

RFE

MAKING
BROADCAST
SMARTER

RF Technologies for Scientific Application





Which is the best FM transmitter for tomorrow?

We have created RFE Broadcast to find the ultimate answer to that question.

Now, after years of research, development and on-field testing, we know: the best FM transmitter for days to come is the most efficient and the most sustainable one.

We are talking about designing and realizing products that stand at the perfect intersection among performance, energy saving, flexibility, reduced initial investment and maintenance together with the best possible audio and components' quality. And we strongly believe that our technologies represent all of that.

Today, RFE's technologies are the answer.



Luciano Ditadi
Chairman

50 years of innovation in broadcasting technologies

Our experience in the RF field started in the early '70s, when our president Luciano Ditadi, gave life to his first transmitter manufacturing company.

Today we design and realize products that stand at the perfect intersection among performance, energy saving, flexibility, reduced initial investment and maintenance together with the best possible audio and components' quality.

RFE: making broadcast smarter.



RF technologies for scientific applications

Whether in a linear or in a circular accelerator, storage ring or feedback loop for beam stabilization, you would surely need reliable and strong RF amplifiers with qualities like high phase stability and low phase noise to apply the required energy to electrons, protons and ions.

More than this, RFE provides completely customized solutions to fulfill customer's requirements.

Our range of technologies for science

RFE's team has more than 40 years of experience in building air-cooled and liquid-cooled high-power amplifiers for broadcasting, physics and medical applications.

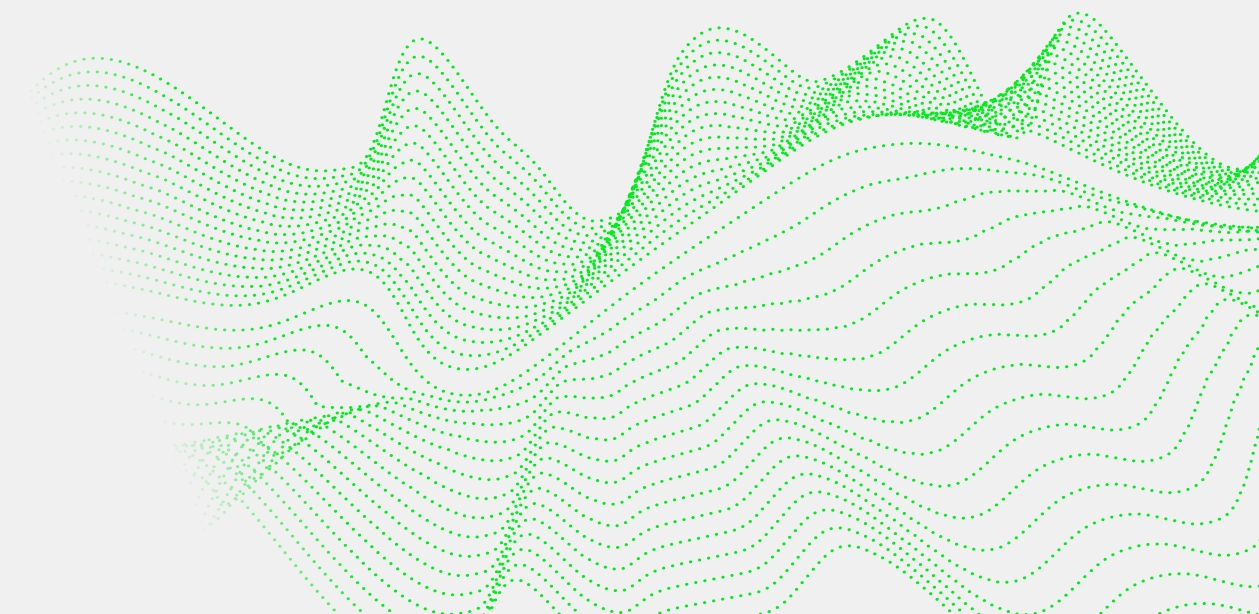
Our company offers a wide range of products, among them narrowband and broadband solid-state amplifiers both in CW or pulsed signals.

RFE's amplifiers are available as class A, class AB and class C amplifiers to meet all the different applications.

Their key features are:

- very short phase delay
- high phase stability
- low phase noise
- constant gain

Their superb high power density while maintaining high efficiency, together with robustness against mismatch, make our RF amplifiers one of the most reliable choice in the market.



RFE solid-state amplifiers are the ideal item to be used as driver amplifiers for klystrons or IOT amplifiers or main amplifier in an accelerator chain.

Here you have a list of our main projects, already installed worldwide in particle accelerators centers.

5kW RF Amplifier

5kW RF Amplifier @ 81.5MHz Frequency, Air Cooled, composed by:

AMZ00500 - 100W Driver & 5-Ways Splitter

AMZ00200 - 1kW RF Amplifier Module

ARZ00100 - 5-Ways 5kW Gysel Power Combiner

AMZ00100 - 5kW Power Amplifier made with 5*AMZ00200 + AMZ00500 + ARZ00100, Air cooled



FULLY CUSTOMIZABLE
TECHNOLOGY



12kW CW / 16 kW Pulsed Power Amplifier

12kW CW // 16 kW Pulsed Power Amplifier @ 85~137MHz Frequency, Liquid cooled, composed by:

AMZ00300 - 1kW RF Amplifier Module

ATS00120 - 4kW RF Amplifier (3HE - 19"), Liquid cooled, composed by 4*AMZ00300 Module

ATS00100 - 12kW CW, 16 kW Pulsed Power Amplifier, Liquid cooled, composed by 4 per ATS00120 Amplifiers. Rack 19" - 30HE



500W Amplifier

500W Amplifier @ 69~651 MHz Frequency

ATS00200 - Amplifier 500W, 69-651MHz



4kW CW & Pulsed Amplifier

4kW CW & Pulsed Amplifier @ 11~20 MHz Frequency:

AMZ01100 - 1kW Amplifier Module

ATS00300 - 4kW CW & Pulsed, Power Amplifier, composed by 4*AMZ01100 Pallet, 5HE Air cooled



Amplifier Modules

Amplifier Modules @ 39~43 MHz Frequency

AMZ01200 - 1kW Amplifier module

ATS00400 - 700W Amplifier 2HE*19", Air cooled

ATS00500 - 6kW Amplifier, 4HE*19", Air cooled



6kW 107 MHz Frequency

6kW 107 MHz Frequency

ATS00700 - 6kW, RF Amplifier, 4HE*19", Air cooled

ATS00800 - 20kW Power Amplifier, 4HE*19", Air cooled



Product innovation

Innovations and technologies are at the centre of RFE Broadcast approach. We always work to improve our products and provide customers the exact solution they need. Our core technological systems and characteristics guide us in order to continuously evolve through experimentation.

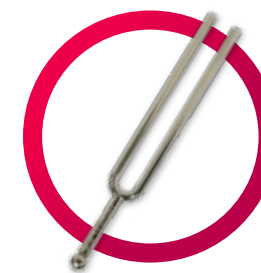
Maximized Efficiency System

MES is an intelligent system of automatic regulation of the power devices working point: efficiencies RF/AC up to 85% and reduction of air and electricity consumption.



Ultimate Audio Quality

UAQ is a sophisticated system that allows to obtain audio quality levels higher than industry standards and the current characteristics of digital modulations.



Intelligent Air Cooling System

ICS is a smart innovation that regulates the amount of cooling air according to the environmental conditions and the needs of the transmitter, reducing energy waste.



High Performance

The characteristics of RFE Broadcast products represent the key features we develop to always provide innovative solutions, paying great attention to efficiency, sustainability and ease of use.



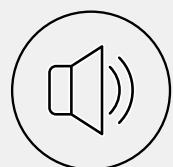
Evolution Touch

Quick and intuitive control of the Transmitter thanks to the full colour touch screen, an easy-to-use LCD display installed on the device front panel.



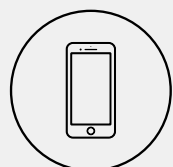
Software Energy Saving

Energy and time saving through RFE smart software, directly installed on the Transmitter: the innovative firmware ensuring easy control and high performance.



Full Audio Interface

All the basic audio features included in RFE Transmitters: L+R board, MPX audio and Stereo coder in order to obtain almost digital audio quality.



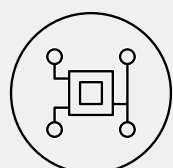
Mobile Remote Control

Complete and remote control of the Transmitter via mobile, web or GSM, monitoring every function in total comfort.



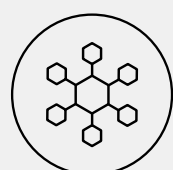
Liquid Cooling System

RFE innovative solution designed to improve the action of cooling the Transmitter by using liquids such as water, instead of the usual air system.



Direct Digital Synthesis

The innovation of the digital audio modulator, a smart technology able to further improve audio quality by producing digital sound.



Multiple Interface

Different television standards, being either analogue or digital, implemented on the same TV Transmitter, extending broadcasting operation.



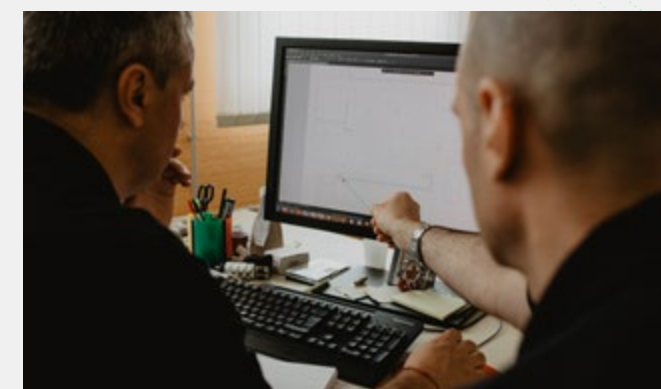
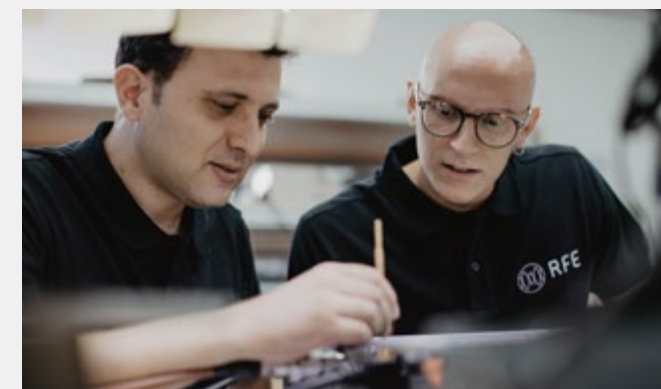
Cast Sharing

Many possibilities in just one device: combining two digital television standards, or an analogue standard with a digital one, through a dedicated software.

Support & Training

CONSTANT ONLINE SUPPORT AND LOCAL ASSISTANCE

We offer on-line support services from our Italian offices or from our local branch offices all over the world, besides a dedicated onsite support at customer's facilities and spare-parts fast shipping in real time. We also specialize in antenna design and coverage studies.



OUR TRAINING PROGRAMME

Sharing our experience and our innovative approach with our customers is of the utmost importance at RFE Broadcast. Therefore, after selling we offer factory training with our engineers and on-site customized training led by our experts at customers' facilities.

Our global network

RFE Broadcast can rely on a network of distributors all over the world. Moreover, RFE Broadcast has offices in the following locations. [For full contacts >](#)

PADUA-FALERNA, ITALY

See contacts on the following page

NAIROBI, BRAZIL

Africa branch office

ANTELIAS, LEBANON

Middle East branch office

MIAMI, USA

North & South America branch office

CURITIBA, BRAZIL

Brazilian branch office

CASABLANCA, MOROCCO

French-speaking Africa branch office

RAFIDIA, PALESTINE

Palestinian branch office

QUEBEC, CANADA

North & South America branch office

HO CHI MINH, VIETNAM

Vietnam branch office

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Awards & Social Committment

INTERNATIONAL AWARDS

We are very proud of our innovative products winning the most famous awards in our field!

2017 IBC Best of Show Award for DS6000

2018 IBC Best of Show Award for DS2000

SOCIAL COMMITTMENT

At RFE Broadcast we always give our support to projects and foundations that we consider remarkable and useful: our real engagement for a better world.



www.rfebroadcast.com

