



Broadcast Electronics



IXplus

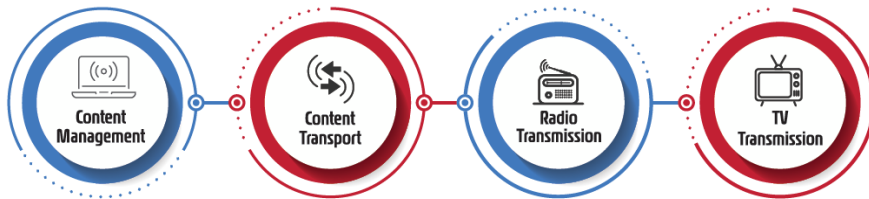
HD Radio®

**Enterprise Class Software Defined
HD Radio Importer & Exporter**

Overview

Broadcast Electronics has an over 65-year legacy of providing innovative technology to enable radio and TV broadcasters to deliver compelling content to their audiences and create revenue-generating business opportunities. Supporting global innovation and next generation content delivery, Broadcast Electronics embodies a customer-first approach to the market from the company's headquarters in Quincy, Illinois in the United States.

Customer focused solutions from Broadcast Electronics are built on four technological areas:

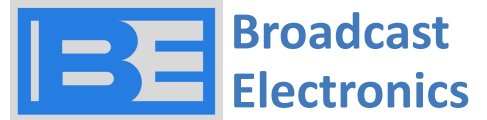


AudioVault is BE's award-winning suite of Content Management software enabling live and automated program creation and playout, news solutions and digital logging as well as data management.

The Marti range enables content Transportation, powering audio contribution and distribution for point-to-point (STL) wireless connectivity.

Radio Transmission is the heart of Broadcast Electronics with multiple product lines to support AM and FM transmission. The BE STX line of HD Radio® ready FM transmitters provides superior sonic quality and low operating cost. BE ETX analog FM transmitters deliver compact, energy efficiency in a cost-effective package. The BE AM line of transmitters provides for rugged, reliable, energy efficient peace of mind for your AM radio station.

Broadcast Electronics' complete line of **low and high-power TV transmitters** are designed around a software defined core exciter that can cover all the global analog and digital TV standards. With solutions covering UHF and VHF frequency bands and air-cooling configurations, BE can craft the right solution to meet your technical, budgetary and operating requirements.



Broadcast Electronics is a global technology company dedicated to driving innovation in broadcast technology providing market leading solutions for software-based content management, Radio & Television transmission, and scientific applications of radio frequency devices.

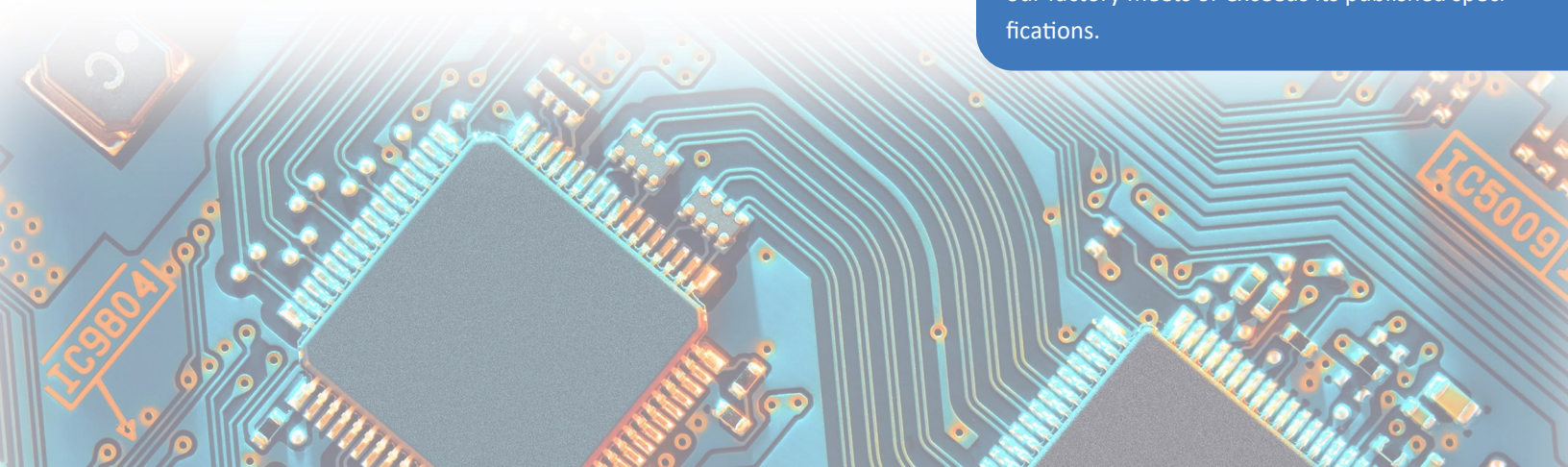
Broadcast Electronics, has been providing high-tech solutions for broadcasters for more than 65 years in over 170 countries. All of our products and services come from a heritage of creativity and innovation unmatched in the industry, focused on developing innovative solutions for customers problems.



Every major innovation that shaped modern radio originated in Quincy, and it is here that BE products are designed, supported and manufactured today.

Our facility in Quincy TV employs the latest instruments for research, new product design, prototype fabrication and testing.

We take advantage of the best practices of automated production, adding human attention to detail to ensure every product that leaves our factory meets or exceeds its published specifications.



IXplus

Software Defined HD Radio® Importer & Exporter

Broadcast Electronics' HD Radio® product line has been the choice for a majority of the digital radio stations in the U.S. and a large number of broadcast facilities overseas. Operating efficiency, easy configuration and on-the-fly operability are just a few of the reasons why.

IXplus is a powerful software-based solution that provides the most cost-effective and simplest pathway to HD Radio. We have combined Exporter and Importer functions into a single software platform that allows the user to configure to best match their station architecture, programing, and technical requirements.

The BE *IXplus* connects, manages, and multiplexes all HD Radio Advanced Applications Services in a simple-to-use consolidated interface, including HD2, HD3... supplemental audio channels into the HD Radio data payload that is combined with the HD1 main program services and sent to the Exgen interface in the HD Radio enables FM exciter.

BE opens the door for broadcasters to embrace new revenue streams with additional data services and multiple audio programs. As HD Radio multicasting and datacasting business models have expanded recently, the *IXplus* makes it fast and simple to add HD2, HD3 and HD4 broadcasts. Coupled with BE's *TREplus* cloud-based metadata management tools, broadcasters can stream line HD Radio PAD (program-associated data), album art, station logos news, traffic, weather and other text and visual content to engage listeners and create new revenue streams.

In an increasingly connected world, remote access and operation have become essential. *IXplus* provides monitor and control of the HD Radio solution from anywhere around the globe, using a standard web browser. *IXplus* provides flexible control of the HD Radio modes and bandwidth configurations.

IXplus has seamless integration with multiple software-based audio processing options to simplify and streamline your HD Radio operations and eliminate costly hardware boxes. In fact you can pair our world-class AudioVAULT 11 media management and automation platform to quickly launch new channels and popup formats using our pay-as-you-go plan allowing you to match operating costs with new revenue.

BE puts the power of HD Radio at your fingertips

- Enterprise Class Solution backed by 35 years of AudioVAULT rock solid reliability
- Fourth Generation Importer and Exporter in one box
- Three user-configurable options
 - Full Importer and Exporter
 - Exporter Only
 - Importer Only
- HD Radio multicasting support
- Configurable MPS, SPS, and data bit-stream
- Exgene Gen 3 and Gen 4 compatible
- Manages PSD and station logo display
- Supports Artist Experience®
- Lynx AES16e audio card
- Optional Software based Audio Processing
- High accuracy GPS time reference with external connector
- Web Browser for local user and remote access
- 2RU industrial computer
- Rear & front panel USB ports
- Windows 11 LTSC 2024 operating system for devices that need long-term support
- Multi-core processor
- Reliable solid state drive (SSD)

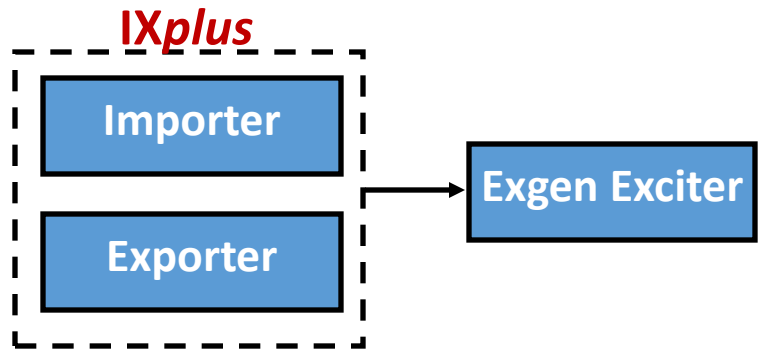


IXplus Operational Architecture

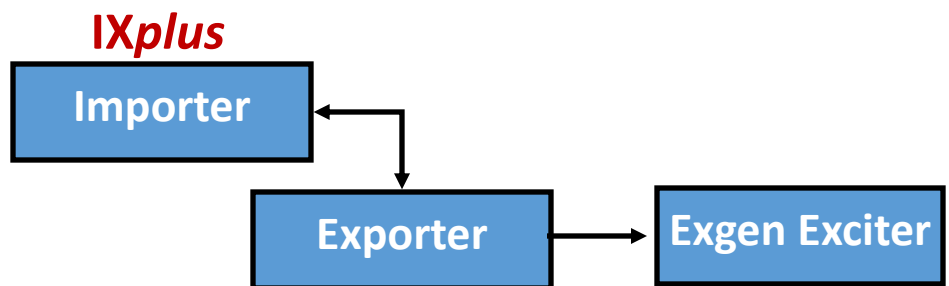
Flexibility to configure HD Radio to meet your needs today and tomorrow

IXplus is scalable ranging from a simple all-in-one software solutions to a distributed component approach. BE puts the choice in your hands allowing you to configure and tailor your HD Radio implementation to meet your station's specific programming, operations and technical needs—you have the flexibility to distribute HD Radio system components out across multiple enterprise class servers or combine everything with one dedicated computer.

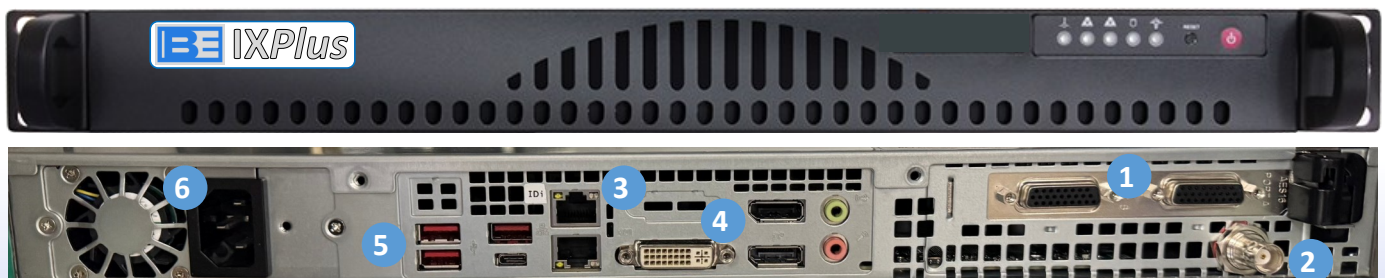
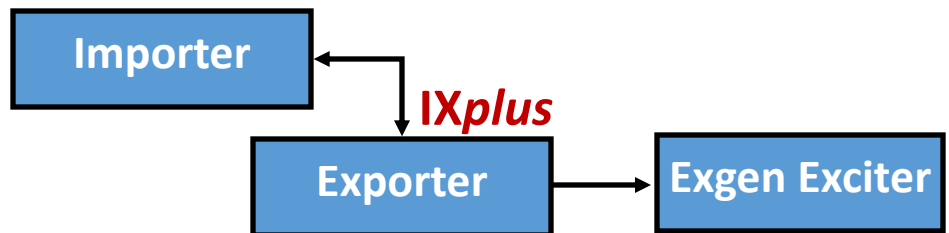
Importer & Exporter: IXplus allows for a simple and consolidated operation of HD Radio with all the functionality of the Importer for HD2,HD 3 HD4... and data services to be in the same platform as the Exporter functionality for HD1 Main Program Audio and associated PAD data.



Importer Only: IXplus can be set up for HD Radio with all the functionality of only the Importer for HD2,HD 3 HD4... and data services. This application allows for the replacement of an older dedicated Importer, or if your station architecture calls for the multicast channel to originate separately from the Main channel IXplus has you covered.



Exporter Only: IXplus also supports HD Radio with all the functionality of only the Exporter for HD1 Main Program Audio and associated PAD data. This application allows for the replacement dedicated Exporter or if you simply want to locate the Importer and Exporter separately from each other, you can do it with the BE IXplus.

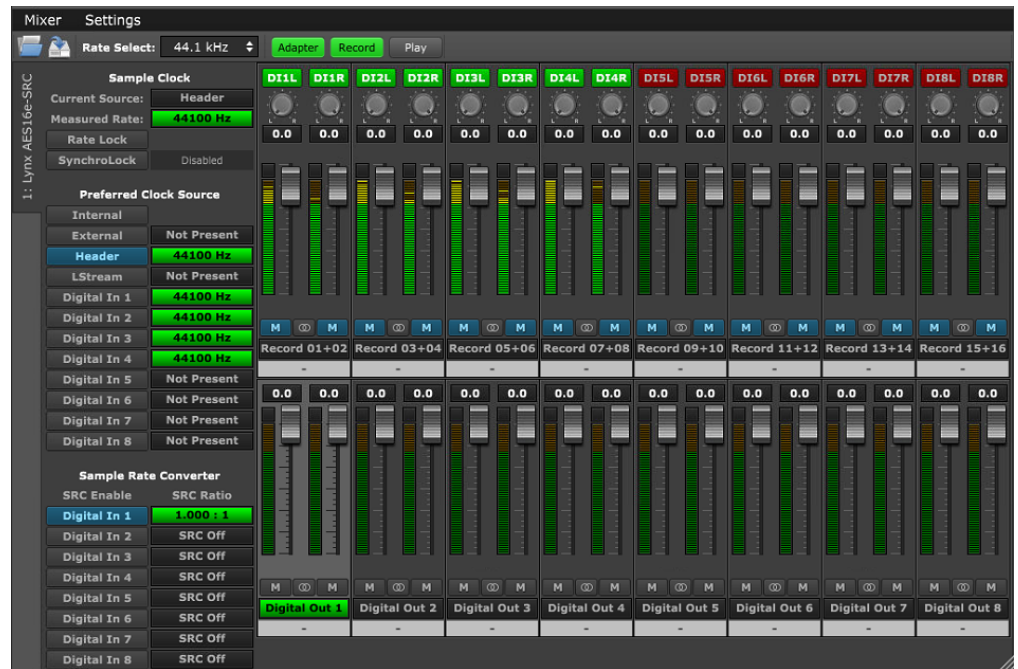


1. Audio I/O—Connects to XLR Break out cable
2. GPS Antenna
3. Dual GB Ethernet
4. Local Video Monitor connections
5. Multiple USB connections
6. AC Main Power Input

Powerful and Intuitive User Interface

Radio is a 24/7 365 business, and you need to balance multiple systems, stations and sites all requiring simple remote access to your tools. *IXplus* helps you balance the demands enabling you to update and control your station on the go from any browser anywhere you have connectivity. In today's fast paced and distributed radio environment, robust remote access, capabilities and control is not just an option for some, but a requirement for all—*IXplus* delivers.

The powerful software enabled *IXplus* gives you full control to spin up an HD 2 channel on the fly, support revenue generating data services like real time traffic or enable display of real time visual images to engage your audience, empower your advertisers and increase your revenue.



The Radio Experience

TREplus

The delivery of radio and audio content continues to evolve across multiple different technologies which enable a rich user experience combining visual content – text, images, contextual data – along with audio.

The Radio Experience – TREplus from Broadcast Electronics is the original and most powerful comprehensive software platform that empowers radio operators to increase engagement with their listeners by managing the delivery of visual content to accompany the audio they are delivering.

TREplus manages data across all the multiple audio delivery methods – Analog FM – RDS, HD Radio®, DAB, streaming, mobile apps, station website.....wherever your audio goes.

TREplus allows you to provide an increased connection with your community, adding up-to-date song titles and artists for the music you play, station promotions, news headlines, weather, and local events, and even enables advanced advertising options to deliver new incremental revenue.

Why Visual Content Matters

High-resolution screens are finding their way into every part of our day-to-day lives, and the car dashboard is no exception. With new features ranging from government-mandated backup cameras for safety to touchscreen control of the climate in your car, automakers include larger and more capable displays with full-color capability into cars at a record level. The car radio is evolving into a highly capable infotainment system with dynamic content display capability. Over 80% of cars on the road today can display visual content using proven RDS technology on analog FM radio and over 25% of vehicles can display enhanced full-color graphics and text using HD Radio or hybrid radio technology.

Westwood One recently outlined the impact of having visual content in addition to the primary audio programing based on the results of studies they had undertaken with MARU/Vision Critical, along with another study done by Nielsen clearly shows visual content gains the attention of radio listeners at an impressive level.

- Nearly 70% of regular radio listeners pay attention to content on the display screen
- Two-thirds of regular radio users recall seeing visual content displayed on the car dashboard and recall the retailer's radio ads



80%

of cars can display visual content

- Nearly 85% of listeners who recalled the radio ad with visual content indicated they planned to or had visited retailers' locations – 12% more than those who didn't see visual content.
- Over half of the ad agencies surveyed were familiar with visual display technology in cars – nearly 75% were interested in using visual content along with radio ads and willing to pay a nearly 15% premium to include visual content.

Using the combination of sound and visual content is a powerful tool for radio operators to build a deep connection with their listeners, community, and advertisers. The Radio Experience – TREplus simplifies the delivery of compelling visual content and provides a platform for broadcasters to increase the bond with their listeners and community and enable new revenue streams.



Managing Metadata

The Radio Experience – TREplus provides a simple and seamless interface between the sources of metadata to accompany your content, and the multiple platforms that you reach your listeners on. Our hosted software platform links to all the major audio playout systems, programs service providers, open-source music, news, and weather feeds, as well as your station branding, advertising, and messaging. All of the sources are scheduled, monitored, and managed to provide a clean and visually appealing feed to consumers via radio HD Radio, streaming, web pages, and mobile apps – wherever your listeners consume your content.



Service and Support

We know that having the right support behind a product is every bit as important as the features and capabilities it delivers. At Broadcast Electronics we are committed to providing you with not only great products and software but a dedicated team of service experts to help you keep your station running smoothly for years to come.

Training

Broadcast Electronics has long provided training programs for our products to educate and prepare users to operate and maintain them in the most effective possible manner. Training is offered for all styles of transmitters and Audio Vault systems, featuring a mix of instruction with hands-on operation and troubleshooting. Training programs can be crafted to meet your local needs, offered in our facility, at your location or online. Many of our programs can provide SBE ongoing educational credits.

Warranty

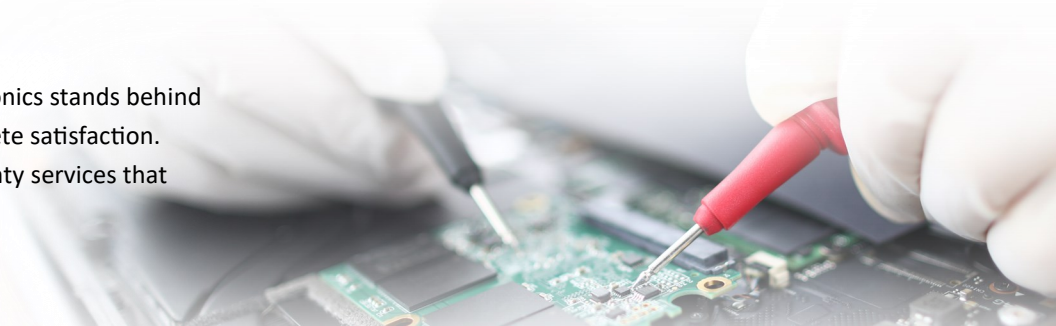
You can rest assured that Broadcast Electronics stands behind its products and services to provide complete satisfaction. Our products offer a standard set of warranty services that exceed others in the industry.

Repair Service

As a leader in providing innovative products and solutions to broadcasters around the globe, Broadcast Electronics understands the need for long life and years of trouble-free service. You can feel secure that if disaster strikes and your products need service, we offer complete repair and refurbishment service to get you back on the air delivering your high-quality programming quickly.

On-Site Service and Installation

Whether you need assistance troubleshooting an existing transmitter or Audio Vault system, or require a complete installation of a new one, the global service team at Broadcast Electronics is here to help you get everything up and running quickly. We also offer support for commissioning, on-site set-up and testing, or simply providing an extra pair of hands. Whatever your needs, we can assist you.





Broadcast Electronics

Telephone (217) 224-9600
4100 North 24th Street
Quincy, Illinois 62305-3606 U.S.A.
www.bdcast.com