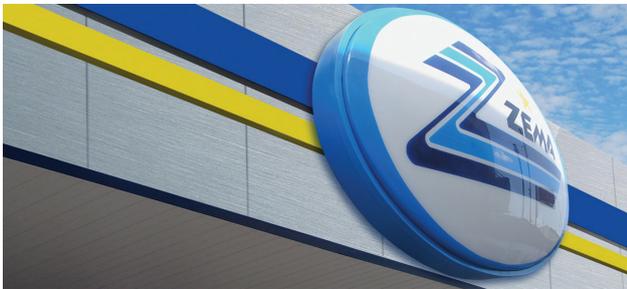


## Hughes Provides Network Redundancy over Satellite



Headquartered in the state of Minas Gerais, Brazil, Grupo Zema operates in a wide variety of market sectors, ranging from automotive dealerships, clothing, consortium groups, and oil and oil products distribution. Grupo Zema owns a chain of Eletrozema stores which sells household items, furniture, and appliances.

With more than 440 stores operating across the southern Brazil region, Grupo Zema needs reliable network connectivity to support basic operations such as customer credit card transactions, which account for most of Eletrozema sales. Without network reliability and secure connectivity, store operations are compromised.

“Satellite is available almost everywhere and Hughes was able to cover 100 percent of our network. It meets Grupo Zema’s needs in cities both large and small and provides reliable backup in case of an outage in our primary terrestrial network. With Hughes, a single provider can provide the same quality of service to all of our stores. Implementation of the network was fast and easy. The Hughes team was very committed.”

**Denis Luciano Rosa**  
IT Manager, Grupo Zema

### Goal

Grupo Zema needed a backup network to ensure the operability of stores in the event of any failures in the main terrestrial communications link. The network needed to be fast and secure to complete credit and debit transactions quickly while protecting customer information.

### Hughes Solution

- Grupo Zema implemented a Hughes VSAT (very small aperture terminal) managed network solution to link its Eletrozema stores in the states of Minas Gerais, Bahia, Goias, Espirito Santo, Mato Grosso do Sul, and Sao Paulo to headquarters in Araxa, Minas Gerais.
- The Eletrozema network consists of customer premise satellite terminals linking stores via satellite to the Hughes Network Operations Center (NOC), and a network management system.
- The Hughes solution provides IP-based communications that support electronic credit and debit card transactions. It also provides Internet connectivity for checking discounts and promotions.
- The Hughes satellite solution provides a contingency (backup) feature in case of a primary network failure. If a terrestrial link fails, the network is automatically and seamlessly switched by the router to the satellite service using a protocol known as VRRP (Virtual Router Redundancy Protocol), a feature embedded in the technology.

### Benefits

The Hughes solution gives Grupo Zema a stable communications system that can be easily and quickly activated in their stores.

- Nationwide coverage
- Automatic switchover
- High availability



- Fixed installation and operational costs, regardless of where the stores are located
- Integration with any IP protocol-based ground communication platform, including MPLS
- Real-time online management portal via the Internet

## Results

- Guaranteed operability of stores in the event of a failure in main data link; covers 100% of stores
- No loss of business due to network failure
- Constant security and monitoring



## About Hughes

Hughes Network Systems, LLC (Hughes) is the world's leading provider of satellite broadband for home and office, delivering innovative network technologies, managed services, and solutions for enterprises and governments globally. HughesNet® is the #1 high-speed satellite Internet service in the marketplace, with offerings to suit every budget. To date, Hughes has shipped more than 4 million systems to customers in over 100 countries, representing approximately 50 percent market share. Its products employ global standards approved by the TIA, ETSI and ITU organizations, including IPoS/DVB-S2, RSM-A, and GMR-1. Headquartered outside Washington, D.C., in Germantown, Maryland, USA, Hughes operates sales and support offices worldwide, and is a wholly owned subsidiary of EchoStar Corporation (NASDAQ: SATS), a premier global provider of satellite operations and digital TV solutions.

For additional information about Hughes, please visit [www.hughes.com](http://www.hughes.com) or email [globalsales@hughes.com](mailto:globalsales@hughes.com).

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