

Compatible  
SMARTFM®



## Ecreso FM AiO Series 2kW

Compact. Redundant. Feature-packed.

**The Ecreso FM AiO Series 2kW is a new-generation digital FM transmitter from WorldCast Systems. Belonging to the AiO Series portfolio, it leverages cutting-edge design with advanced functionality - offering the market's lowest Total Cost of Ownership.**

Its 3U build is perfect for broadcasters who demand unparalleled reliability while benefiting from a compact size. Thanks to its enhanced redundancy features, you can count on consistent, high-quality performance at all times.

The Ecreso FM AiO Series 2kW is packed full of the software-driven features representative of the AiO Series transmitters. These include a built-in APT audio/MPX over IP decoder, a full RDS encoder, 5-band sound processor, and the patented SmartFM technology for energy savings of up to 40%. A version of the transmitter as a 1kW HR (High Redundancy) is also available.

Experience the AiO Series and transform your broadcasting capabilities with the perfect blend of innovation, reliability, efficiency, and broadcast quality.



## Benefits



### Best Total Cost of Ownership On The Market

The new AiO Series delivers the highest efficiency on the market: up to 74% before a SmartFM boost. With its extensive list of built-in features to reduce on-site equipment, this new range of FM transmitters is proof that aligning cutting-edge innovation with the best Total Cost of Ownership is possible. Broadcasters also benefit from a 4-year standard warranty and an unrivalled 10-year warranty in option.



### Worry-Free Broadcasting – Top-Tier Redundancy for Absolute Reliability

With hot-swappable PSU & fans, optional dual-drive, and a planar design, it ensures uninterrupted operation. Market-proof RF pallets and a rock-solid build guarantee absolute dependability for seamless broadcasting.



### 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, APTmpX and SynchroStream.



## Powerful Features

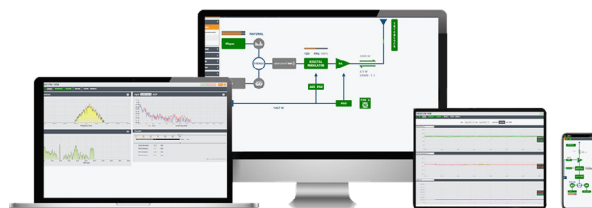
### Designed to operate REMOTELY

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 (v2c & v3) with 4 independent SNMP "manager" configurations and physical GPIO for local control on site.



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

SMARTFM<sup>®</sup>



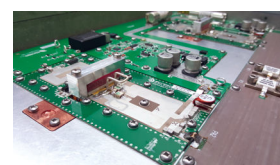
## TOP-TIER Redundancy



Up to 2 hot swappable 3.5kW PSUs



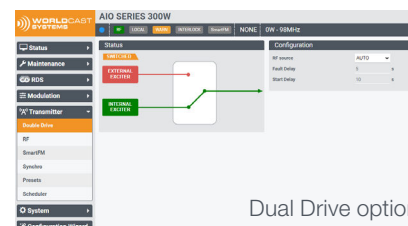
2 hot swappable Fans



2 planar design RF pallets each of 1.25 kW

## OPTIONAL Redundancy

- Dual Drive option with external exciter and automatic management
- N+1 System with program priorities and automatic switching
- 1+1 System



Dual Drive option

## 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.



## Built-in 5-Band SOUND PROCESSOR

Embedded into the FM digital modulator, the software sound processor offers 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.



## 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!



## Built-in 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 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



### SFN COMPATIBILITY

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



GPS receiver configuration

## 10-Year Warranty



WorldCast Systems offers a standard warranty of 4 years 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



ECRESO FM AiO Series	1kW HR	2kW
Frequency Range	87.5 to 108MHz in 10kHz steps	
Frequency Stability	< 10 <sup>6</sup> per year	
HF Output	7/16 type, 50 ohm	
Power range	5 - 100W	100- 2000W
Power settings	0 - 1100W	0 – 2200W
VSWR	< 1.35, optimal performance: <1.1, protection: >1.5	
Spurious and harmonic suppression	> 79dBc	
Efficiency	Up to 70%	Up to 72%
Voltage	Single phase 184VAC to 264VAC, 47Hz - 63Hz Hot swappable PSU	
Analog input (L&R)	2 XLR connectors, balanced, > 10 kΩ (600 Ω jumpers selectable), Software adjustable level (-18/+18 dBu range)	
2 AES Inputs (Audio or MPX)	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)	
Composite operation		
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)	
Stereo operation		
Bandwidth	> 20Hz to 15kHz @ 0.1dB	
38 kHz discontinuance	> 50 dB	
Stereophonic crosstalk	> 50 dB	
Mono operation		
Bandwidth	> 40 Hz to 15 kHz @ 0.1 dB	
Out of band rejection	> 40 dB @ 19 kHz	
IP Streaming operation		
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	
MPX algorithm	Linear MPX 16/24bit, APTmpX @300/400/600 & 900kbps	
Streaming mode	UDP over RTP, Unicast & Multicast mode	
Physical & Environmental		
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
TF01246-1K	AiO Series 1kW - High Redundancy
TF01246	AiO Series 2kW
HARDWARE	DESCRIPTION
	Surge protector
ST01615	Standard GPIO
ST01276	Analog GPIO
SP02737	10MHz input
SP02963	SFN
	GPS Receiver
SP02957	Dual drive
AL00122	Optional 2nd Power supply

SOFTWARE	DESCRIPTION
CD01003	SmartFM – contact us for more info
CD01001	5-band sound processor
CD01041	APT IP Decoder with SureStream
LC00074	APTmpX compression algorithm
CD01018	SynchroStream
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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