

Compatible
SMARTFM



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.



Digital Exciter

Control

Efficiency

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.



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

Lowest OPERATING COSTS

Up to 76% efficiency thanks to state-of-the-art technology such as 6th generation MOSFET + **SmartFM**

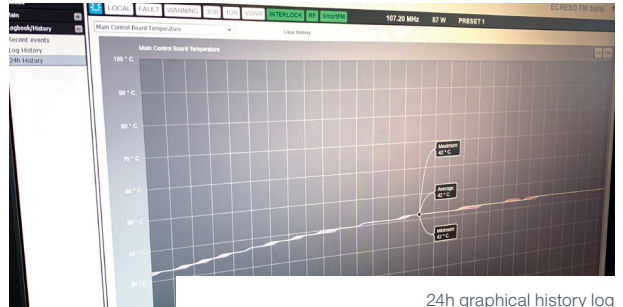
Many onboard functions: Sound Processor, Dynamic RDS Encoder, Digital Stereo Encoder, Audio Backup, MPX Power Limiter, GPIO...

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

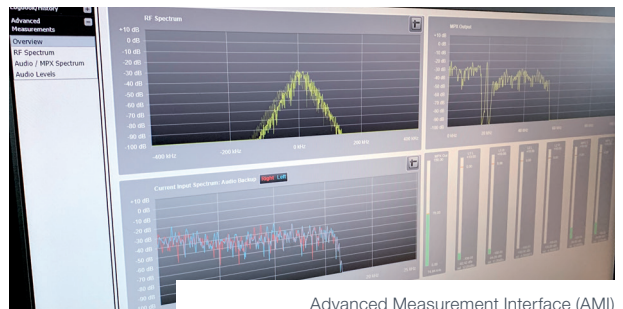
Simple control and monitoring thanks to a user-friendly web interface, Advanced Measurement Interface (AMI), 24h graphical history log and Expert Maintenance Reporting (EMR)

Full SNMP management

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



24h graphical history log



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



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.



**Up to 40%
Energy Cost
Savings**

- Lowers energy costs up to 40%**
thanks to electricity savings and reduced cooling
- Reduces CO₂ emissions**
for a cleaner, more sustainable environment

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)



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.



| ECRESO FM | 100W | 300W | 500W | 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 | 50-550W | 50-750W | 50-1000W | 200-2000W |
| Power setting | 0-110W | 0-350W | 0-550W | 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 70% | up to 72% | up to 76% | 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 | | ~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. Specifications on the offer prevail those in this document.

Order information

| Standard Version | |
|--|-----------------------------------|
| REF | DESCRIPTION |
| TF00452 | ECRESO FM 100W |
| TF00441 | ECRESO FM 300W |
| TF00996-2-500W | ECRESO FM 1000W - Limited to 500W |
| 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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