Flexiva FLX Liquid-Cooled High-Power FM Transmitters

November 11, 2015
Webinar

Featuring GatesAir’s

Tim Anderson
Radio Product & Business Development Manager
Flexiva FLX
Liquid-Cooled
High-Power
FM Transmitters
Flexiva Liquid Cooled FM

- **EFFICIENT:** 72% AC-RF efficiency
  - 88% heat to liquid transfer efficiency
  - Only 466W (1,590 BTU) A/C required

- **COMPACT:** 11kW with dual exciters & internal pump module in a single rack
Flexiva Liquid Cooled FM

- **SCALABLE:** 22kW with dual exciters in a single rack with external pump module

- **RUGGED:** Latest LDMOS Power-FETS, Hardware based system controller

- **RELIABLE:** Complete redundancy. No single point of failure

- **SERVICEABLE:** Modular, Hot-Swappable, Hot Pluggable power supplies and power amplifiers
Flexiva Liquid Cooled FM

- **SCALABLE:** 40kW with dual exciters in a single rack with external pump module

- **PROVEN:** Leveraging technology from GateAir’s ULX TV liquid transmitters and FAX air-cooled FM transmitters

- **CONNECTED:** 24x7 Access via IP, Web, SNMP and Email

- **FUTURE PROOF:** Digital Ready
Flexiva Liquid Cooled FM

- Broadband, high-efficiency and maximum power density
- Most compact footprint available
- Modular design with small, lightweight, hot-pluggable PA modules and power supplies
- Robust RF and Control Systems with redundant controllers
- Future-proof architecture, Digital Ready
- Best Trained Service Dept. Available 24/7

= Lowest Total Cost of Ownership!
# Flexiva FLX Power Chart

<table>
<thead>
<tr>
<th>Flexiva Liquid Cooled FM</th>
<th>FLX 5K</th>
<th>FLX 10K</th>
<th>FLX 20K</th>
<th>FLX 30K</th>
<th>FLXT40K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analog Only</td>
<td>Max Power</td>
<td>5,500</td>
<td>11,000</td>
<td>22,000</td>
<td>33,000</td>
</tr>
<tr>
<td></td>
<td>Typical Efficiency</td>
<td>72%</td>
<td>72%</td>
<td>72%</td>
<td>72%</td>
</tr>
<tr>
<td>Analog @ -20 dBC HD</td>
<td>Max Power</td>
<td>5,000</td>
<td>10,000</td>
<td>20,000</td>
<td>30,000</td>
</tr>
<tr>
<td></td>
<td>Typical Efficiency</td>
<td>70%</td>
<td>70%</td>
<td>70%</td>
<td>70%</td>
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<tr>
<td>Analog @ -14 dBC HD</td>
<td>Max Power</td>
<td>4,850</td>
<td>9,700</td>
<td>19,400</td>
<td>29,100</td>
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<tr>
<td></td>
<td>Typical Efficiency</td>
<td>57%</td>
<td>57%</td>
<td>57%</td>
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</tr>
<tr>
<td>Analog @ -10 dBC HD</td>
<td>Max Power</td>
<td>3,800</td>
<td>7,600</td>
<td>15,200</td>
<td>22,800</td>
</tr>
<tr>
<td></td>
<td>Typical Efficiency</td>
<td>52%</td>
<td>52%</td>
<td>52%</td>
<td>52%</td>
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</tbody>
</table>
FLEXIVA™ High Power FM Transmitters

New Flexiva™
FLX
Liquid-Cooled
FM Transmitters
New Flexiva™ FLX
Liquid-Cooled FM Transmitters

FLX10K 16RU Cabinet
- 12 kW average power
- 17kW peak power
- 7 - 50 Volt, 2.75 kW power supplies
  - 96% AC-DC Efficiency
- 14 - New 970 Watt PA pallets
- 7 - 1940 Watt PA modules
  - 82% DC-RF PA efficiency
- Dual Exciter and IPA - failover switching
Flexiva™ FLX Liquid-Cooled FM Transmitters

Hot-Pluggable Liquid Cooled PA Module with Quick-Disconnects

Liquid cooled 14-Way Splitter & ISO-Loads

Liquid Cooling Distribution System
NEW FLX Liquid Cooled FM Transmitter

- FLX10K
  - 12 kW Analog at 72% AC-RF Efficiency
  - 9.7 kW Analog, FM+HD @ -14dBc – 60% AC-RF Efficiency
  - 7.7 kW Analog, FM+HD @ -10dBc – 55% AC-RF Efficiency
- Power Block Scalable 5kW – 80kw

Available in Digital-Ready Analog Or Fully Digital
NEW! Flexiva™ FLX Liquid-Cooled FM Transmitters

- 88% overall heat dissipation to liquid transfer efficiency
- Internal or external redundant pump modules
- Two 10kW transmitters with dual exciters, in a single rack
- 20kW with dual exciters in a single rack
Flexiva™ FLX Liquid-Cooled FM Transmitters

Up to 80kW

Most Immediate Plans call for a 20 and 40kW Liquid Cooled
Flexiva™ FLX Liquid-Cooled FM Transmitters

Internal or External Dual Pumps, with auto/manual changeover
- Pump speed inverter controlled
- Optimized for High Efficiency
- Reliable, proven
- Small physical size
- Low maintenance, closed-loop pressurized system
- Quiet – Designed for indoor installation
**Flexiva™ FLX Liquid-Cooled FM Transmitters**

**High Efficiency, Dual-Fan Outdoor Heat Exchanger**

- Low noise, with high-efficiency fan blades
- Speed controlled for maximum efficiency
- Vertical or horizontal airflow
- Two sizes available 20kW & 50kW heat dissipation