



# Enhancing Operational Efficiency and Network Reliability for Construction Site

## Overview

The Birchmeier Group, a prominent construction company in Switzerland, faced the challenge of ensuring reliable internet access across their dynamic construction sites. Traditional internet options like copper or glass fiber were often unavailable or impractical, so a strong alternative was needed. The Zyxel Networks' Nebula FWA710 5G NR Outdoor Router emerged as the ideal solution, offering fast and reliable internet connectivity for efficiently sharing construction plans and 3D models.

## Challenges

Construction sites frequently lack traditional internet infrastructure, yet demand high-speed, reliable connectivity for real-time collaboration among clients, planners, architects, and construction management. The challenge was to implement a solution that could deliver consistent internet access despite harsh environmental conditions and site mobility.

## Solutions

Partnering with Coresystems Technics AG, Birchmeier Group deployed 50 Nebula FWA710 5G routers equipped with Nebula Pro Pack licenses. These routers feature industrial-grade components and an outdoor design, allowing them to be used in harsh environments where the desired signal strength is difficult to achieve or where difficult weather conditions prevail. The IP68-certified device can withstand strong winds and rain showers. Four long-range 9dBi directional antennas are integrated into the Nebula FWA710, ensuring a better-focused transmission beam to achieve higher signal strength and quality from network operators' base stations. With 4x4 MIMO high-gain antennas, the Nebula FWA710 excels at receiving 5G signals, even in remote or near non-line-of-sight scenarios.

### Customer

Birchmeier Group

### Industry

Construction

### Location

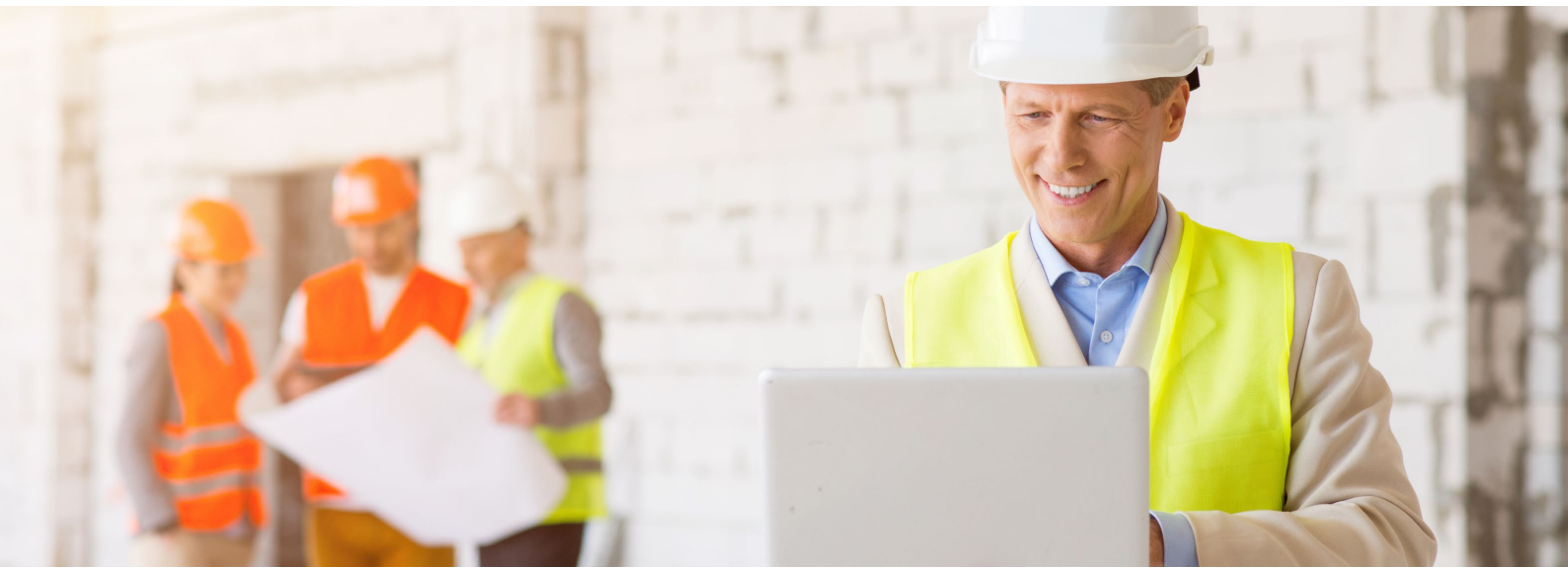
Switzerland

### Partner

Coresystems Technics AG

## Customer Background

Birchmeier Group is a prominent construction company based in Switzerland, renowned for its extensive workforce of over 600 employees. Specializing in diverse construction projects, Birchmeier Group is recognized for delivering high-quality solutions and services across the industry.



Finding the best location for installation is easy with the Nebula FWA710 router. Just connect your smartphone or tablet to its WiFi and follow the setup instructions in the free “Zyxel Air” app. The 5G router provides flexible mounting options for both walls and masts. Plus, with its integrated PoE (Power-over-Ethernet) support, powering the device is hassle-free.

Supported by the Nebula cloud networking management platform, Nebula FWA710 offers an easy-to-use “zero-touch” setup process. Users can add devices to Nebula using their serial number and MAC address, or even more conveniently with the Nebula app. Just scan the QR code on the packaging or the device with the app, and assign it to a location. Once added, the router can be effortlessly managed and monitored through the web interface or app. If a router loses its mobile network connection, the user will receive a push notification immediately.

The devices are attached to the container with magnets. If the container is needed at a new construction site and is lifted onto a truck with a crane for transport, the router can simply be removed. Upon arrival at the new location, the 5G router can be easily reinstalled.

## Product List



- Nebula FWA710 Outdoor 5G Router

## Results

Nebula FWA710 5G routers deliver high-performance connectivity at Birchmeier Group’s construction sites. Staff now benefit from seamless, high-bandwidth internet access essential for data-intensive tasks such as sharing large files and accessing cloud solutions. The routers’ flexibility, including easy attachment with magnets to site containers and straightforward relocation, enhances operational efficiency during site moves.

- Effortless setup and management through the Nebula cloud platform
- Reliable and durable design withstands severe weather conditions and maintains consistent performance
- Easy mobility and reinstallation via the magnetic attachment, enhancing operational flexibility

