OIL AND GAS COMMUNICATIONS ON THE FRINGE

Cellular Hardware for Pipeline Management

Pipelines that transport oil and liquefied natural gas are often located in remote and extremely challenging locations. To stay connected to pipelines at various critical junctions in the field, organizations need reliable communications devices and specialized antenna assemblies to boost signal strength within fringe network coverage areas.

Challenges Faced | CONNECTING ON THE FRINGE

Oil and gas companies need solutions that enable the remote monitoring of hundreds of miles of pipeline criss-crossing our nations fields, forests, and mountain ranges. Spotty connections to equipment on the fringe makes the real-time monitoring of pressure sensors, flow meters, and more difficult. These organizations need low power solutions for remote areas located several miles from the nearest power sources and cell towers.

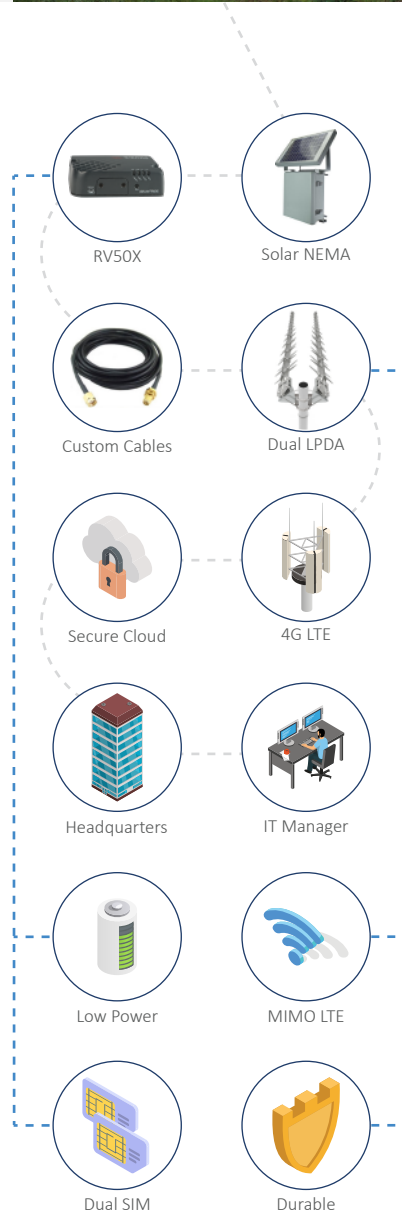## Router Solution | PURPOSE-BUILT INDUSTRIAL LTE ROUTERS

USAT works with several oil and gas organizations across North America. Many have asked USAT to help replace soon to be outdated 3G routers with more robust 4G solutions. To help them better comply environmental reporting requirements, they are looking for routers capable of redundancy with cellular failover. And to better cope with limited electricity access, they need low power devices compatible with photovoltaic arrays. USAT was able to help them select AirLink **RV50X** industrial routers.

Antenna Solution | SPECIALIZED HIGH-GAIN ANTENNAS

These same organizations cited varying connection reliability at different points along their distribution pipelines. Some monitoring locations were located within five miles of a local cell tower, while others were as far as 20 miles out. USAT was able to match the antenna to the specific needs of each location. For the near locations, we provided the Poynting **XPOL-2**. For fringe areas, we provided two Poynting **LPDA**'s in a dual configuration.

Field-Tested Results | RELIABLE REMOTE CONNECTIVITY

These organizations utilized our **DevProv+** services to provision their devices to work within their existing network infrastructures. They also utilized our engineering services to create poled-mounted NEMA enclosures to host their routers, antennas, custom cabling, and solar arrays. Each of their distribution lines saw instant increases in connection speed, strength, and reliability, and decreases in power consumption. ALMS Software allows for easy automated event reporting and over-the-air device monitoring and management.

Industrial Router:	Long Range Antenna:	Device Software:
Airlink RV50X	**Poynting LPDA**	**ALMS**

RV50X

Solar NEMA

Custom Cables

Dual LPDA

Secure Cloud

4G LTE

Headquarters

IT Manager

Low Power

MIMO LTE

Dual SIM

Durable

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