1000W DIGITAL FM TRANSMITTER
EM 1000 DDS

The 1000W fully digital FM transmitter **EM 1000 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 1000W 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.

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GENERAL CHARACTERISTICS

FREQUENCY RANGE	87.5-108MHz
TRANSMITTER TUNING STEPS	100KHz – fine tuning steps: 10Hz
FREQUENCY ERROR	<50Hz not synchronized, <1Hz synchronized
GPS SYNCHRONIZATION	10MHz/1PPS Internal/external with digital PLL
MODULATION TYPE	FM DDS, direct digital synthesis 256kF8E
AUDIO AND MPX/L/R INPUT LEVEL	From -10 to +10dBu @75KHz deviation, 0.1dB steps
AUXILIARY INPUT CHANNEL LEVEL	SCA: from -12 to +6dBu @7.5KHz deviation RDS: from -24 to -3dBu @2KHz deviation
DIGITAL AUDIO INPUT	AES/EBU: from -6 to +12dBfs @75KHz deviation, 0.1dB steps
MODULATION DISTORTION	75KHz deviation: ≤0.02%
AUDIO BACKUP	µSD/USB: MP3 320kbps
S/N RATIO, MONO	30 to 20000Hz: >76dB, 83dB typical CCIR: >72dB, 76dB typical
S/N RATIO, STEREO	30 to 80000Hz: >72dB, 77dB typical CCIR: >68dB, 72dB typical
AUDIO CHANNELS FQ RESPONSE	30 to 15000Hz ±0.1dB
MPX INPUT FREQUENCY RESPONSE	30 to 100000Hz ±0.1dB
PRE-EMPHASIS TIME CONSTANT	0µS, 50µS (CCIR), 75µS (FCC)
DETACHED LF CHANNEL	MPX, L, R, AES/EBU, aux, SCA (all main plus reserve), SD memory, audio streaming
MODULATION DELAY	Digitally programmable from 0.1µs to >3s
STEREO CODING	According to ITU-R BS.450-3, pilot frequency
STEREO SEPARATION	>55dB
PILOT FREQUENCY	19kHz ±0.1Hz, adjustable level 0-12%
RDS GENERATOR	According EN62106 PI, PS, ECC, PTY, TP/TA, AF, MS, DI, CT
RATED RF OUTPUT POWER	1000W
OUTPUT POWER ALC STABILITY	±3%
HARMONIC AND SPURIOUS EMISSIONS	<75dB (harmonic), <80dBc (spurious)
RF OUTPUT CONNECTOR	7/16”(F), N(F) and EIA 7/8”(F) optional
MONITOR PORTS AND REMOTE CONTROL	Analog MPX on BNC, parallel control on subD9, RS232, RS485, 10/1000T serial ports, GSM, web server, SNMP
POWER SUPPLY	180-264Vac, 47/63Hz
CONSUMPTION	~1450VA at 1000W output power
OPERATING TEMPERATURE RANGE	Suggested: 0 to +35◦C Extreme: -10 to +50◦C (55◦C max. with derating)
RELATIVE HUMIDITY	Up to 95% not condensing
DIMENSIONS AND WEIGHT	2RUs and 11kg
REFERENCE NORMS	ETSI EN 302 018 v2.1.1

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

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