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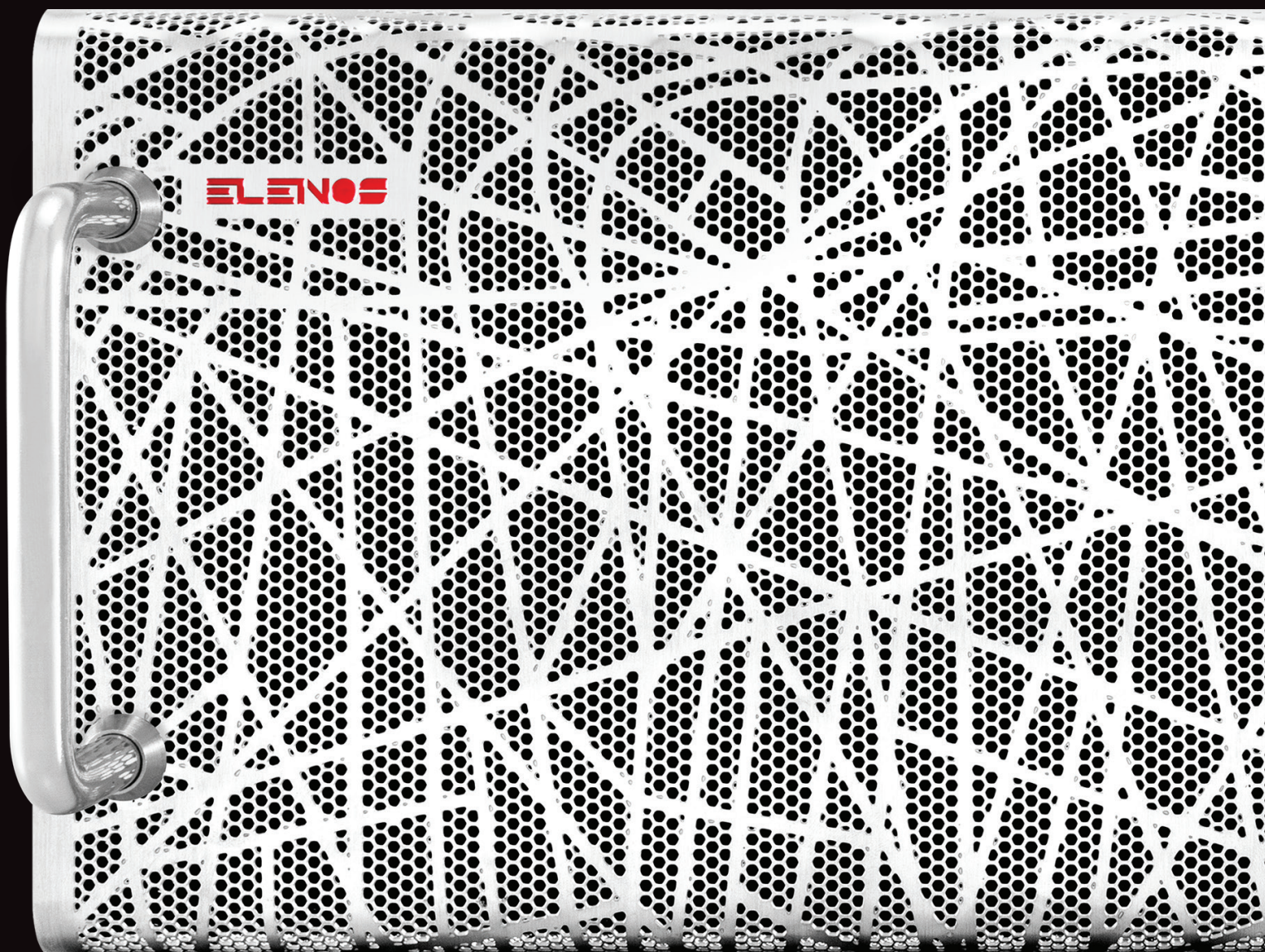


# E10000X

## 10kW4U

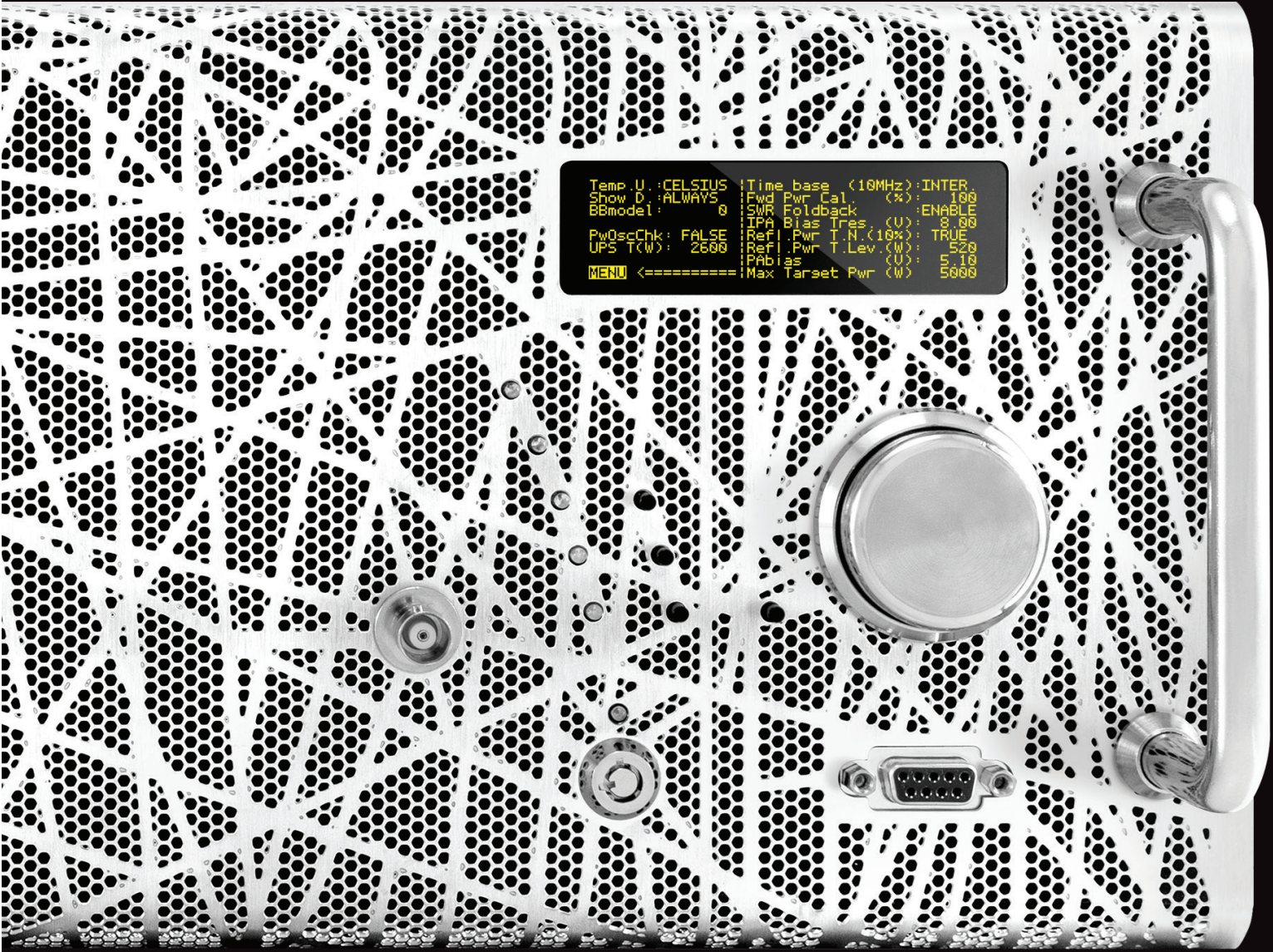
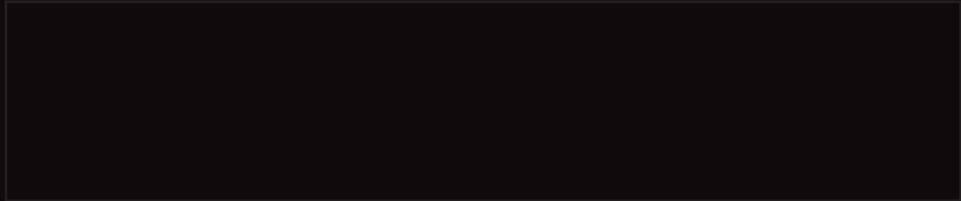
FM AMPLIFIER

**ELENOS**<sup>®</sup>  
World Broadcast Experience



\*All images are proprietary from Elenos and are for indicative purposes only.  
Technical data can be subject to change without notice.





```
Temp.U :CELSIUS      Time base <10MHz>:INTER
Show D :ALWAYS      Fwd Pwr Cal (%) : 100
BBmodel: 0          SWR Foldback :ENABLE
PwOscChk: FALSE    TPA Bias Tres (U) : 8.00
UPS T(W): 2600      Refl Pwr T.N.(10%): TRUE
                  Refl Pwr T.Lev (W) : 520
                  PAbias (U) : 15.10
MENU <===== Max Target Pwr (W) : 5000
```

our technologies



ind

Indium

Icefet

Icefet

e

Ecosaving

eXt

Life Extender



## THE RESULT OF 10 YEARS OF RESEARCH IN ENERGY SAVING

The new E10000X amplifier is the latest of a series of Elenos devices, from the Italian manufacturer that proudly boasts a world record: being the first, ever, 12 years ago, to concern itself with energy conservation in the context of broadcasting.

Attention is paid to the environmental impact of transmitting stations, and has now also become very important for energy conservation of radio broadcasters. Antonello Giovannelli, Director of Research and Development at Elenos, told us that as early as 2003, with the project in the "IceFet" series (amplifiers and E3000 and ETG3000 transmitters integrated in 4 UR), the highest possible energy efficiency was being targeted with the available technology at the time.

The market trend for limiting consumption and costs was in the air, which is why the planning staff have prioritised this opportunity. In 2007 the economic crisis arrived, but at that time Elenos had already improved its products and had a complete catalogue with a very high energy efficiency range at its disposal, which was ideal for adopting energy saving policies on consumption. The possibility of programming power, already present in the original projects, was then further improved, allowing for an even more significant saving on electricity.

## REVOLUTIONARY

It is the result of a long investment in research and of the very high competence of Elenos' Team. So the revolutionary E10000X is finally arrived! It is a highly powerful FM amplifier that can boast an unbeatable range of characteristics of compactness, electrical efficiency and weight.

The apparatus can be contained in just 4 rack units, but can provide 10kW of RF power in the 87.5-108 MHz range with a total electrical efficiency within 70% and 75%.

E10000X is a highly versatile and effective solution, and can be installed in stand-alone mode, or used as a reserve for more powerful systems, but can also be used as a base module for very powerful amplifiers.

"The project started around 4 years ago", Giovannelli explains, "and was already in the prototype stage, but we have only recently decided to market it, for two reasons. The first is technical: we wanted to work on it until it reached a maximum efficiency state-of-the-art and the best in aesthetic design. Once again we want to break the boundaries of déjà vu. The second reason is commercial: Elenos is at the very top of the energy savings and high-quality market, so much so that bringing out this model too soon would have created too much competition with our other products, on the same power range".



## CRISIS BREEDS OPPORTUNITY

Elenos is an Italian company based in the city of Ferrara and the leader of a group that includes brands such as ITELCO and Electrosys.

For Elenos, being an Italian company means knowing how to combine excellence and flexibility and knowing how to transfer these qualities to its products.

Elenos's care for the environment, that from the start of the 2000's attracted the interest of broadcasters more sensitive to these issues, with the arrival of the economic crisis from 2007 onwards became successful as a response to the growing need to manage budgets, but without compromising on the quality of the equipment and their capacity of coverage.

Today E10000X is the heir to this business philosophy that has two concepts at its roots: responsibility and innovation. This equipment looks to the future of international broadcasting, because it represents a real and convenient solution, both to the problems of business management, and to the challenges that the world imposes on us.

## Features:

### **Smart Design**

Extremely contained dimensions, lightweight, clean layout, easy maintenance and servicing.

### **Low energy consumption**

Highly reduced electricity consumption and operating costs thanks to innovative and accurate design techniques.

### **Reliability**

Very high reliability and a capacity to maintain operating functionality even under extreme conditions, thanks to intelligent protection systems, Icefet technology and Lifextender algorithms.

### **Total control**

Accurate, detailed data on the device's operation, available at an analytical level (voltages, currents, powers, temperatures, efficiency, protections, settings, audio levels, communications).

Remote connection possible via SMS, GPRS, SNMP and WEB.

### **Digital ready**

The FM Amplifier is ready for analog+digital or digital transmission. With the new Elenos FM Amplifier you will catch the best opportunity to face FM digital future challenges.





Datasheet

## FM AMPLIFIER HIGH POWER | E10000X

E10000X

FM AMPLIFIER HIGH POWER

### GENERAL DATA

Output Nominal Power	10000 W Analog Mode
Operating band	87.5 ÷ 108 MHz
RS232/RS485	Yes. Connector DB9 female
Points of measure	RF Sample
Displayed Parameters	More than 50 parameters displayed on a wide graphic OLED
Adjustments	From the frontal panel through OLED/from PC
Number of L-DMOS in amplifier stage	14 x BLF188XR
RF power stage technology	ICEFET & ECOSAVING
Dimensions: Rack units	4U
Dimensions: W - H - D	48.5 - 17.6 - 74 cm
Weight	45 Kg
Number of power supplies	3 (93 % of efficiency)
Number of cooling fans	6 Controlled speed
RF Output connector	1 + 5/8"
RF Input connector	N

### RF PERFORMANCE

Output impedance	50 Ω
Automatic RF power control	Stabilizes the output power at the set value
Overall output power RF stability	+/- 0,1 dB
VSWR	2:1 at full power. Automatic power reduction beyond 1.7:1 in foldback mode. High speed protection against open and short circuit.
Driving power	1.8W *
Protections	Proportional protection against excess of temperature, currents, VSWR. Smart protections against the propagation of faults.

## FM AMPLIFIER HIGH POWER | E1000X

### INSTALLATION REQUIREMENTS

Power supply	230/400 VAC 50 ÷ 60 Hz
Power consumption (typical)	13.7 KW Analog Mode
Overall efficiency (typical from -3 dB to Pnom)	70 ÷ 75 % within 87.5 ÷ 108 MHz
Power factor	> 0.95
Current Consumption @ 230VAC/single phase	60 A
Current Consumption @ 400VAC/three phase	20 A
Cooling system	Forced air-cooling variable flow

### ENVIRONMENT

Temperature range (operating)	-5 ÷ +45 °C, 23 ÷ 113 °F
Temperature range (non operating)	-20 ÷ +55 °C, -4 ÷ 131 °F
Humidity range (operating)	95% @ 40 °C, 104 °F
Humidity range (non operating)	90% @ 55 °C, 131 °F
Altitude range (operating)	<3000 meters / <9840 Feet
Altitude range (non operating)	<15000 meters / < 49200 Feet

### TELECONTROL & TELEMETRY

Remote control	Yes
Remote control, dry contacts	Yes
SNMP option	Yes
Web option	Yes



