

USE CASE

Transforming Midstream Pipeline Communications: The POTS Replacement Revolution

The Industry Challenge: Legacy Infrastructure Crisis



Midstream pipeline operators face mounting pressure as traditional copper telephone systems, long the backbone of remote-site communications—fail with increasing frequency. When severe weather strikes, copper is stolen, or infrastructure ages beyond repair, the consequences cascade across operations: SCADA backup paths go dark, alarm panels lose connectivity, and emergency phones at unmanned stations fall silent.

For operators managing hundreds of miles of pipeline, compressor stations, remote valve sites, and tank terminals, these are not merely technical inconveniences, they are threats to regulatory compliance, worker safety, and environmental reporting continuity.



The Strategic Dilemma: Innovation vs. Disruption

Pipeline operators face a difficult choice. Complete infrastructure overhauls demand capital investment and extensive downtime in environments where uptime is non-negotiable. Yet maintaining aging copper systems means accepting escalating carrier costs, anywhere from \$80–\$150 per line per month, while gambling with the reliability of safety-critical systems.

Traditional approaches force operators to choose between financial prudence and operational resilience, creating dangerous exposure to PHMSA reporting gaps, fire panel failures, and unmonitored environmental conditions at remote, unmanned sites.

The Solution: POTS IN A BOX® Technology

Advanced POTS replacement technology eliminates traditional trade-offs by delivering analog dial tone through LTE cellular networks without requiring changes to existing field equipment. MIX Networks' 90X1 and 90X2 systems address the unique demands of midstream infrastructure:



Regulatory Compliance: UL-compliant hardware maintains PHMSA reporting, NFPA fire panel signaling, and state environmental monitoring requirements without interruption.

Operational Continuity: 48-hour battery backup and automatic LTE failover maintain operations during power outages or network interruptions at unmanned sites.

Financial Optimization : Monthly savings of \$50–\$100 per line redirect resources from copper maintenance to field operations and infrastructure growth.

Enhanced Oversight : Centralized real-time monitoring provides visibility across all sites, capabilities that legacy copper systems never offered.

The Industry Impact: Measurable Results

Midstream operators deploying POTS IN A BOX report dramatically improved operational outcomes across all key metrics:

- 35–50% reduction in recurring telecom costs
- 70% reduction in service downtime
- System uptime rising above 99%
- 48-hour battery backup at every site
- Installation completed in under 2 hours per site
- Compliance maintained across SCADA, alarm, and environmental reporting systems
- Legacy RTUs, alarm panels, and emergency phones preserved without modification

Key Midstream Use Cases

SCADA Backup Communications

The 90X1 connects directly to legacy SCADA dial-up modems, providing LTE-based failover that maintains regulatory reporting continuity. Existing RTU hardware is fully preserved, eliminating the need for costly field equipment replacement.

Compressor Station Alarm Panels

Dual-line 90X2 devices simultaneously support fire panels and gas detection systems, maintaining compliant alarm signaling to central monitoring stations without copper dependency. Line 1 handles fire panel communications; Line 2 handles security and gas detection alarms.

Remote Valve and Block Sites

Unmanned rural locations receive stable LTE connectivity via high-gain external antennas, with 48-hour battery backup ensuring continuous monitoring through power outages. Low power draw and weather-resistant hardware are engineered for remote deployment.

Emergency Phones and Safety Lines

FXS ports enable analog emergency phones at pump stations and terminals to operate over LTE, maintaining OSHA and internal safety compliance through the copper retirement transition. No new handsets or wiring are required.

The Strategic Advantage: Future-Ready Infrastructure

POTS IN A BOX delivers immediate operational benefits without compromising flexibility. Operators preserve legacy equipment investments while gaining enterprise-grade LTE reliability, multi-carrier redundancy, and centralized management capabilities.

Copper retirement is not optional. The FCC-mandated decommissioning is already underway, with 90-day shutdown notices arriving across rural service areas. The risk of waiting is operational disruption. MIX Networks enables incremental modernization, spreading infrastructure transition costs over time while maintaining uninterrupted operations. The result transforms a compliance liability into a resilience advantage for long-term operational success.



Conclusion: Modernization Without Risk

A midstream pipeline operator replaced over 200 legacy copper POTS lines across compressor stations, remote valve sites, and terminals using MIX Networks' POTS IN A BOX solution. The deployment preserved existing analog systems while delivering multi-carrier LTE connectivity, 48-hour battery backup, and centralized management.

The result:

- Maintained regulatory compliance across PHMSA, NFPA, and environmental requirements
- Reduced recurring telecom spend by 35–50%
- Increased reliability and uptime across all remote sites
- Eliminated copper shutdown risk and carrier dependency
- Improved operational resilience without replacing legacy field hardware

