

Case Study: IEC 104 GPRS Gateway

Provider Name : KALKI Communication Technologies (P) Ltd.
Client Name : European Automation Major
Project Title : IEC 60870-5-104 / GPRS Protocol Gateway

The Problem

The client, a Major OEM in the RTU and SCADA space, required to provide IEC 60870-5-104 gateway over a GPRS/CDMA network to their SCADA system from RMU's installed in the field. The OEM RTU/PLC did not have necessary support for communicating over GPRS/CDMA. The KSGM family of products were deployed to achieve this functionality.

The Solution

The stated solution consisted of the following:

1. KSGM/M Protocol Gateway with 3 RS-232, 1 RS-485 and 1 Ethernet port and IEC 104 Slave and Modbus Master Protocol Components
2. GPRS / CDMA External Modem
3. OEM SCADA Software
4. OEM RTU
5. IEC 60870-5-104 Protocol Test Tool

The said OEM RTU/PLC was connected to the KSGM/M protocol converter over Modbus RTU protocol. The KSGM/M was connected on another interface to the GPRS / CDMA modem. The KSGM/M is configured to be connected on the GPRS/CDMA network with fixed IP assigned to the interface. The KSGM/M on the GPRS/CDMA interface provided a TCP/IP connection and IEC 104 Slave interface, to which the OEM SCADA will connect.

This network currently has over 120 units running continuously from 2004 and is expanding.

Tools Used:

- Test Harness IEC 60870-5-104 Test Simulator
- EasyConnect Configuration Tool