

Preliminary version



FM Transmitter

3 kW



POWERFUL PERFORMANCE

- Built-in active redundancy
- Digital modulator "Direct to Channel"
- 5-Band Sound Processor
- MPX over AES compatibility



POWERFUL CONTROL

- TCP/IP, SNMP management and email notifications
- Advanced Measurement Interface
- 24h graphical history log
- Expert Maintenance Reporting (EMR)



POWERFUL SAVINGS

- Up to 76% efficiency + SmartFM
- Hot swappable power supplies
- Built-in functionality
- Increased life span

Key Benefits



BUILT-IN REDUNDANCY *

- Up to 3 power supplies with load sharing
- Active redundancy RF amplification
- Passive coupler with maximum robustness
- Oversized coupling loads for unlimited operation on fault
- Intelligent design, maximum reliability and redundancy

** Figures given here may vary depending on the transmitter power level and version*



DIGITAL EXCITER

- Digital FM modulator "direct to channel"
- Highest signal quality
- Perfect audio fidelity
- Several built-in broadcast tools
- Control of all signal parameters



5-BAND SOUND PROCESSOR

- 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



ADVANCED CONTROL

- Advanced Measurement Interface (AMI)
- Expert Maintenance Reporting (EMR)
- Intuitive web interface
- Full SNMP management



UP TO 76% EFFICIENCY

- 6th MOSFET generation and new planar design
- Reduced consumption and operational costs
- Reduced heat and cooling costs
- Hot swappable power supplies
- Reduced maintenance costs

ASK US FOR 1+1 and N+1

WARRANTY

Egreso offers a standard warranty of 3 years on all our FM transmitters and up to 10 Years, yes TEN YEARS Warranty on our range of compact FM transmitters for a small additional charge. No other FM Transmitter Manufacturer even comes close to that commitment or confidence! We can offer the 10 Year Warranty with confidence thanks to:

- Our exceptional design quality
- The outstanding efficiency of our transmitters
- Advanced diagnostic capabilities

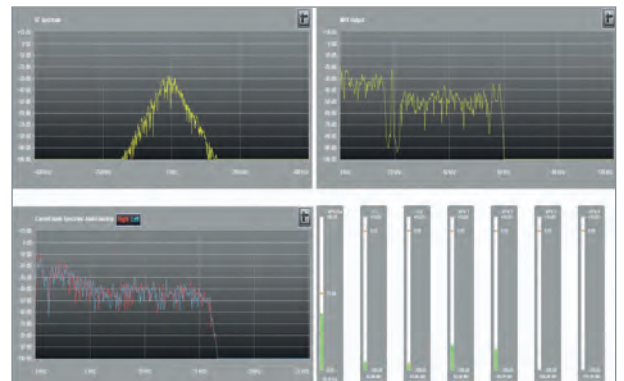


Artificial intelligence for radio

- #1 Enhances the listening experience
- #2 Lowers energy costs by 10 to 40%
- #3 Reduces CO₂ emissions



Sound Processor Interface



Advanced Measurement Interface (AMI)



Built-in Features

Advanced Communication



- Intuitive and secured web interface (TCP/IP)
- Advanced Measurement Interface
- Full SNMP management
- Audio Backup on μ SD card

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

Scheduler



- Automatic preset changes
- Schedule RF power to reduce consumption
- Schedule any parameter of your ECRESO FM

Email Notifications



- Alarm delivery by SMTP
- Easy configuration of notifications
- Also deliver notifications by SNMP

Multiband Sound Processor



- DSP based 5-band or wide-band processing
- Presets for all applications and formats
- Intuitive GUI to fine-tune your sonic signature
- Low distortion Final Limiter
- MPX Power Limiter (ITU 412)

Single Frequency Network



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

Digital Stereo Encoder

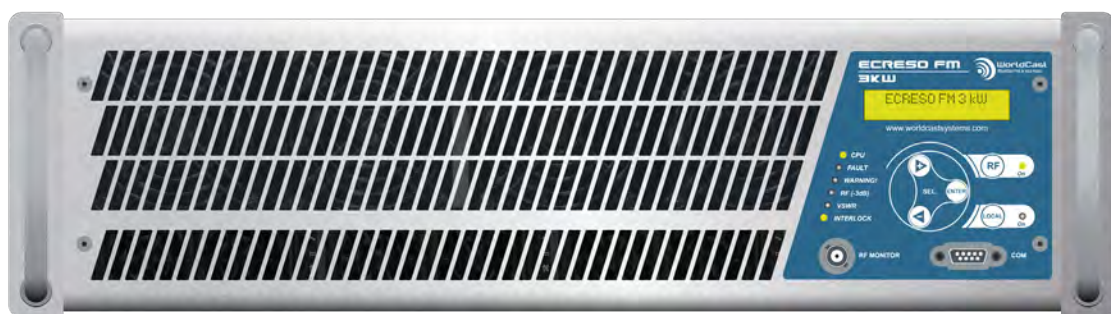


- High speed DSP circuitry
- Subcarrier perfect synchronization
- Amazing signal quality

MPX Over AES Input



- Improved MPX signal quality
- No hardware change required
- Compatible with APT MPX over IP codecs



Expert Maintenance Reporting (EMR)



EMR is a proactive 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 Features

Technical specification

Specification	ECRESO FM 3 kW
Frequency Range	87.5 to 108 MHz in 10 kHz Steps
Frequency Stability	< 10 ⁻⁶ per Year
HF Output	EIA 7/8 type, 50Ω
Power range	0.3-3.3 kW
Power setting	0-3.3kW
Power factor	> 0.95
VSWR	< 1.35, optimal performance: < 1.1 , protection : >1.5
Spurious and harmonic suppression	> 82 dBc
Efficiency	up to 76%
Voltage	3 phase wye + neutral, 340-457 VAC or Single phase 184 VAC to 264 VAC, 47-63 Hz
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	< 0.02%
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	> 40 Hz to 53 kHz @ 0.1 dB, > 20 Hz to 60 kHz @ 0.2 dB, > 60 kHz to 80 kHz @ 0.4 dB
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	3U x 19" x 700mm
Weight	Main unit: 30kg, 66 lbs - PSU's: 2.18/module
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 3900 m - 12795 ft
Cooling	Customized external or internal air cooling configurations
Marking	CE, FCC
Standards	2014 30 UE, 2014 53 UE, ETS 302 018 (EMC), ETS 300 384 (Radio), NF EN 60215 (Safety)

Technical specifications are subject to change without prior notice - 08/2018




Order information

STANDARD VERSION	
REF	DESCRIPTION
TF01072	ECRESO FM 3kW
TF01113	1+1 ECRESO FM 3kW
Several redundancy configurations available: contact us!	
Software Options	
CD00103	SmartFM
CD00106	Dynamic RDS
CD01001	5 Band Sound Processor
Hardware Options	
ST01792	SFN Option
On request	External Surge Protector
10 year warranty	
On request	10 year warranty for ECRESO FM 3kW

ON-DEMAND SERVICES

Dummy loads, adapters, cables
Cavity filters, combiners and antenna systems
Coverage Study
Turnkey solutions for broadcasting site

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