

## 500W DIGITAL FM TRANSMITTER EM 500 DDS

The 550W fully digital FM transmitter **EM 500 DDS** has been created by the OMB center of development for DDS technology. Thanks to its powerful core, crystal clear sound, accurate filtering procedures, audio processing and usage this device brings your experience to the next level. This 550W DDS FM transmitter comes with a 4.3" touch screen display, allowing an easy configuration and simple access to functions setting, operating parameters and alarms detections. It also includes a wide mode AES/EBU (192kHz broadband sampling), audio backup and many more advanced features.



### MAIN ADVANTAGES

- It can be used as an independent exciter, with power output from 0 to 100%.
- Suitable for single frequency applications (SFN), audio limiter (ITU).
- Audio rescuer integrated, with programmable established time and all inputs priority (analog, digital and MPX).
- Fold back for correct protection against VSWR (Voltage Standing Wave Ratio): 2.0 at full output power.
- Typical AC efficiency >73% and typical RF efficiency of 84%.
- Speed control of cooling fans according to temperature of power modules so as to optimize consumption and to decrease acoustic contamination.
- Advanced protection against load mismatches without transmission cuts and fast protection in case of excessive reflected power.
- Programmable power reduction.
- Automatic voltage control for efficiency optimization.
- Dual power supply.
- Solid state and compact design.

broadcast your \_ world

## GENERAL CHARACTERISTICS

<b>FREQUENCY RANGE</b>	87.5-108MHz
<b>TRANSMITTER TUNING STEPS</b>	100KHz – fine tuning steps: 10Hz
<b>FREQUENCY ERROR</b>	<50Hz not synchronized, <1Hz synchronized
<b>GPS SYNCHRONIZATION</b>	10MHz/1PPS Internal/external with digital PLL
<b>MODULATION TYPE</b>	FM DDS, direct digital synthesis 256kF8E
<b>AUDIO AND MPX/L/R INPUT LEVEL</b>	From -10 to +10dBu @75KHz deviation, 0.1dB steps
<b>AUXILIARY INPUT CHANNEL LEVEL</b>	SCA: from -12 to +6dBu @7.5KHz deviation RDS: from -24 to -3dBu @2KHz deviation
<b>DIGITAL AUDIO INPUT</b>	AES/EBU: from -6 to +12dBfs @75KHz deviation, 0.1dB steps
<b>MODULATION DISTORTION</b>	75KHz deviation: ≤0.02%
<b>AUDIO BACKUP</b>	μSD/USB: MP3 320kbps
<b>S/N RATIO, MONO</b>	30 to 20000Hz: >76dB, 83dB typical CCIR: >72dB, 76dB typical
<b>S/N RATIO, STEREO</b>	30 to 80000Hz: >72dB, 77dB typical CCIR: >68dB, 72dB typical
<b>AUDIO CHANNELS FQ RESPONSE</b>	30 to 15000Hz ±0.1dB
<b>MPX INPUT FREQUENCY RESPONSE</b>	30 to 100000Hz ±0.1dB
<b>PRE-EMPHASIS TIME CONSTANT</b>	0μS, 50μS (CCIR), 75μS (FCC)
<b>DETACHED LF CHANNEL</b>	MPX, L, R, AES/EBU, aux, SCA (all main plus reserve), SD memory, audio streaming
<b>MODULATION DELAY</b>	Digitally programmable from 0.1μs to >3s
<b>STEREO CODING</b>	According to ITU-R BS.450-3, pilot frequency
<b>STEREO SEPARATION</b>	>55dB
<b>PILOT FREQUENCY</b>	19kHz ±0.1Hz, adjustable level 0-12%
<b>RDS GENERATOR</b>	According EN62106 PI, PS, ECC, PTY, TP/TA, AF, MS, DI, CT
<b>RATED RF OUTPUT POWER</b>	550W
<b>OUTPUT POWER ALC STABILITY</b>	±3%
<b>HARMONIC AND SPURIOUS EMISSIONS</b>	<75dB (harmonic), <80dBc (spurious)
<b>RF OUTPUT CONNECTOR</b>	N(F)
<b>MONITOR PORTS AND REMOTE CONTROL</b>	Analog MPX on BNC, parallel control on subD9, RS232, RS485, 10/1000T serial ports, GSM, web server, SNMP
<b>POWER SUPPLY</b>	100-250Vac
<b>CONSUMPTION</b>	750W @500W
<b>OPERATING TEMPERATURE RANGE</b>	Suggested: 0 to +35°C Extreme: -10 to +50°C (55°C max. with derating)
<b>RELATIVE HUMIDITY</b>	Up to 95% not condensing
<b>DIMENSIONS AND WEIGHT</b>	2RUs and 11kg
<b>REFERENCE NORMS</b>	ETSI EN 302 018 v2.1.1

*\* The images and/or technical specifications are subject to change without previous notice.*

broadcast your \_ world