



“Due to the overview that I have of the industry and the competitors in the Austrian and also in the German radio landscape, I can say that KRONEHIT has always been a broadcaster that drives innovation.”

Christoph Oberreiter, Media IT & Audio-consulting  
Connecting Media GmbH



### Challenge

Switching to Audio-over-IP  
| High Bandwidth | Device Synchronization | Redundancy | Compatibility with Existing Infrastructure



### Solution

NETGEAR M4350 | PTP Boundary Clock | Red/Blue Network Infrastructure | Collaboration with IT Service Provider



### Results

New DAB+ Senders | Future-proof | Latency-free network | 24/7 Operation | Efficient Workflow Flexibility



### Satisfaction

Seamless Implementation | Easy Administration | Requirements Met | Excellent Price/Performance Ratio | Reliability & Support | Recommended for Other SMBs

Company Name:  
KRONEHIT

Industry:  
Broadcasting

Company Website:  
www.kronehit.at

Geographic Region:  
Vienna, Austria

## Innovation in Rhythm.

### KRONEHIT AT A GLANCE

KRONEHIT is Austria’s largest private radio station, which was first broadcast in Vienna and Lower Austria in 2001. Since 2004, the station, which is part of the Mediaprint network, has been available nationwide. In addition to the main program, which is broadcast via FM, KRONEHIT offers over 30 different digital radio streams with a varied range of music genres as well as the online music TV channel, KRONEHIT TV. From current charts to special shows, everything is there.

### THE CHALLENGE

KRONEHIT has been one of the innovative leaders in the radio landscape for years. This is demonstrated not only by the interactive app, KRONEHIT smart, which offers the world’s first skipable Liverpool radio station, but also by the consistent modernization of its network infrastructure. The transition from traditional baseband technology to audio over IP marks an important milestone in their growth.

“This was the next logical step in technical development,” commented Martin Holovlasky, Technical Manager at KRONEHIT, on the decision to opt for audio over IP and the new infrastructure that it entails. “Today, it is simply necessary to remain flexible and be able to respond quickly to new requirements. That’s why we’re going all-in now – without parallel operation with classic audio lines.” The addition of four new DAB+ Channels to the audio network this year reinforced this need. This means that KRONEHIT stands not only for content diversity, but also for technical innovation and high reliability.



[www.netgear.com/av](http://www.netgear.com/av)

[www.kronehit.at](http://www.kronehit.at)



“Thanks to NETGEAR, we have been able to expand the program range by four additional DAB+ stations in record time and to rely entirely on audio over IP.”

Martin Holovlasky, Technical Manager KRONEHIT

### High bandwidth

By switching operations from traditional baseband technology to audio over IP, KRONEHIT faced the challenge of managing over 800 audio streams over the network. High bandwidth is required for the audio signal to be transmitted in real time and for smooth operation.

### Synchronization of devices in the network

In order to transport audio data in real time without jitter, accurate synchronization of all devices on the network is essential. This is the only way to ensure interference-free and stable transmissions and to send data packets to the target devices in a timely and error-free manner.

### Redundancy

To ensure 24/7 operation, full system redundancy is critical. A key challenge for KRONEHIT is to guarantee uninterrupted transmission even in the event of unexpected outages. This requires an infrastructure that automatically provides alternative transmission paths in the event of a failure.

### Compatibility with existing infrastructure

It was critical for KRONEHIT that the new NETGEAR AV solutions were seamlessly compatible with the existing fiber infrastructure and equipment. Especially the connection of the fiber SFP modules.

This is a challenge because different implementations between manufacturers can lead to compatibility issues.

*“Working with the NETGEAR support team was really great. We evaluated several modules and found a solution that works fine.”*

Martin Holovlasky, Technical Manager KRONEHIT



## THE SOLUTION

### Next-level network: Innovative, redundant, future-proof

One of the main challenges KRONEHIT experienced was the transition from classic baseband technology to audio over IP and NETGEAR AV offered the right solution: the M4350 series switches. These switches and the new network design, fit the specific requirements perfectly.

For the conversion to audio over IP, KRONEHIT not only was able to successfully convert to the new format, but also was able to integrate four new DAB+ Channels in record time.

Meinberg delivered precise time servers that set the pace and laid the foundation for the entire network that formed the SMPTE ST 2110 compliant synchronization of all devices. Lawo brought its expertise and delivered the audio solutions that were seamlessly integrated into the NETGEAR AV infrastructure. This collaboration enabled the creation of a fully redundant, accurate, and future-proof network infrastructure.

In addition to NETGEAR, IT solution provider Connecting Media was an important partner in implementing the solution. As a specialist in radio and broadcast, they were responsible for the technical planning and integration of the new network infrastructure.

An important aspect for KRONEHIT was the compatibility with the existing infrastructure, in particular the integration of the new fiber SFP modules into the existing fiber links.

At the heart of the new solution were NETGEAR AV M4350 series PTP Boundary Clock-enabled switches, which ensure precise synchronization of all devices in the network. The SMPTE ST 2110 compliant decentralization relieved some of the pressure on the central clock generators. Due to this capability of the NETGEAR M4350 switches, KRONEHIT has a trouble-free and stable transmission in real time.

In order to maximize redundancy and thus resiliency, KRONEHIT implemented a Red/Blue network infrastructure in a spine leaf architecture. This allows two parallel networks to operate synchronously in real time. If one network fails, the other automatically and seamlessly takes over, ensuring uninterrupted transmission.

"Our key requirements have all been met with the new NETGEAR AV networking solution. Ultimately, the price-performance ratio led to the purchase decision."

Martin Holovlasky, Technical Manager KRONEHIT

## THE RESULTS

Thanks to the collaboration with NETGEAR AV, KRONEHIT has succeeded in building a future-proof and latency-free network infrastructure that is completely based on audio over IP. "The changeover was without failures," confirms a satisfied Martin Holovlasky.

And months after implementation, the radio station continues to operate 24/7, thanks to the high reliability and flawless operation. "Until now, no troubleshooting was necessary."

In addition to the reliable high-speed network, the KRONEHIT managers were also impressed by the easy administration of the system. With NETGEAR Engage™ software, updates and configurations can be performed quickly and easily via an AV-oriented user interface, without requiring staff to complete extensive training.

The redundant power supplies and the use of the PTP boundary clock ensure high reliability and precise synchronization. This ensures uninterrupted and high-quality audio transmission. In addition, the compatibility of the fiber SFP modules allows seamless integration into the existing fiber infrastructure, which has saved KRONEHIT time and costs.

## To the Point

NETGEAR helped KRONEHIT build a reliable, latency-free network infrastructure and transition to it smoothly.

The solution is easy to manage and integrates seamlessly with existing systems. Improved signal quality and optimized workflows provide a significant economic advantage.

The new setup resulted in a significant improvement in jitter values using the PTP boundary clock switches. Thanks to NETGEAR AV technology, KRONEHIT has also been able to launch the new DAB+ senders quickly, fully using audio over IP instead of using a parallel infrastructure.

An economic advantage was also evident: "(Traditional) copper cables are cheaper than switches, but the cost-effectiveness is achieved through more flexible workflows," says Martin Holovlasky.

The new networking solution makes production processes leaner and increases resiliency through automatic redundancy. This improves both the transmission quality and the efficiency and future-proofing of the workflows.



## SATISFACTION

*"We are completely satisfied with the products as well as with the customer support from NETGEAR. The entire planning and procurement phase was a straight-forward story where we made a request and received test equipment. Shortly afterwards, a joint sketch of the setup followed, a quote, ordering and implementation."*

Martin Holovlasky, Technical Manager KRONEHIT

*"Although we are only a small customer, the collaboration is professional, reliable, friendly and appreciative."*

Martin Holovlasky, Technical Manager KRONEHIT

*"An email or call was enough to get help. Customers' needs have shifted. A personal contact is now of great importance. We are really lucky with NETGEAR."*

Christoph Oberreiter, Media IT & Audio-consulting GmbH, Connecting Media