



Case Study

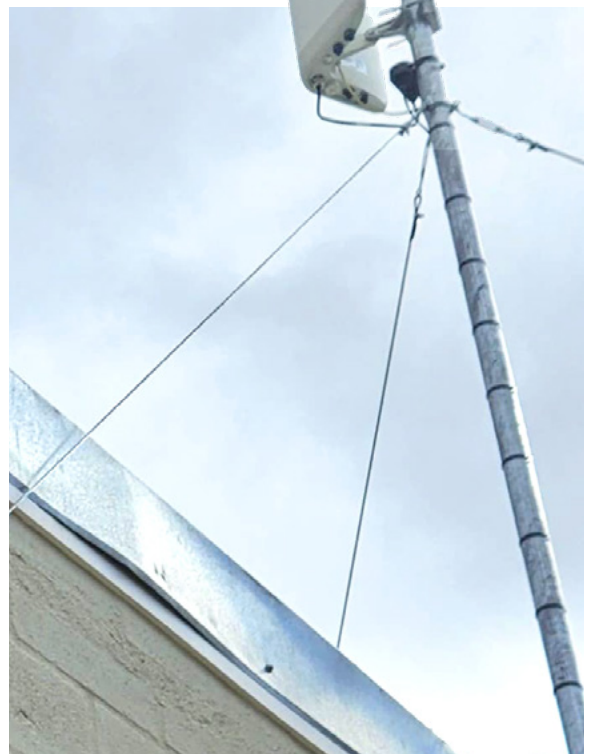
RADWIN MultiSector Wireless Broadband Transforms Poultry Farm Network in South Africa

About the Project

A leading poultry farming operation in Caledon, Western Cape, South Africa runs three farm sites managed from a central office. To support precision agriculture and real-time monitoring across all sites, Tinsky Communications, a RADWIN partner, replaced the farm's legacy RS485 serial network with a high-performance wireless broadband solution. The project was fully funded by the farm owners and completed across all three sites in under two weeks.

Project Challenges

The farm's RS485 serial architecture had reached the limits of what it could support. Cabling between the central office and individual poultry houses was expensive to maintain and impossible to scale. More critically, the setup offered no direct communication between houses, meaning resources like weather station data and GPS feeds had to be managed in isolation at each site rather than shared across the operation. Deploying a replacement network across three geographically distributed farm sites in a rural environment, without disrupting live farming operations, added further complexity.





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Deployment

Tinsky implemented a RADWIN Multisector Hub Base Station (HBS) with 89 Subscriber Units across the three sites, each site completed in approximately 3–4 days. The solution included:

- » **RADWIN Multisector (128-Series):** 1.5 Gbps throughput, dual integrated MIMO antennas + 2 external MIMO connectors (4x TNC), up to 128 subscribers.
- » **RADWIN SU Air (89 units):** Outdoor subscriber unit with integrated antenna delivering 500 Mbps net aggregate throughput, one per poultry house across all three sites.
- » **Serial-to-Ethernet media conversion:** Managed over the existing network infrastructure — no cabling overhaul required.
- » **Integrated GPS for TDD Sync:** Synchronised cross-site operations for consistent, interference-free performance.

Benefits

The wireless network delivered three meaningful operational changes:

- » **Real-time coordination:** Stable two-way communication between every house and the central office enables live monitoring and rapid response.
- » **Shared data across the operation:** A single weather station and GPS source now serves all houses, replacing the fragmented per-house data management the farm previously relied on.
- » **Foundation for future growth:** Direct Layer 2 house-to-house connectivity unlocks peer-to-peer data sharing and positions the farm for IoT integration as needs expand.

Highlights

- » **Technology:** RADWIN Multisector HBS (128-Series) + SU Air
- » **Scale:** 89 SUs, 3 complete farm sites
- » **Location:** Caledon, Western Cape, South Africa
- » **Deployment:** ~3–4 days per site
- » **Application:** Poultry farm monitoring - RS485 replacement
- » **Funding:** Farm owner-funded
- » **Partner:** Tinsky Communications



This project is a strong example of what modern wireless technology can do in a working farm environment. We replaced years of cabling complexity with a network that not only solves today's communication challenges but gives the operation a foundation to grow on.

Rhynard Buys,
Tinsky Communications



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Conclusion

The Caledon deployment shows what becomes possible when farms move beyond legacy serial infrastructure. With a scalable wireless backbone in place, the operation is positioned to grow as the global livestock monitoring market, projected to reach \$2.57 billion by 2031, continues to accelerate.



About RADWIN

RADWIN is a global provider of broadband wireless solutions that deliver fast broadband with unparalleled reliability. RADWIN solutions have been deployed in more than 180 countries and have a proven track record of delivering connectivity for mission-critical applications in industries such as transportation, mining, ports, and public safety, as well as backhaul, access, and private network connectivity. With over 25 years of experience, RADWIN is the go-to choice for broadband solutions you can depend on.

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