

CONNECTED FUEL DISPENSER

SATELLITE SOLUTION FOR GAS STATION CHAINS IN POLAND

Several of the large gas retail chains in Poland operate WAN connectivity for its point of sale networks. The project has been implemented by our partner TTcomm GmbH (part of TTcomm Group) who has developed unique expertise in Layer 2 mission critical services via Eutelsat's **KA-SAT** High Throughput Satellite.

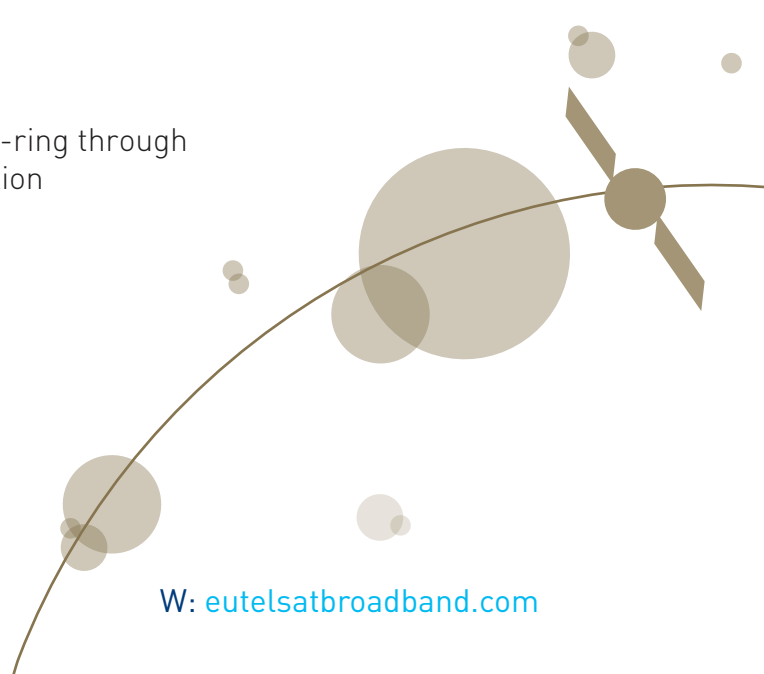
TTcomm through the **KA-SAT** satellite serves today over 1,000 gas stations in Poland, with an even split between primary connections and backups. In case where **KA-SAT** is the primary solution, a mobile network is deployed as a backup. This combination ensures over 99.99% network availability for vital applications.

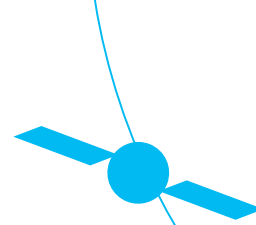
The **KA-SAT** service is designed for resilience against adverse weather conditions, with Adaptable Coding and Modulation (ACM) that adjusts key transmission parameters in the event of severe rain or dense clouds covering a location. The **KA-SAT** ground network provides a protected MPLS network with 8 primary and 2 backup ground stations for optimal performance.

In addition to meeting bandwidth and security needs at gas stations, this technology also supports various telemetry and monitoring applications across Europe. These include IP camera monitoring, storage tanks and infrastructure monitoring, gas/oil pipeline security, data gathering and backup connectivity.

Key functional features of Eutelsat's **KA-SAT** for this use include:

- Bi-directional IP-traffic
- TCP/IP and UDP/IP support
- Connection to Eutelsat's fully redundant fibre-ring through the Point of Interface (PoI) in Frankfurt/Interxion
- Layer 2 based operation
- Static IP addresses
- Satellite VPN tunnel (Layer 3 services only)





CUSTOMER REFERENCES



THE ARCHITECTURAL DESIGN OF OUR HIGH THROUGHPUT CONNECTIVITY SOLUTION

The entire corporate network is physically separated from the internet with only private IP addresses. The Frankfurt point-of-interconnect (POI) between **KA-SAT** and the clients' networks is fully redundant on equipment and at the connectivity level.

The primary line to HQ is a physical circuit, while the backup circuit is set up as a VPN tunnel – dependent on specific customer requirements it can also be set up as a diverse terrestrial circuit.

In this case, the customer opted for S-VLAN tagging for the network side and C-VLAN tagging on Frankfurt POP side. The client has selected Layer 2 network design for network control and robustness.

KA-SAT TERMINAL

- Metal frame modem
- 77cm dish
- Dual processor
- Layer 2 capability
- 45W electrical power usage



NETWORK DIAGRAM

