TELEPORT USINGEN
DATA, VOICE, VIDEO AND AUDIO TRANSMISSION TO THE WHOLE WORLD
INTRODUCTION

Through our teleport in Usingen, Germany MEDIA BROADCAST SATELLITE provides secure and reliable voice, data, internet, video and audio connectivity around the globe, operating over 100 antennas. With the Usingen Teleport manned around the clock MEDIA BROADCAST SATELLITE ensures continuous technical support and personal contact for all customers.

With the in-depth technical knowledge of our experts and over 30 years’ experience in the field of satellite communication, MEDIA BROADCAST SATELLITE offers Teleport, VSAT and Broadcast Satellite Services, utilising optimum network design responding to our customers’ requirements.

MEDIA BROADCAST SATELLITE realises numerous SCPC connections as well as entire network services via VSAT platforms including [iDirect™, SkyWan™]. The extensive satellite capacities are based on Eutelsat, Intelsat, SES [including NSS], Telesat and Arabsat orbital positions. Our NGN fibre network provides MPLS connections to the major local loop carriers within Germany and across Europe.
A large variety of services are implemented at Usingen Teleport, each being provided by dedicated technical experts and service staff:

- Global turn-key corporate satellite services (several system platforms)
- Hybrid solutions (terrestrial and satellite access)
- Uplink, downlink, turn-around services
- Broadband Internet access
- Provision of VNO services on state-of-the-art satellite technology platforms
- DVB-S/S2 platform services for DTH
- Operation of large IPTV headend for more than 250 TV programmes
- Provision of TT&C services with customer-furnished equipment
- Housing services of various kinds

The Usingen Teleport is manned 24h/365d for continuous technical support and customer care.

- Operational for satellite services since 1977 with orbital arc visibility from 76° E to 60° W
- Central network management for all MEDIA BROADCAST’s broadcasting, satellite and terrestrial (NGN) networks, with an experienced technical staff of around 100 employees on-site
- Facility size: 1,400,000 m² with sufficient space for additional antenna deployments
- More than 60 Tx/Rx antennas of 4.2-19 m (Ku-, K- and C-Band)
- All antenna systems are fully redundant and equipped with de-icing systems
- Sustained premium annual availability of > 99.99%
- Redundant 20 kV power lines
- UPS of 4.6 MW (battery and diesel)
- Technical facilities are equipped with air conditioning and fire alarm systems
- Access control systems: video surveillance, completely fenced and secure
- Trailer-mounted transportable Ku-/K-Band antennas available on-site
- Easy to reach: located only 45 km from Frankfurt/Main airport
SERVICES

USINGEN TELEPORT OFFERS A COMPREHENSIVE PORTFOLIO OF SERVICES:

- Platform services operated by MEDIA BROADCAST
- Equipment colocation and housing space for technical equipment and customer personnel (optional)
- Sufficient space for the deployment of additional antennas (optional)
- Licenses to operate C-Band, Ku-Band and Ka-Band antennas (X-Band customer-dependent)
- Broadband terrestrial connectivity to national and international PoPs
- Secure facility with high security access control systems
- State-of-the-art technology
- Qualified technicians on-site 24/7 for NOC services and 1st-2nd level technical support on-demand or with dedicated permanent resources from MEDIA BROADCAST

SATELLITE LINK SERVICES

- Uplink and downlink services for international connectivity (L-Band/IF-interface, modem provision optionally included)
- Optional provision of satellite capacity
- Turn-around satellite services
- Optional Carrier-in-Carrier solutions

PLATFORM SERVICES

iDirect hub services:
- Fully managed with network observer function for the customer
- Different VNO-type services (equipment provision or equipment housing)
- 1st level support
- Optional 2nd level support and network management
- International voice termination service
- Internet trunking service
- Equipment colocation and complete housing facilities for client networks, also ideally suited to serve VoIP carrier services

[Diagram showing various satellite connections and services]
Full support provided to customers who want to use their own technical systems with an in-depth planning of the required infrastructure and provision of project management throughout the implementation phase until commencing the operational phase.

**Service elements include:**
- Deployment and integration of all kinds of technical systems
- Performing functionality tests during the implementation phase up to reaching full service operation
- 24h online-support and monitoring & control of equipment and operational service
- Optional dedicated technical support (if required)

**Customer examples:**
- Installation and operation of an IPTV headend for internet streaming of more than 250 TV programmes
- Satellite Services for the European Weather Forecast Service (Telemetry, Tracking and Control operation of a Primary Ground Station)

Operation of a satellite gateway system consisting of 5 large MEO antennas for US customer.

**Operating the Ground Station for the European Weather Forecast Service**

- **Support Ground Stations (SGSs)**
- **Satellite Application Facilities (SAFs)**
- **BRGS**
- **Control & Processing Centre**
  - Darmstadt, Germany

**Operation of a satellite gateway system consisting of 5 large MEO antennas for US customer.**
BROADCAST PLATFORM SERVICES

- DTH premium services to Europe via ASTRA @ 19.2° E and EUTELSAT HOT BIRD @ 13° E.
- Provision of multiplexes on the "Dualfeed" positions ASTRA @ 23.5° E (ASTRA 3B, PE2 Beam) and EUTELSAT 9A @ 9° E.
- Signal contribution via satellite connections and international fibre networks
- Server based play-out service
- DVB-Encryption: CONAX and NAGRAVISION

Full service package for broadcasters to reach European clients:
Signal contribution / reception, MPEG Encoding, DVB Scrambling and Encryption, DVB Multiplexing, IP Encapsulation, norm conversion, EIT service, modulation and satellite uplink, space segment with guaranteed bandwidth, 24/7 helpdesk, equipment accommodation service

BROADCAST CONTRIBUTION SERVICES (NEWSSPOTTER+)

The satellite-supported, mobile IP transmission solution for portable news gathering in the UAE, North Africa and all over Europe.

Advantages:
- High-speed mobile IP transmission from the open field
- Receiving data via the MEDIA BROADCAST NGN/public Internet
- Independent connection establishment and bandwidth management by the user
- Small auto-pointing vehicle antennas
- Flyaway antennas that can fit into a suitcase
- Ad-hoc bandwidth per GB significantly cheaper than for the Ku-Band
- High-speed bidirectional throughput of up to 10 Mbit/s
- Bandwidth does not have to be shared with other users
- Flexible pay-per-use volume price model that can be booked through MEDIA BROADCAST’s Internet portal
INTERNATIONAL NETWORK/NGN

Within Germany, the MPLS network provides data connections with many German cities and the major local loop carriers. The cutting edge network technology offers many features like hitless switching, Level-2 VPN and variable bitrates for permanent service, oc use or direct dialing services.

What we offer:
- Germany-wide connections within 2x10G network with 19 central PoPs
- Network access between 2 Mbit/s and 10 Gbit/s
- Interfaces for SDH, Ethernet, SD-SDI, HD-SDI, DVB ASI
- Transparent or compressed video-transmission
- 24/7 network management
- PoP in New York, Los Angeles, London
- ISP services, storage management and equipment hosting
- MeXS: High security file transfer solution with a community of approx. 150 broadcasters and production companies in Germany

NETWORK MANAGEMENT

MEDIA BROADCAST operates its Network Operation Centre from its teleport in Usingen. The NOC provides the service portal for all broadcast, data, business TV and multimedia applications of MEDIA BROADCAST.

Network monitoring and current control of
- 2,500 transmitters
- 8,500 broadcast lines
- 1,530 VSAT dishes worldwide
- 3,500 business TV and digital signage locations
- 13 iDirect platforms (own and customer-owned), 7 DVB-S platforms, IPTV platform
- 1,000 occasional use transmissions per month

OUR ENGINEERING SUPPORT

- Our technical engineering department provides wide-ranging solutions for all sorts of customer service requirements
- We develop optimised system concepts and take care of the service provision with a dedicated project management team covering all steps from complete infrastructure deployment, construction, testing, acceptance, licensing, etc. up to final commissioning and commencing the operational state.
## SATELLITE COVERAGE BY MEDIA BROADCAST

<table>
<thead>
<tr>
<th>Frequency band</th>
<th>Satellite</th>
<th>Orbital position</th>
<th>Antenna size (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Intelsat 903</td>
<td>34.5° W</td>
<td>19.0</td>
</tr>
<tr>
<td>C</td>
<td>Intelsat 902</td>
<td>62° E</td>
<td>11.5</td>
</tr>
<tr>
<td>C</td>
<td>Intelsat 907</td>
<td>27.5° W</td>
<td>11.1</td>
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<tr>
<td>C</td>
<td>Intelsat 905</td>
<td>24.5° W</td>
<td>11.0</td>
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<tr>
<td>C</td>
<td>Arabsat BADR6</td>
<td>24° E</td>
<td>11.0</td>
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<tr>
<td>C</td>
<td>Arabsat 5C</td>
<td>20° E</td>
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<tr>
<td>C</td>
<td>Intelsat 906</td>
<td>64° E</td>
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<tr>
<td>C</td>
<td>Intelsat 1002</td>
<td>1° W</td>
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<tr>
<td>Ku</td>
<td>Eutelsat 3B</td>
<td>3° E</td>
<td>19</td>
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<tr>
<td>Ku</td>
<td>Eutelsat 10A</td>
<td>10° E</td>
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<td>Ku</td>
<td>Intelsat 20</td>
<td>68.5° E</td>
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<td>Ku</td>
<td>Eutelsat 36B</td>
<td>36° E</td>
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<tr>
<td>Ku</td>
<td>Hotbird 13B</td>
<td>13° E</td>
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<tr>
<td>Ku</td>
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<tr>
<td>Ku</td>
<td>SES Astra 3B</td>
<td>22.5° E</td>
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<td>Gazprom Yamal 402</td>
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<td>ext. Ku</td>
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<tr>
<td>K (17/18 GHz)</td>
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<td>23.5° E</td>
<td>5.6</td>
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</tbody>
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YOUR CONTACT FOR SATELLITE ENQUIRIES

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