



**RFS Technologies**  
an Amphenol Company

Utility Communications Infrastructure Playbook  
**SOLUTIONS FOR  
GRID MODERNIZATION, PRIVATE LTE,  
& MISSION-CRITICAL INFRASTRUCTURE**

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# UTILITY COMMUNICATIONS MARKET OPPORTUNITY

Utilities are rapidly investing in communication infrastructure to support grid modernization, renewable integration, automation, and workforce connectivity. Private LTE networks, fiber backbone infrastructure, microwave backhaul, and in-building wireless systems are becoming essential components of modern utility operations.

## KEY INFRASTRUCTURE INVESTMENT AREAS INCLUDE:



**Private LTE & private 5G networks** for utilities



**Substation automation** communications



**Microwave backhaul links** for remote sites



**DAS & in-building wireless** for utility facilities



**Fiber backbone & edge connectivity**

To support the evolving communications needs of modern utility networks, RFS Technologies, an Amphenol company, offers a comprehensive portfolio of RF, fiber, and hybrid infrastructure solutions designed for mission-critical environments. **Key products—including LCF series RF coaxial feeder cables, hybrid power and fiber cables, fiber optic connectivity solutions, waveguide systems for microwave backhaul, and DragonSkin™ fire-resistive communication cables**—provide reliable connectivity across multiple layers of the utility network, from control centers and substations to wireless base stations and remote field devices.

**With decades of experience supporting telecommunications, public safety, and industrial networks, RFS Technologies delivers robust infrastructure solutions tailored for smart grid communications, SCADA systems, and private wireless networks.** These products are engineered to meet the high reliability and environmental requirements of electric utilities, oil and gas operations, mining sites, and other critical infrastructure environments, helping operators build secure, resilient, and future-ready communication systems.

## RFS TECHNOLOGIES' CORE PRODUCT LINES FOR UTILITIES



### HYBRIFLEX™ POWER AND OPTIC FIBER CABLE SOLUTIONS

These cables combine **optical fiber and power** wires into a single corrugated cable. For utilities, this simplifies the deployment of communication equipment at remote substations or along power lines by reducing installation time and weight.



### CELLFLEX™ LOW-LOSS FOAM DIELECTRIC CABLE SOLUTIONS

CELLFLEX® coaxial cable delivers highly efficient RF signal transmission thanks to its low attenuation, while its solid outer conductor provides continuous RFI/EMI shielding to minimize system interference. Designed for optimal RF performance, it offers low VSWR for reduced system noise and excellent intermodulation performance, as its solid inner and outer conductors virtually eliminate intermodulation effects. The cable also supports high transmit power levels, benefiting from efficient heat transfer and temperature-stabilized dielectric materials that ensure safe, long-term operation.



### RADIAFLEX™ RADIATING CABLE SOLUTIONS

Industry Leading Design with optimization to simultaneously support 4G and 5G wireless communication bands in the frequency band of 660-4200MHz covering CBRS, C-Band (3.7GHz-4.2GHz).

These capabilities make RFST solutions particularly well suited for utility communication networks, where reliable and scalable connectivity is essential for mission-critical operations. Applications include private LTE networks for grid automation, substation communications, smart grid monitoring, SCADA systems, field workforce connectivity, and remote infrastructure monitoring.



### FLEXWELL™ WAVEGUIDE SOLUTIONS

RFS Technologies standard elliptical waveguides provide low-loss, high-power transmission performance for microwave communication systems, making them ideal for high-capacity microwave backhaul links. These waveguides are widely used in utility communication networks to support reliable connectivity between remote substations, control centers, and field infrastructure.

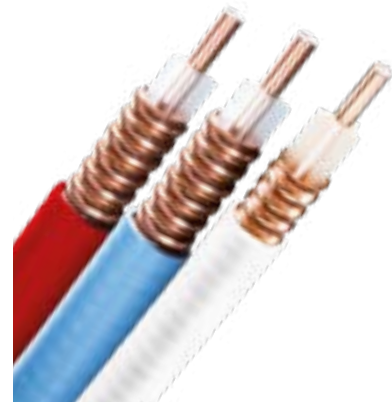
## DEHYDRATOR SOLUTIONS

RFS Technologies (an Amphenol company) provides dehydrator solutions primarily focused on cable pressurization for infrastructure, including utility telecommunications, renewable energy, and industrial automation. These systems prevent condensation in elliptical waveguides, coaxial cables, and antenna systems by delivering a constant source of dry, pressurized air.



### Dehydrator Solutions Features and Benefits:

- Wide selection according to capacity requirements and budgets
- Automatic regeneration without manual intervention—ideal for remote or unattended utility sites
- Remote access and integration to Network Management System (NMS) using SNMP.



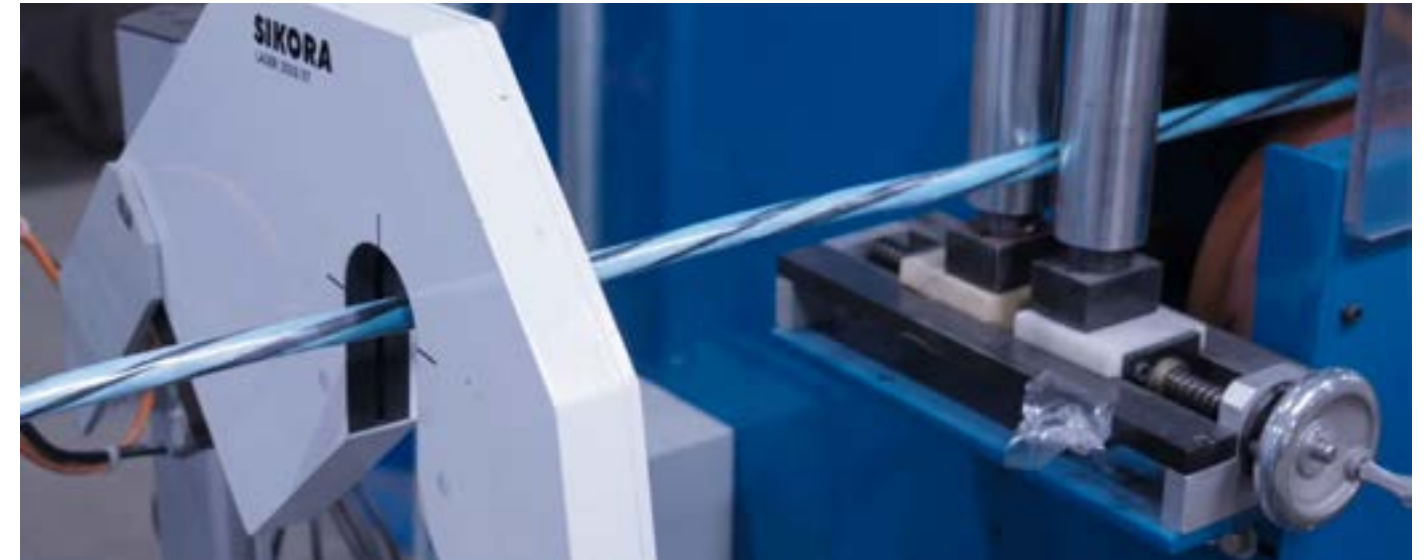
### CLEARFILL® LINE PLENUM-RATED 1/2" AIR DIELECTRIC CABLE

RFS Technologies' 1/2" air dielectric cable is specifically engineered to meet stringent plenum requirements in both the United States and Canada, ensuring compliance with NEC and NFPA safety standards for use in air-handling spaces. Designed for exceptional RF performance and low loss, this cable is widely used in Distributed Antenna System (DAS) projects for in-building wireless communication, including utilities buildings.

## DRAGONSKIN™ - THE ONLY UL 2196 REV. 3 (JUNE 25, 2025 RELEASE) CERTIFIED & LISTED RF COAXIAL CABLE AND NFPA 72-COMPLIANT STANDALONE CABLE

DragonSkin™ is engineered for the most demanding environments, supporting critical systems such as Emergency Responder Radio Communication Systems (ERRCS), Distributed Antenna Systems (DAS), fire alarm systems, fire pumps and emergency feeders, smoke evacuation systems, and tunnel and utilities infrastructure. In these applications, maintaining circuit integrity and sustaining RF communication capability during a fire is essential to ensure that emergency systems continue functioning when they are needed most.

DragonSkin is proven to be the only standalone cable solution that enables an RF system to be operational during 1850 degrees F, fire exposure for 2 hours.



## CUSTOM BUNDLED CABLE SOLUTIONS

While bundled cable assemblies are widely used in telecommunications, they are increasingly being adopted across other sectors—including utilities, renewable energy, and data centers—to address the industry challenge of faster builds and tighter budgets.

By combining multiple power, control, and communication cables into a single, organized unit, these assemblies provide several key advantages:

- **Accelerated Installation:** Pre-bundled solutions allow multiple cables to be pulled at once, significantly reducing labor time and complexity.
- **Pathway Optimization:** Bundling minimizes conduit and tray congestion, which is critical in high-density or space-constrained environments.
- **Improved Reliability:** Organised assemblies are more predictable and easier to identify during maintenance, which reduces the risk of wiring errors and long-term system failures.

RFS Technologies leverages state-of-the-art planetary cabling technology along with decades of engineering and manufacturing expertise to deliver highly customized bundled cable solutions tailored to specific customer applications. By integrating multiple cable types into a single optimized assembly, RFST bundled solutions simplify installation, reduce on-site deployment challenges, and improve overall system efficiency. These solutions help customers accelerate network rollout, minimize installation complexity, and significantly reduce both upfront deployment costs and long-term operational expenses.



Watch the video of the cabler in action!  
<https://www.youtube.com/watch?v=bMvYKInhtVU>



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**QUESTIONS?**

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