz @ 0.1dB			
38 kHz discontinuance	> 50 dB			
Stereophonic crosstalk	> 50 dB			
<b>Mono operation</b>				
Bandwidth	> 40 Hz to 15 kHz @ 0.1 dB			
Out of band rejection	> 40 dB @ 19 kHz			
<b>IP Streaming operation</b>				
IP Interface	2x RJ45, 10/100/1000 BaseT/Tx			
Standard protocols	Ethernet IEEE 802.3x, IPv4, HTTPS, ICMP, SMTP, SNMPv1 & v2c, NTP, SMTP, RTP/UDP			
Audio algorithm	E-aptX 16/24bit, lin. PCM 16/24bit, MPEG2/4 AAC LC/ LD/ELD, HE-AACv1/2, MPEG1/2 L2/3, OPUS, AES67 (interoperable with proprietary audio networking protocols – Livewire, Dante, Ravenna)			
MPX algorithm	Linear MPX 16/24bit, APTmpX @300/400/600 & 900kbps			
Streaming mode	UDP over RTP, Unicast & Multicast mode			
<b>Physical &amp; Environmental</b>				
Overall dimensions	19" x 2U x 485mm - 19in x 2U x 19in			
Weight	13 kg - 28.5lbs			
Operating temperature	Nominal: 5°C to 45°C, 41°F to 113°F - Maximum: 0°C to 50°C, 32°F to 122°F			
Humidity	5 - 95% non-condensing relative humidity			
Altitude	Up to 3900m - 12795ft			
Standards & markings	CE, FCC, RED 2014/53/UE, EN 301 489-1, EN 60215, EN 301 489-11, EN 302 018-2, EN 50581, UECP & IEC62106			

Technical specifications are subject to change without prior notice - On project, WorldCast Systems may offer distinct specifications. Specifications on the offer prevail those in this document.

## Order Information

REFERENCE	ADDITIONAL OPTIONS
WTY-1K	10-year warranty
CD01003	SmartFM
CD01001	5-band sound processor
CD01041	APT IP Decoder with SureStream
LC00074	APTmpX compression algorithm
CD01018	SynchroStream
CD00106	Dynamic RDS Encoder
CD01040	Full RDS encoder
ST01276/ST01615	Standard / Analog GPIO (hardware)
SP02737	10MHz & 1PPS input (hardware)
SP03014	Built-in GPS receiver (hardware)
SP02957	Dual Drive input (hardware)

### Essentials

- 2-year warranty
- Standard features

AiO series 100W:  
AIO-ESSENTIALS-100

AiO series 300W:  
AIO-ESSENTIALS-300

AiO series 600W:  
AIO-ESSENTIALS-600

AiO series 1kW:  
AIO-ESSENTIALS-1K

MOST POPULAR!

### Perform

- 4-year warranty
- Standard features
- Surge protector
- Dynamic RDS
- 5-band sound processor or APT IP Decoder

AiO series 100W:  
AIO-PERFORM-100

AiO series 300W:  
AIO-PERFORM-300

AiO series 600W:  
AIO-PERFORM-600

AiO series 1kW:  
AIO-PERFORM-1K

### Extreme

- 10-year warranty
- Standard features
- Surge protector
- Full RDS
- 5-band sound processor
- APT IP Decoder
- SmartFM

AiO series 100W:  
AIO-EXTREME-100

AiO series 300W:  
AIO-EXTREME-300

AiO series 600W:  
AIO-EXTREME-600

AiO series 1kW:  
AIO-EXTREME-1K

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