

Installation of communication towers in Eastern Europe



Overview

How neutral host TowerCos strengthen Europe's wireless connectivity Towers are part of passive infrastructure, and access to them is traded on the wholesal.

Key Takeaways

Communication tower deployment in Eastern Europe relies on a mix of macro towers, rooftop sites, and small cells, supported by TowerCos to enhance 4G/5G coverage efficiently.

Tower Infrastructure Types

Eastern European countries utilize a variety of tower structures to meet coverage and capacity needs: Macro Towers: Lattice or monopole towers provide long-range coverage, suitable for rural and suburban areas. They support multiple antennas and heavy loads for 4G and 5G networks. Rooftop Sites: Antennas installed on buildings, including residential, office, or special constructions, are common in urban areas where space is limited.

Small Cells: Compact antennas mounted on street furniture, traffic lights, or bus stops to improve network density and reduce latency in high-traffic urban zones.

Deployment Process



The installation of towers in Eastern Europe typically follows these steps: **Site Acquisition:** Identifying optimal locations based on population density, coverage requirements, and zoning regulations. **Design and Approval:** Tower designs are submitted for local engineering validation to ensure compliance with EU and national standards. **Manufacturing and Logistics:** Towers are often shipped in sections and assembled on-site, ensuring structural integrity and safety.

Installation and Commissioning: Structural and electrical testing is conducted to verify performance and regulatory compliance. **Maintenance and Monitoring:** Smart towers integrate sensors for remote monitoring, energy efficiency, and predictive maintenance. **Role of Tower Companies (TowerCos):** Neutral host TowerCos play a critical role in Eastern Europe by: **Outsourcing Infrastructure:** Mobile Network Operators (MNOs) lease tower space, reducing CAPEX and accelerating network rollout.

Co-location: Multiple operators share the same tower, improving efficiency and reducing environmental impact. **Investment:** TowerCos invest billions annually in infrastructure, supporting the EU Digital Decade goal of ubiquitous connectivity.

Economic and Regulatory Considerations

Private Investment: TowerCos typically invest over €2.5 billion annually in Europe, with Eastern Europe included in the broader EU and EFTA framework. **Regulatory Compliance:** Towers must meet EU safety, environmental, and structural standards, which streamline approvals and reduce deployment delays.

Market Dynamics: Mergers and partnerships among MNOs, such as co-location agreements in Italy and Spain, influence tower strategies and site rationalization, a trend also relevant in Eastern Europe.

Technological Innovations

Green Towers: Use of solar power, recyclable steel, and eco-friendly paints to reduce environmental impact. **Smart Towers:** Integration of sensors for real-time monitoring, predictive maintenance, and energy optimization. **Turnkey Solutions:** Companies like XY Tower provide end-to-end services, from design to installation, minimizing coordination challenges.

Conclusion

The installation of communication towers in Eastern Europe is a strategic combination of macro towers, rooftop sites, and small cells, supported by TowerCos that provide investment, co-location, and operational efficiency. This approach ensures robust 4G/5G coverage, supports IoT expansion, and aligns with EU connectivity goals while optimizing costs and environmental impact.

Article Content

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Towers are part of passive infrastructure, and access to them is traded on the wholesale wireless infrastructure market. MNOs, for example, install radio access network (RAN) equipment such as

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Telecom Tower Industry | TowerXchange's Europe guide

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Transforming Europe's Wireless Infrastructure

EWIA advocates policies that encourage the network infrastructure investment and deployment necessary to make advanced wireless broadband available everywhere for consumers, businesses,

Europe: telecom tower sites by country 2024| Statista

There were more than half a million telecom tower sites across Europe in 2024. Around 80,000 of these were located in Germany, the most of any country. The increasing number of towers

Europe Telecom Towers Market Size, Share, 2026-2031 Outlook

Ground-based towers controlled 54.10% of the European telecom towers market size in 2025, reflecting decades of macro-coverage build-outs. Rooftop sites, though smaller in volume, are

How TowerCos strengthen Europe's wireless connectivity | EY

EY-Parthenon and the European Wireless Infrastructure Association (EWIA) have conducted a series of studies on the economic contribution of the European mobile tower sector.

TowerXchange catches up with Europe's newest towerco EuroTeleSites

We are a tower company that operates in Austria, Bulgaria, Croatia, North Macedonia, Serbia and Slovenia. Our assets include over 13,200 rooftops and greenfield sites and currently

Telecom Tower Portfolio in Central and Eastern Europe

In January 2024, Silk Road Fund joined a consortium of international institutional investors led by Actis to acquire a newly carved-out tower portfolio from Telekom Srbija, a leading telecommunications

EuroTower

We are the first local European TowerCo and are focused on the unique needs and challenges of the European telecommunications market. Our objective is to create the optimal wireless communication

How neutral host TowerCos strengthen Europe's wireless connectivity

There are currently around 526k macro tower sites in Europe, including rooftops and other larger structures that are used for wireless communication (excluding small cells and DAS).

Tower Infrastructure for Mobile Networks in Europe: Design Guide

The need for tower infrastructure for mobile networks in Europe has reached its peak. As 4G networks expand and 5G networks are planned, as well as the emergence of the IoT, European

European Wireless Infrastructure Association Report

There are over 400,000 developed communication sites in Europe today including around 300,000 towers, with growth expected as mobile broadband speeds accelerate and data volumes increase

What To Know Before Installing a Communication Tower

Communication towers are great for bringing reliable internet and cellular service to rural areas. However, there's a lot that can impact every step of the project, starting with the earliest

2009-3581958 EY-P European Wireless Infrastructure Report-v17 dd

Context EY-Parthenon and the European Wireless Infrastructure Association (EWIA) published a report on the economic contribution of the European mobile tower sector in April 2019. The study examined

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2.1.2 Best practices in the siting of telecommunication masts: lessons from Canada
Industry Canada is the official authority that regulates the installation of telecommunication

Europe Telecom Towers Market Size, Share, 2026-2031 Outlook

Europe Telecom Towers Market Size & Share Analysis - Growth Trends and Forecast (2026 - 2031) The Europe Telecom Towers Market Report is Segmented by Ownership (Operator

Managing the deployment of telecommunication towers in Ghana: an

Ghana is however confronted with huge tele-communication towers doted in the skylines of its major cities with some towers mounted in homes and on roof top of structures. The objective of

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

