SATEL®
reference database

The benefits of a SATEL wireless communication network:

- reliable data communication
- automated network management system (NMS)
- real-time operation (typical latency 10-30 ms)
- easy to set up and use
- easy to extend
- cost-effective

GAS SUPPLY SECURITY IS IMPORTANT

In 2012, the Turkish gas distribution company Bursagaz introduced a SCADA distribution automation system. SATEL designed and produced the wireless data transfer network for the system, which handles data transmission between the SCADA control centre and the 193 sub-stations. Communications are handled wirelessly using SATEL radio modems. Bursagaz's radio modem network operates independently and is not dependent on other radio and data communication networks or devices. Having their own radio communication network ensures the best flow of data and reliable operation in all situations for Bursagaz.

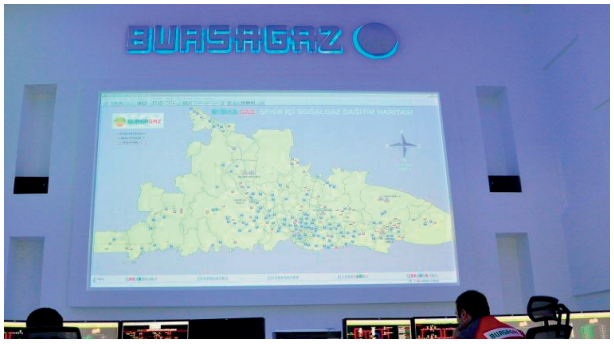
SATEL radio modems are used in distribution automation systems for numerous gas, electricity and water distribution companies. SATEL radio modems are particularly suitable for critical systems, where uninterrupted operation is extremely important.

BURSAGAZ KEEPS THE GAS FLOWING

Bursagaz is a large gas distribution company in the industrial city of Bursa in Turkey. Bursagaz is responsible for maintaining uninterrupted gas distribution for the city with a population of close to two million.

Thanks to SATEL's expertise and reliable data transmission solutions, Bursagaz can guarantee uninterrupted gas supply to its customers every day. The SATEL radio modem based wireless communication system operates independently of commercial network operators. This means that Bursagaz is the owner of the data network and has full control and exclusive access to the network. The data transfer is secure and safe even in the event of a power failure.

SATEL is an ideal partner for Bursagaz. The company values SATEL's extensive experience in the design and implementation of wireless data communications networks. The flexibility of the radio modem network allows for the reliable maintenance of the extensive gas distribution network as well as simultaneous real-time radio network operation monitoring of different locations. The network can be monitored for gas pressure, temperature, fuel consumption, flow and network load, as well as user safety and more besides.



Bursagaz values the reliability of the SATEL wireless communication network.

REAL TIME DATA NETWORK

Communications between Bursagaz's SCADA operating centre and the various substations is handled by SATEL radio modems in a private network on a radio frequency specially licensed for Bursagaz. All events in the distribution system are monitored in real-time by the SCADA system.

CONTINUOUS MONITORING

Data collection is conducted continuously from all substations by a SCADA poll (IEC-60870-5-101) every 60 seconds. Customer expectations are met and satisfaction is guaranteed as the wireless communication network is secure and runs smoothly even in extreme weather conditions.

Design, installation and commissioning of Bursagaz radio modem network

Radio network design SATEL designed an optimised wireless communication network based on the measurements taken by the local distributor.

Equipment deliveries SATEL delivered the radio modems, antennas, antenna cables, and lightning protectors for the system in cooperation with local distributor.

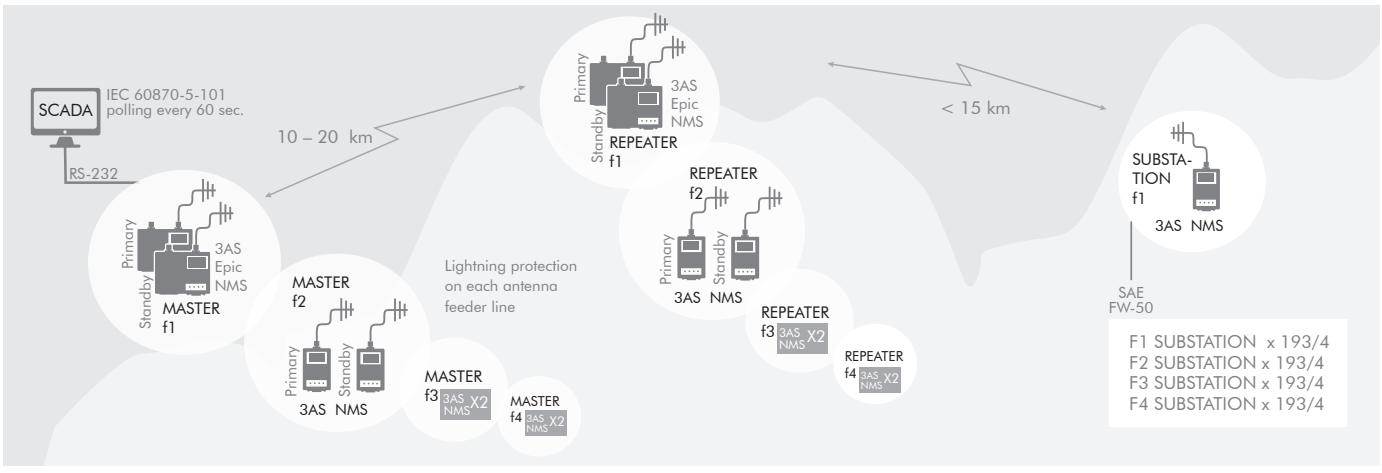
Installation and commissioning The SATEL local distributor took care of installation and network deployment on the ground.

Operation and maintenance training SATEL organized operation and maintenance training for the wireless communications network in Bursa, in Turkey and Salo, in Finland.

SATELLINE-3AS Epic NMS*
- TX Power 10 W
- Diversity reception
- Frequency 330 ... 470 MHz
- Interface RS-232/422/485

SATELLINE-3AS NMS*
- TX Power 1 W
- Frequency 330 ... 470 MHz
- Interface RS-232/422/485

* NMS = Network Management System



Due to the broken ground in Bursa region, network functionality is ensured by using repeater stations and dividing the data into four separate networks, each of which operates under its own frequency. The distances between each station are within 10-20 km.

To maximise the system reliability, the control centre and repeater station radio modems are redundant. With the redundant modems, one is always primary and the other is a backup. In the event of a fault, the back-up radio modem will automatically continue the communication without the operator having to intervene.

SATEL®

Our skilled and knowledgeable distributor network serves you in over 100 countries.

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