



## Cellular Backhaul Solutions

### Reaching Out to Rural Areas

The benefits that reliable communications can bring to rural areas are clear. However, such areas prove particularly challenging to cellular operators due to low user density, low ARPU, tough terrains, extreme weather conditions and poor or completely lacking Telco infrastructures. As a result, a potentially enormous market is left underserved.

With backhaul expenses representing a significant chunk of network costs, a low cost, environmentally robust, easy to install backhaul solution could provide the answer to the rural market challenge.

RADWIN's instantly deployable, field proven, low CAPEX/OPEX wireless backhaul solutions transcend all rural market obstacles to successfully deliver robust, reliable cellular backhaul to remote areas.

By delivering native TDM & Ethernet over a single wireless link, RADWIN's Sub-6GHz solutions enable operators to connect entire communities to communications services for the first time and as a result, profit from the rural revenue opportunity.



Cellular backhaul in village with no Line of Sight

“RADWIN’s WinLink 1000 enabled us to reduce the implementation time of our new network POPs and it significantly reduced our OPEX & CAPEX. We use RADWIN for cellular backhauling because it is a carrier-class solution.”

Largest cellular operator in Mexico

RADWIN enables rural communications via backhaul solutions that are:

**Wireless & License Free**

Wireless license-free technology eliminates recurrent leased-line expenditures and license fees, enabling low-cost communications ideal for low ARPU, low density areas.

**Environmentally Robust**

High transmission power enables extensive geographical coverage. OFDM technology overcomes nLOS conditions (jungle, forests, hills, etc.) while providing high performance in extreme temperatures and weather conditions.

**Easy to Install & Maintain**

Fast installation and simple maintenance eliminates high installation costs and complex training processes while enabling rapid network ramp-up and operations.

**Reliable**

Field-proven solutions and built-in technology mechanisms for mitigating interference enable optimal performance in sub-6GHz bands, in any environment.

**Voice & Data Converged**

TDM & Ethernet communications over a single wireless link enable voice and data services over one infrastructure, increasing operator revenue streams.



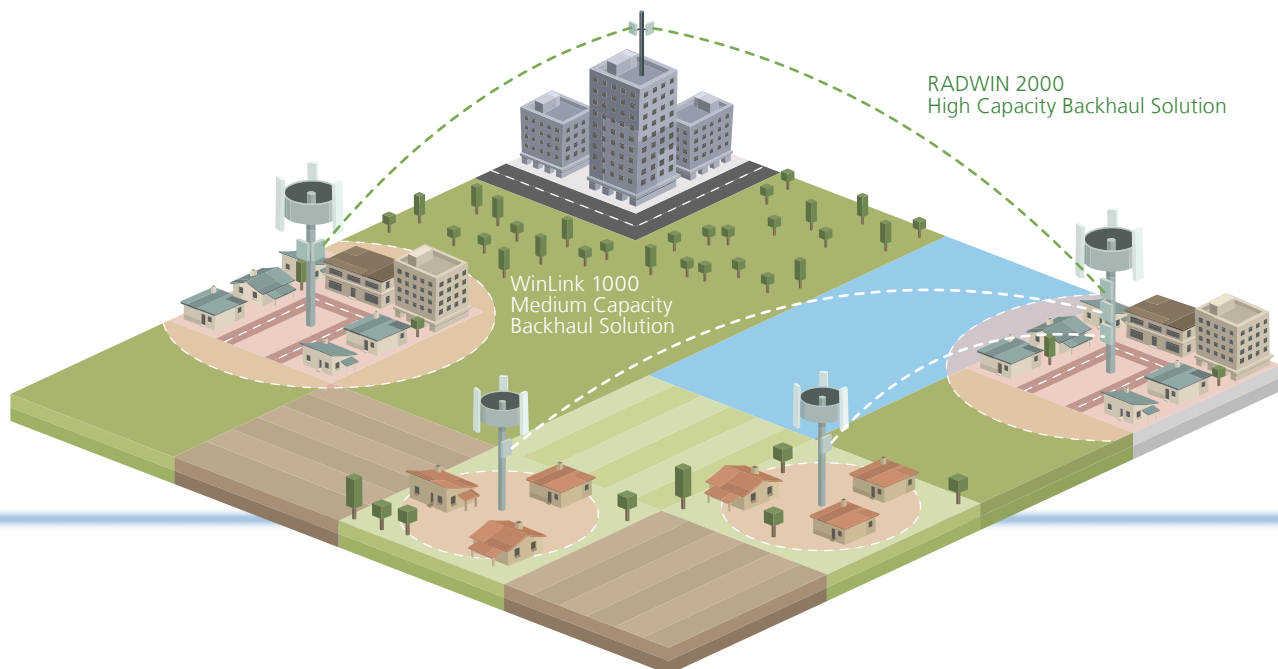
# Cellular Backhaul



RADWIN's WinLink 1000 in Russia at -50 degrees celsius

## Optimal Performance: High-Capacity, Field Proven Backhaul

- High capacity - up to 100 Mbps @ 20 MHz
- Native TDM + Ethernet on 1 platform (up to 16 E1s/T1s)
- Long range - up to 120 Km/75 miles
- Built-in advanced technologies: OFDM, MIMO & Diversity
- 1+1 support ensures carrier-grade reliability
- One platform, multiple frequency bands
- Simple installation
- Carrier-class performance at most competitive price in industry



Backhaul with RADWIN to Rural Areas

# Cellular Backhaul Portfolio



## RADWIN 2000 High-Capacity Backhaul Solution

RADWIN 2000 is a high-capacity TDM and IP backhaul solution tailored to meet the needs of carriers and service providers. RADWIN 2000 provides 100 Mbps net throughput with a flexible combination of Ethernet and up to 16 E1s/T1s as well as an extended range of up to 120 km/75 miles. The solution combines advanced OFDM and MIMO technologies with RADWIN's exceptionally robust air interface. With unparalleled performance and easy installation and maintenance, RADWIN 2000 supports multiple frequency bands on a single platform and suits a variety of different topologies and environments.



## WinLink™ 1000 Medium-Capacity Backhaul Solution

WinLink 1000 offers carriers and service providers a comprehensive carrier-class, medium capacity backhaul solution for both TDM and Ethernet traffic. An economic solution for connecting areas with low user density, WinLink 1000 is highly reliable, and offers superior ease of installation and maintenance at an attractive and competitive price. Delivering up to 36 Mbps net throughput and up to 4 E1s/T1s at a range of up to 80 km/50 miles, WinLink 1000 is available in various sub-6GHz frequency bands, and is currently deployed in over 110 countries around the world.

“ We chose RADWIN's systems over the competition because the price is unbeatable and the systems are extremely robust. Thanks to RADWIN's high-capacity, long range links, we can reach underserved rural areas. ”

Alexander Bugakov, CEO, Industriya Svyazi, Service Provider, Kazakhstan

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