

Compatible



## Ecreso FM - AiO Series

Efficient. Scalable. Rock-Solid.

The AiO series is the latest generation of FM transmitters from WorldCast Systems. Its cutting-edge design empowers broadcasters with the lowest Total Cost of Ownership achievable in FM today.

Available from 100W to 1kW, the AiO series delivers unparalleled efficiency. 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 alarms notifications by SNMP traps and e-mails.



## SMARTFM<sup>®</sup>

SmartFM is a sophisticated algorithm which enables broadcasters to **significantly reduce their energy costs** without any **compromise on the audio quality and coverage**.

→ **Lowers energy costs by up to 40%** thanks to electricity savings.

→ **Reduces CO<sub>2</sub> emissions** for a cleaner, more sustainable environment.

## Built-in APT IP DECODER

The embedded APT IP Decoder directly ingests audio over IP to the Direct-to-Channel Digital Modulator and is compatible with SureStream.

It also supports MPX over IP and the unrivalled MPX compression algorithm: APTmpX. 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 standard warranty of 3 years on all FM transmitters and 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**



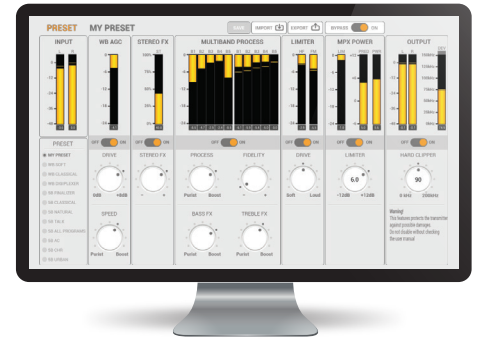
## Built-in 5-Band SOUND PROCESSOR

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.

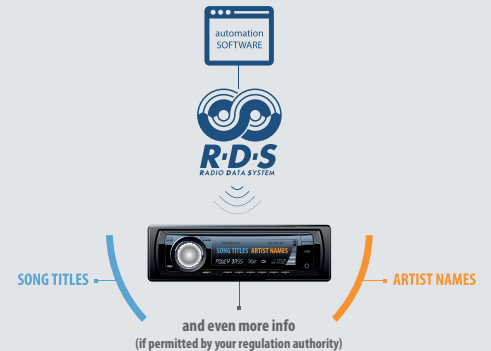
The processor is supplied with a full set of presets.



## 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



Digital MPX over AES  
Intelligent automatic switching  
Digital Stereo encoder  
Direct-to-channel digital modulator

## Designed to operate for decades



1+1 & N+1 solutions  
Hot-swappable PSU & fan  
Scalable hardware for software upgrade

## Fully Controlled



Automation engine with scheduler and presets  
SNMP & GPIO management  
Alerts notifications by email



## 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.



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, 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			
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, ICC, RED 2014/53/UE, EN 301 489-1, EN 60215, EN 301 489-11, EN 302 018-2, EN 50581, UECF & 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

PRODUCT	DESCRIPTION
TF01232	Ecreso FM 100W – AiO series
TF01234	Ecreso FM 300W – AiO series
TF01124-600	Ecreso FM 600W – AiO series
TF01124	Ecreso FM 1kW – AiO series
HARDWARE	DESCRIPTION
SP01260-A0	Surge suppressor
ST01615	Standard GPIO
ST01276	Analog GPIO
SP02737	10MHz input

SOFTWARE	DESCRIPTION
CD01003	SmartFM – contact us for more info
CD01001	5-band sound processor
CD01041	APT IP Decoder with SureStream
LC00074	MPX over IP
CD01004	Full RDS encoder
CD00106	Dynamic RDS Encoder
SERVICES	DESCRIPTION
WTY-1K	10-year warranty
SU-WCS-CPT	1 year support contract

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