Compatible SMART**FM**

Ecreso FM 100W-2000W

Efficient. Robust. Feature-Packed.

Ecreso FM 100W to 2000W are fully digital transmitters for analog FM, designed for broadcasting within the low and medium power range.

Engineered to meet the needs of the most demanding network operators and stations, it combines reliable performance, efficiency, and state-of-the-art innovation into a compact, yet modular 2U or 3U chassis design.

With Ecreso FM, broadcasters benefit from a robust design deployed across thousands of sites worldwide, easy maintenance, a multitude of onboard features and the first patented Artificial Intelligence for FM radio, SmartFM.

This advanced broadcasting solution is the result of decades of experience and a mission to bring to market the best FM transmitters in terms of quality, total cost of ownership, and audio quality.

up to **10** YEARS WARRANTY	Digital Exciter	Control	Efficiency	**5** band SOUND processor

Ecreso FM Benefits:

Market-Leading Expertise
60 years of expertise developing RF solutions and deploying several thousands of systems worldwide enables WorldCast Systems to accompany Ecreso FM with a range of services and warranties.

Lowest Operating Costs
Thanks to cutting-edge innovations and an intelligent design, Ecreso FM offers high efficiency, reduced consumption and easy maintenance. All-in-all the lowest Total Cost of Ownership.

Highest Quality To Listeners
Ecreso FM brings amazing audio to your radio broadcasting thanks to the direct-to-channel digital modulator, 5-band sound processor, and MPX over AES compatibility.

www.worldcastsystems.com

Market-Leading EXPERTISE

Customer support: Expert technical support team to accompany you for installation, configuration, maintenance, repairs, and on-site field operations

Turnkey solutions: Ecreso FM is available as a standalone unit or as a system, including peripherals and rack integrations

Project assistance: Site visits, factory acceptance tests, team trainings, installation support

Up to 10-year warranty

Turnkey Solutions & Rack Integrations

24h graphical history log

Lowest OPERATING COSTS

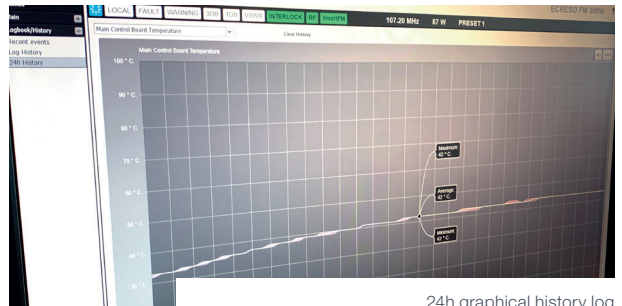**Up to 72% efficiency** thanks to state-of-the-art technology such as 6th generation MOSFET **+ SmartFM**

Many onboard functions: Sound Processor, Dynamic RDS Encoder, Digital Stereo Encoder, Audio Backup, MPX Power Limiter, GPIO...

High reliability: The product undergoes Highly Accelerated Life Tests (HALT), Parts Stress Analysis (PSA), Failure Mode Effects and Criticality Analysis (FMECA), burn-in...

Simple control and monitoring thanks to a user-friendly web interface, Advanced Measurement Interface (AMI), 24h graphical history log and Expert Maintenance Reporting (EMR)

Full SNMP management
⋯⋗ Up to 4 SNMP managers
⋯⋗ Control and monitor all parameters
⋯⋗ Alarms by SNMP traps and e-mails

Advanced Measurement Interface (AMI)

Highest QUALITY TO LISTENERS

Available in 1+1 and N+1 turnkey solutions for maximum redundancy

Direct-to-channel digital modulator
⋯⋗ Highest signal quality / Perfect audio fidelity
⋯⋗ Several built-in broadcast tools
⋯⋗ Control of all signal parameters

5-band sound processor

Digital MPX over AES

Audio Backup
⋯⋗ Silence detect on all program inputs
⋯⋗ Intelligent automatic auto-switch and recovery
⋯⋗ Internal player from µSD card

Ecreso FM 100W

Ecreso FM 1000W

10-Year Warranty

up to 10 YEARS WARRANTY

Ecreso offers a standard warranty of 3 years on all FM transmitters and up to 10 Years, yes TEN YEARS Warranty, for a small additional charge.
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**

SmartFM ARTIFICIAL INTELLIGENCE

Worldwide patented technology for FM transmitters which revolutionizes FM radio broadcasting and brings massive benefits to broadcasters, radios, and their audience of listeners.

Lowers energy costs up to 40%
thanks to electricity savings and reduced cooling

Reduces CO_2 emissions
for a cleaner, more sustainable environment

Up to 40% Energy Cost Savings

5-Band SOUND PROCESSOR
Craft Your Own Amazing Sound

• Hosted in direct-to-frequency digital modulator
• Highest quality processing from audio input to RF output
• Powerful DSP-based processing
• Complete 5-band architecture
• Factory presets for all formats
• Easy to fine-tune through intuitive Graphical User Interface
• Real-time meters at each stage
• No additional hardware: maximum reliability, no maintenance
• MPX Power Limiter (ITU 412)
• Wideband sound processor comes standard; 5-Band optional

Sound Processor Interface

Dynamic RDS Encoder

Supports PI, PS, TP, TA, MS, PTY, PTYN, DI, CT, AF, RT
Dynamic PS scrolling
Pure and stable signal thanks to Digital Modulator
Built on Audemat's RDS expertise

Alarm Notifications

Alarm delivery by email (SMTP) & SNMP
Easy configuration of each notification

Automation & Scheduler

Schedule preset changes
Schedule any parameter of your ECRESO FM
Schedule RF power to reduce consumption
Automate actions when an alarm is detected

Single Frequency Network (SFN)

10 MHz input for RF Carrier synchronization
Adjustable program delay (on audio / MPX inputs)

Expert Maintenance Reporting (EMR)

FREE EMR 6 months

EMR is a proactive cloud service which sends regular reports on the status of key parameters such as temperatures, currents and voltages, plus information on the performance and lifespan of components such as the fan and the power supply of the transmitter.

Thanks to a powerful firewall-friendly Web protocol, EMR works securely over a regular Internet connection (ADSL, 3G, ...) even when the connection bandwidth is limited.

Technical specifications

ECRESO FM	100W	300W	750W	1000W	2000W
Frequency Range	87.5 to 108 MHz in 10 kHz Steps				
Frequency Stability	$< 10^{-6}$ per Year				
HF Output	N type, 50Ω		7/16 type, 50Ω		
Power range	5-100W	20-300W	50-750W	50-1000W	200-2000W
Power setting	0-110W	0-350W	0-750W	0-1050W	0-2050W
Power factor	> 0.9				
VSWR	< 1.35, optimal performance: < 1.1 , protection : > 1.5				
Spurious and harmonic suppression	>75dBc				
Efficiency	up to 57%	up to 70%	up to 67%	up to 72%	up to 72%
Voltage	100VAC to 264VAC, 47Hz - 63Hz		184VAC to 264VAC, 47Hz - 63Hz		
Fuses	10AT				Circuit breaker
Analog input (LINE1)	2 XLR connectors, balanced, > 10 kΩ (600 Ω jumpers selectable), Software adjustable level (-18/+18 dBu range)				
AES Input (LINE2)	1 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				
Preemphasis	0 μs, 50 μs or 75 μs				
Environmental / Physical specifications					
Overall dimensions	19" x 2U x 444 mm		19" x 3U x 470 mm		19" x 3U x 690 mm
Weight	~9kg	~9.5kg	~13kg	~13kg	~18kg
Operating temperature	Nominal: 5°C to 45°C, 41°F to 113°F - Maximum: 0°C to 50°C, 32°F to 122°F				
Warehouse temperature	-20°C to +70°C, -4°F to 158°F < 10 years				
Humidity	5 - 95% non-condensing relative humidity				
Altitude	Up to 3900m - 12795ft				
Cooling	1 fan (10l/s to 30l/s)		1 fan (~30l/s)		2 fans (~60l/s)
Marking	CE, FCC, ICC				
Standards	RED 2014/53/UE, EN 301 489-1, EN 60215, EN 301 489-11, EN 302 018-2, EN 50581				

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

Order information

Standard Version

REF	DESCRIPTION
TF00452	ECRESO FM 100W
TF00441	ECRESO FM 300W
TF00996-2-750W	ECRESO FM 1000W - Limited to 750W
TF00996-2	ECRESO FM 1000W
TF00367-2	ECRESO FM 2000W

Several redundancy configurations available: contact us!

Software Options

CD01003	SmartFM
CD00106	Dynamic RDS
CD01001	5 Band Sound Processor
CD00162	Communication Pack

Hardware Options

SP01319	GPIO board
SP01615	Analog GPIO board
ST01981 / ST01792	SFN option
SP01260-A0	Internal surge protector

10 year warranty

EMR4	10 Year Warranty (100-300W)
EMR5	10 Year Warranty (750-2000W)
EMR6	Expert Maintenance Reporting

On-Demand Services

Dummy loads, adapters, cables

Cavity filters, combiners and antenna systems

Coverage Study

Turnkey solutions for broadcasting site

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ISO 9001
Qualité
AFNOR CERTIFICATION