What is IP SCADA

IP SCADA is a plug-and-play feature in the IPD 600 terminal series that allows common SCADA devices such as remote terminal units (RTUs) and Programmable Logic Controllers (PLCs) to be connected to SCADA networks using the IsatData Pro satellite service.

IP SCADA is well suited for SCADA devices that are located in remote sites where other communication services are unavailable, unreliable or cost prohibitive and for sites that have low data usage requirements.

Fig 1: Widely dispersed remote sites remain unconnected

Fig 2: All remote sites have been connected to existing SCADA system
How IP SCADA works

1. The SCADA master sends data (encapsulated in TCP/IP overhead) destined for a SCADA device using a VPN session to the IP SCADA gateway at SkyWave.

2. SkyWave’s IP SCADA gateway maps the private IP address of the IDP-600 series terminal to an IsatData Pro address, removes the TCP/IP overhead, adds a very small IsatData Pro header and sends the data across the IsatData Pro satellite network.

3. The IDP terminal receives the data, removes the IsatData Pro header and forwards the original bytes to the serial port to the Slave RTU.

4. At this point, the Slave RTU responds to the data poll with the requested data, which goes through the reverse process upstream to the SCADA master.

Benefits of IP SCADA

**Connectivity.** IP SCADA provides a way to connect to sites that would require considerable investment in infrastructure to be connected to communication service.

**Cost Savings.** Compared to broadband satellite systems, terminals that support IP SCADA can have significantly lower hardware and airtime costs.

**Data savings.** Since the system relies on the small IDP satellite overhead to direct data to and from remote sites, IP SCADA uses less data than conventional IP-based SCADA systems. This allows significantly less overhead to be sent over the satellite and reduces airtime costs.

How to buy?

IP SCADA feature is available on SkyWave’s IDP 600 Series satellite messaging terminals. These terminals operate on the Inmarsat network using the IsatData Pro satellite service and are optimized for SCADA or remote monitoring applications up to hundreds of kilobytes per month.

Fig 3: Only the essential data is transmitted through satellite, decreasing costs

Other reasons to choose IsatData Pro and IDP terminals include:

**Global coverage.** The Inmarsat system provides coverage anywhere in the world.

**Easy to install antenna.** IDP terminals use an omnidirectional antenna. There is no need to “point” or “repoint” the antenna like many other satellite systems.

**Onboard intelligence.** Implement RTU-like functions like alarm sorting, categorizing, prioritizing and filtering, respond to state changes of sensors, send “heartbeat messages”.

**Low power modes.** Increase energy efficiency and reduce power costs.

**C1D2 certification.** For use in hazardous locations.

**Modbus.** Ability to make the terminal a Modbus master for functions like querying registers.

**Peripheral ports.** Serial, digital/analog ports for connecting to sensors.

HOW TO BUY

SkyWave mobile devices and satellite airtime services are available through a network of Solution Providers who offer turnkey solutions and industry expertise.

Visit us at SkyWave.com to learn more.