



SCADA Systems Application Brief

The Challenge

Supporting large scale distributed measurement and control systems such as Supervisory Control and Data Acquisition (SCADA) implementations requires reliable and rugged networks that can connect thousands of remote sites and operate in inhospitable regions where no traditional infrastructure exists.

Additionally, above and beyond supporting traditional SCADA implementations, companies are increasingly requiring their infrastructure to handle more network services and deliver the full spectrum of broadband applications to hundreds and even thousands of points along their business operations.

Enhance SCADA applications to support data, voice and video communications



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The iDirect Solution

iDirect delivers high-speed two-way broadband connectivity over the air and can be deployed quickly to any geographic region, under any conditions.

The iDirect platform operates completely independent of terrestrial networks and is ideally suited to support traditional SCADA implementations, as well as the complete complement of voice, data and video applications. In fact, an iDirect powered network addresses all the enhanced performance requirements that companies seek for their SCADA systems, including:

- Centralized management
- Seamless connectivity to thousands of remote sites
- High reliability under all conditions
- Data, voice and video applications
- Scalability from 1 Kbps to 20 Mbps
- AES encryption
- Efficient bandwidth allocation

High-speed broadband connectivity anywhere, anytime and under any conditions

Take advantage of iDirect's unique combination of highly-efficient bandwidth usage, enormous flexibility, and superior reliability and performance. Extend your broadband service anywhere in the world, economically, quickly and easily with iDirect.



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How it Works

A single INFINITI chassis installed at a central monitoring station can support thousands of remote sites across a wide geographic footprint. From this location network operators can configure, monitor and control all remote sites and even customize services to meet individual site requirements.

The extremely flexible iDirect system can be configured from 1Kbps all the way to 20 Mbps in 1Kbps increments. At this level of granular network sizing bandwidth allocation can be based on exact business needs to provide an extremely cost-effective option for the lower bandwidth requirements associated with traditional SCADA implementations.

Take it to the next level and easily accommodate the larger bandwidth and quality requirements associated with toll quality voice and video streaming. The iDirect system supports all voice, data and video applications and networks can be configured on the fly to enable any mix of these services. With on-demand video capabilities network operators can use video monitoring to troubleshoot system alarms before sending field teams to investigate the problem. If field teams are deployed, the iDirect system can instantly support all communications between field personnel and the central monitoring station.

Industry leading IP-over-satellite delivers unmatched reliability and efficiency for all mission critical operations



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At remote locations, satellite routers provide all the hardware and software needed to support broadband applications. Each compact terminal includes a satellite modem, IP router, TCP optimization over satellite, AES encryption and QoS/prioritization. An extremely rugged and field tested solution, the iDirect system can be deployed quickly and operate under the harshest conditions to provide a solution that requires minimal maintenance in any environment.

Built in AES encryption provides the security necessary for supporting the mission critical nature of SCADA systems. Additionally, since the encryption is fully integrated into the platform, it allows for the acceleration of encrypted data and the real-time exchange of information. Real-time communications is also supported by the system's QoS/prioritization and TCP/IP optimization over satellite, which delivers quality that matches traditional networks for delay sensitive traffic like voice and video.

As a pure IP-over-satellite solution, the iDirect platform provides 99.999 percent availability to deliver unmatched reliability for all business operations. As business requirements change, the existing platform can be easily scaled and reconfigured without a forklift upgrade enabling new applications to be added quickly and easily.



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Advancing a Connected World