FM Transmitters
100W and 300W

POWERFUL PERFORMANCE
• Digital Modulator with Crystal Clear Signal
• 5-Band Sound Processor
• MPX over AES input
• Highly Reliable

POWERFUL CONTROL
• TCP/IP, SNMP Management and Email Notifications
• Expert Maintenance Reporting
• Advanced Metering Interface

POWERFUL SAVINGS
• Up to 70% Efficiency + SmartFM
• Built-in Functionality
• Increased Life Span
**Key Benefits**

### 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 GUI
- 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 70% EFFICIENCY
- 6th MOSFET generation (Worldcast Systems design)
- Reduced consumption and operational costs
- Reduced heat and cooling costs
- Longer component life span
- Reduced maintenance costs

### HIGHLY RELIABLE
- Compact transmitter, modular design
- Protected against VSWR, temperature, overload...
- Switching power supplies with large voltage range
- Active surge current limiting
- Optional Surge Suppressor
- Automatic input switching and recovery (audio and MPX)
- Audio Backup (from µSD card)
- Internal RDS Backup

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**Ask us for 1+1 and N+1**

Ecreso 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 diagnostics capabilities
Built-in Features

Advanced Communication Pack
Intuitive and secured Web Interface (TCP/IP)
Advanced Measurement Interface
Full SNMP Management
Audio Backup on µSD 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
Delivers Audemat’s expertise in RDS

Scheduler*
Automatic change of preset
RF Power scheduling and consumption saving
Schedule any parameter of your ECRESO FM
* verify your version compatibility

Email Notifications
Alarm sending by SMTP
Easy configuration of each notification
Same notifications can be sent by SNMP

Internal Surge Protector
Powerful protection against lightning
Visible status LED
Easy to replace

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.

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)
* verify your version compatibility

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
Compatible with MPX over IP APT codecs
Technical Features

Technical specification

Specifications ECRESO FM 100W / ECRESO FM 300W

<table>
<thead>
<tr>
<th>Requirements</th>
<th>ECRESO FM 100W</th>
<th>ECRESO FM 300W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency range</td>
<td>875 MHz to 108 MHz by 10 kHz steps</td>
<td></td>
</tr>
<tr>
<td>Frequency stability</td>
<td>&lt; 10^-4 per year</td>
<td></td>
</tr>
<tr>
<td>HF output</td>
<td>BNC, 50 Ω</td>
<td></td>
</tr>
<tr>
<td>Power range</td>
<td>5-100W / 20-300W</td>
<td>110W / 0-350W</td>
</tr>
<tr>
<td>VSWR</td>
<td>&lt; 1.35, optimal performance: &lt; 1.1, protection: &gt;1.5</td>
<td></td>
</tr>
<tr>
<td>Spurious and harmonic suppression</td>
<td>&gt; 75 dBc</td>
<td></td>
</tr>
<tr>
<td>Efficiency</td>
<td>up to 70% for the ECRESO FM 300W, up to 57% for the ECRESO FM 100W</td>
<td></td>
</tr>
<tr>
<td>Max consumption</td>
<td>200W / 500W</td>
<td></td>
</tr>
<tr>
<td>Voltage</td>
<td>100 VAC to 264 VAC, 47 Hz - 63 Hz</td>
<td></td>
</tr>
<tr>
<td>Power factor</td>
<td>&gt; 0.9</td>
<td></td>
</tr>
<tr>
<td>Fuses</td>
<td>10 AT</td>
<td></td>
</tr>
<tr>
<td>Analog input (LINE1)</td>
<td>2 XLR connectors, balanced, &gt;10 kΩ (600 Ω jumpers selectable), software adjustable level (-18/+18 dBu range)</td>
<td></td>
</tr>
<tr>
<td>AES Input (LINE2)</td>
<td>1 XLR connector, balanced, &gt;110 Ω, software adjustable level (-20 to 0dBFS range), AES 16,24,32 bits, up to 192 kHz</td>
<td></td>
</tr>
<tr>
<td>2 Multiplex (MPX/SCA) inputs</td>
<td>BNC type, unbalanced, &gt;5 kΩ, software adjustable level (-18/+18 dBu range)</td>
<td></td>
</tr>
<tr>
<td>Bandwidth</td>
<td>&gt; 40 Hz to 53 kHz @ 0.1 dB, &gt; 20 Hz to 60 kHz @ 0.2 dB, &gt; 60 kHz to 80 kHz @ 0.4 dB</td>
<td></td>
</tr>
<tr>
<td>Intermodulation distortion</td>
<td>&lt; 0.05%</td>
<td></td>
</tr>
<tr>
<td>FM S/N ratio</td>
<td>&gt; 80 dB RMS @ 75 kHz deviation</td>
<td></td>
</tr>
<tr>
<td>AM noise</td>
<td>&gt; 55 dB, weighted/unweighted, sync/async. RMS/CCIR (20-20 000 Hz)</td>
<td></td>
</tr>
<tr>
<td>Composite operation</td>
<td></td>
<td></td>
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<tr>
<td>Stereo operation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bandwidth</td>
<td>&gt; 20 Hz to 15 kHz @ 0.1 dB</td>
<td></td>
</tr>
<tr>
<td>38 kHz discontinuance</td>
<td>&gt; 50 dB</td>
<td></td>
</tr>
<tr>
<td>Stereophonic crosstalk</td>
<td>&gt; 50 dB</td>
<td></td>
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<tr>
<td>Mono operation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bandwidth</td>
<td>&gt; 40 Hz to 15 kHz @ 0.1 dB</td>
<td></td>
</tr>
<tr>
<td>Out of band rejection</td>
<td>&gt; 40 dB @ 19 kHz</td>
<td></td>
</tr>
<tr>
<td>Preemphasis</td>
<td>0 μs, 50 μs or 75 μs</td>
<td></td>
</tr>
<tr>
<td>Environmental / Physical specifications</td>
<td>Overall: 487.5 X 2U X 475 mm, Rack size: 437.7 X 82 X 443.8 mm (WxHxD)</td>
<td></td>
</tr>
<tr>
<td>Enclosure depth required</td>
<td>600 mm</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>19&quot; enclosure, with 4 M6X12 screws</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>~9 kg / ~9.5 kg</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>Nominal: 5°C to 45°C, Maximum: 0°C to 50°C</td>
<td></td>
</tr>
<tr>
<td>Warehousing temperature</td>
<td>-20°C to +70°C</td>
<td></td>
</tr>
<tr>
<td>Humidity</td>
<td>5 - 95 % non-condensing relative humidity</td>
<td></td>
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<tr>
<td>Altitude</td>
<td>Up to 3900 m</td>
<td></td>
</tr>
<tr>
<td>Cooling</td>
<td>1 fan: between 10 l/s and 30 l/s depending on ambient temperature</td>
<td></td>
</tr>
<tr>
<td>Marking</td>
<td>CE, FCC, ICC</td>
<td></td>
</tr>
<tr>
<td>Standards</td>
<td>1999/5/CE (R&amp;TTE), ETS 302 018 (EMC), ETS 300 384 (Radio), NF EN 60215 (Safety)</td>
<td></td>
</tr>
</tbody>
</table>

Order information

Technical specification are subject to change without prior notice – 11/2018

STANDARD VERSION

<table>
<thead>
<tr>
<th>REF</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>TF00307</td>
<td>ECRESO FM 100W</td>
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<tr>
<td>TF00441</td>
<td>ECRESO FM 300W</td>
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<tr>
<td>CD00103</td>
<td>SmartFM</td>
</tr>
<tr>
<td>CD00106</td>
<td>Basic RDS</td>
</tr>
<tr>
<td>CD01001</td>
<td>S Band Sound Processor</td>
</tr>
<tr>
<td>SP01319</td>
<td>GPIO board</td>
</tr>
<tr>
<td>SP01615</td>
<td>Analog GPIO board</td>
</tr>
<tr>
<td>SP01322</td>
<td>RF metering board</td>
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<tr>
<td>ST01792</td>
<td>SFN Option</td>
</tr>
<tr>
<td>SP01260</td>
<td>Internal surge protector</td>
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</tbody>
</table>

ON DEMAND SERVICES

Redundancy solutions : 1+1, N+1
Dummy loads, adapters, cables
Cavity filters, combiners and antenna systems
Coverage Study
Turnkey solutions for broadcasting site
Sound processor preset adjustment

Watch more about
ECRESO FM Transmitters

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