Broadcast Solutions

Reference Projects

BROADCAST

KATHREIN

Title: Pyramidenkogel, Austria

Contents

We Deliver Reliable Technology for Broadcasting

The first regular radio broadcasting was almost one hundred years ago. Since then the technology has changed in every respect, as have the listening and viewing habits of users. One thing however remains the same: the need for information and entertainment. Regardless of the Internet, TV and radio remain important pillars in the media arena. With the move from analogue to digital broadcasting, these traditional media have taken a great step forward.

Kathrein has over 60 years of experience in the area of broadcast antenna systems and its antennas also serve digital technologies of the future such as DAB, DAB+, DVB-T2, ISDB-T, ATSC and DTMB. We offer customer-specific solutions for even the most difficult challenges, for example concerning special radiation characteristics or protection against extreme icing. Kathrein is regarded as a competent and reliable partner by broadcasting service providers around the world due to this special expertise.

Our portfolio also includes ground-to-air solutions for aircraft communication and navigation.

eMBMS

DVB-T

ISDB-T

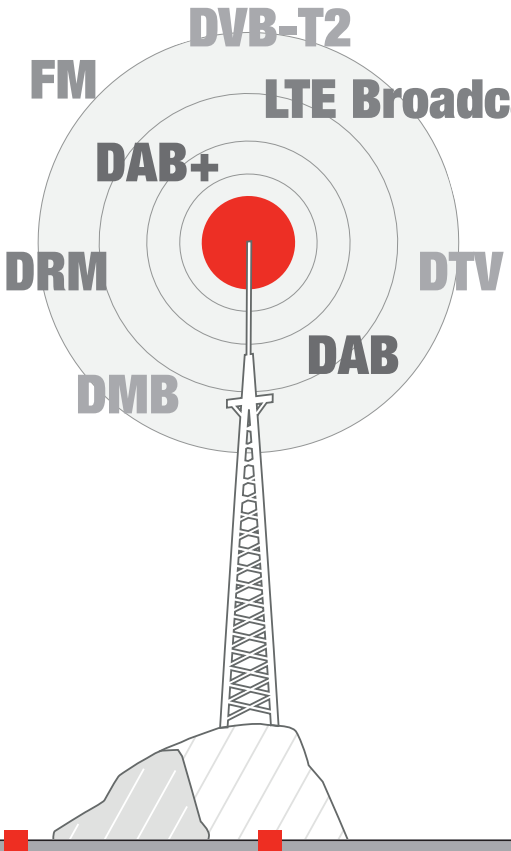
ATSC

Our Solutions and Services

With our Product Portfolio we cover the entire Radio and TV Broadcast Frequency Spectrum from 47 to 1542 MHz and all international standards as well as ground-to-air solutions.

Our project management services

- Analysis, Coverage Prediction
- Planning and Conception
- Fabrication
- Quality and Factory Tests



Our technology solutions

- Radio and TV Antenna Systems
- Antenna Aerials
- Power Splitters
- Branch Cables
- Fixing Steelwork
- GRP Cylinders
- Steel Carriers
- Main Feeders
- Pressurisation & Dehydrators
- Combiners & Filters
- Coaxial Components
- Switching Units
- Monitoring & Test Equipment

Logistic and Shipment

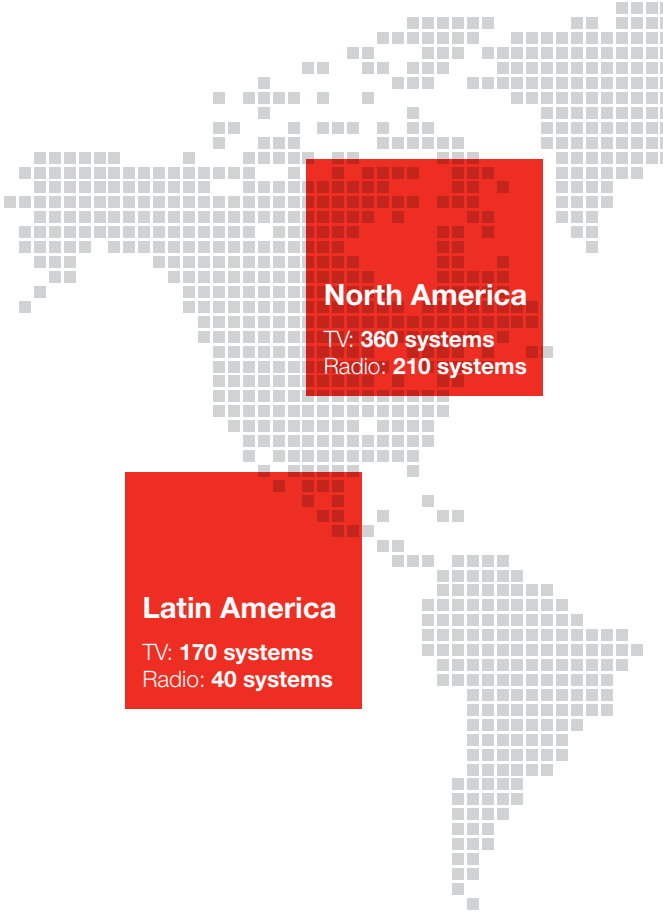
Installation

Site Tests and Commissioning

Case Studies

Over 7,200 systems installed since 1976*

Find all references listed by categories at our website: www.kathrein-bca.com



*beginning of records


Europe
TV: 2700 systems
Radio: 1850 systems
Middle East
TV: 200 systems
Radio: 120 systems
Asia-Pacific
TV: 800 systems
Radio: 190 systems
Africa
TV: 430 systems
Radio: 130 systems

Keutschach am See, Austria

Pyramidenkogel

The “Pyramidenkogel” viewpoint is located high above the Wörthersee. The viewing tower is an architectural masterpiece of wood and steel, and of course it is a great tourist attraction. In addition the tower carries a transmission mast from which several private radio channels are transmitted, using a Kathrein broadband FM antenna system.

Ashgabat, Turkmenistan

Turkmenistan Broadcast Tower

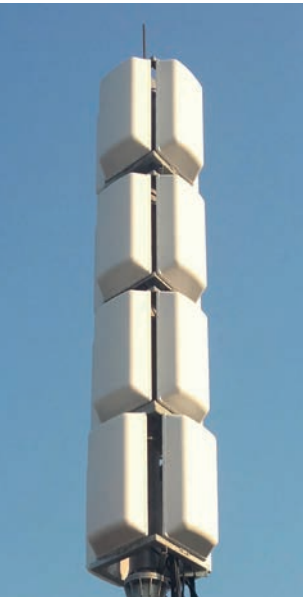
997 m high, located south-west of Ashgabat, built 2011. Architecturally it is a very attractive broadcast centre, with viewing tower and rotating restaurant. The star-shaped facade incorporates a photovoltaic system which generates impressive illumination of the tower at night. The mast on the tower carries multiple radio and TV transmission antennas incorporating the latest technology. An oscillation damper specially developed for the purpose prevents disturbance due to dynamic oscillations arising from air turbulence at the top of the tower. The monumental building also incorporates 13 TV studios within it. It is the largest broadcast centre in Central Asia.


park inn

Berlin Alexanderplatz, Germany

Berlin Broadcast Tower

At 368 m, the Berlin Broadcast Tower is the tallest building in Germany, located right in the centre of the German capital and metropolitan Berlin. The transmission mast extends to a height of approx. 120 m and carries a number of transmission antennas for analogue and digital radio and TV. The tower is in the centre of the city and is a tourist attraction. The transmission antennas had to be specially designed to protect passers-by at ground level against snow and ice falling from the antennas. For this reason the antennas are mounted within a protective fibre-reinforced plastic cylinder. The external FM antenna is an integral part of the tower, and thus can be heated.



Bangkok, Thailand

Baiyoke II Tower

At 328 m, the Baiyoke II Tower in Bangkok is the tallest building in Thailand. In a pilot trial, a slant polarised Kathrein UHF antenna unit was used for the first time in Thailand. This new technology permits digital TV signals to be transmitted, and also delivers significantly better results for mobile reception. The system comprises 16 antenna aerials in exposed positions at the top of the building; they have delivered the desired results and even exceeded expectations.

St. Gallen, Switzerland

Säntis

At a height of 2501 m in the rocky Swiss Alps lies the Säntis, which attracts visitors all the year round. The Säntis is famous not only for its cable cars and the visitors' terrace for tourists. A 124 m high transmission tower with radio and TV transmission antennas is also located there. To protect tourists in winter against ice falling from the antennas, the transmission antennas are enclosed within fibre-reinforced plastic cylinders specially developed for the purpose. These can be heated in winter. The antennas had to undergo special comprehensive simulation, and were electrically optimised for this unique solution.

Tashkent, Uzbekistan

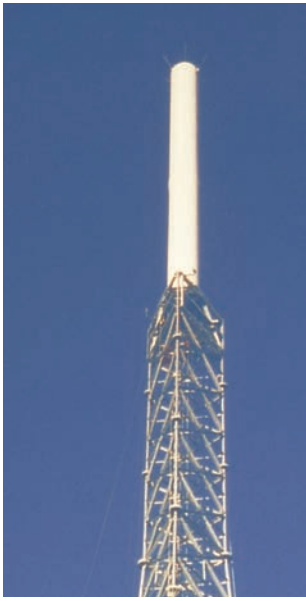
Tashkent Broadcast Tower

The emblem of Tashkent is 375 m tall – the most impressive and also the tallest TV tower in Central Asia. A Kathrein DVB-T pilot transmission unit was commissioned for the first time in 2008, at a height of 220 m above the transmission station and technical installation. That marked the start of the digital TV age in Uzbekistan. Since that time, Kathrein has delivered transmission antennas for supplying DVB-T signals through the country.

Salt Lake City, USA

Farnsworth Peak

In the middle of a ski region lies the area of the 2750 m high “Farnsworth Peak”, on which are mounted radio and TV masts. The weather conditions on the mountain can be extreme, with gusts of wind up to 400 km/h. Kathrein developed and dimensioned a UHF transmission system within a special robust fibre-reinforced plastic cylinder, which has reliably withstood these dynamic loadings. The system was handed over in time for the 2002 Winter Olympic Games in Salt Lake City, since then it has supplied the region with 8 digital TV channels.



Dubai, United Arab Emirates

Almas Tower

The 74-floor “Almas Tower” rises 363 m above the rooftops of Dubai. It includes a famous exhibition centre for diamonds and a broadband FM transmission antenna for supplying the residents with radio signals. The high-power transmitters and also the Kathrein transmitting combiner for simultaneous transmission of several radio channels are located within the building.

Bayrischzell, Germany

Wendelstein

Since 1954 there has been a radio and TV transmitter at the peak of the 1838 m high Wendelstein in the Alps, broadcasting to the Bavarian alpine upland. The 55 m tall transmission mast, which is next to the astronomical and solar observatory of the University of Munich, carries FM, DAB+ and DVB-T/T2 transmission antennas, some elements of which, because of the remote nature of the terrain, were installed by heavy-lift helicopters. In winter the antennas are exposed to significant snow and ice loadings and extreme winds; they therefore have been optimised mechanically and electrically for these extreme conditions.

Brasilia, Brazil

Digital TV Tower

The TV Tower in Brazil‘s capital city Brasilia is certainly amongst the architectural masterpieces by the world-famous architect Oscar Niemeyer. A Kathrein UHF transmission antenna was commissioned at its top in time for the 2014 Football World Cup. Since then it has continued to transmit very high quality digital TV signals.

München, Germany

International Airport

Munich Airport has been equipped almost completely with VHF and UHF ground-to-air antenna systems for radio communication and navigation. These include glide path antennas for the ILS Instrument Landing System. Kathrein offers high-quality products with a long working life, and is a reliable partner for all international air traffic control authorities.

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