:::Gridstream™

SC ICG

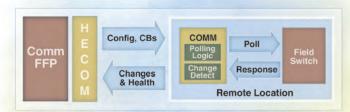### SCADA Center **Intelligent Communication Gateway**

- Native integration with Gridstream network
- Acquires data from multiple master channels
- Serves data to external systems
- Supports multiple protocols
- Supports serial and TCP/IP channels

Data Concentrator

SCADA Center Intelligent Communication Gateway (ICG) contains a powerful data acquisition engine that acquires data over multiple master communication channels. Both serial and TCP/IP channels are supported. Serial channels can be connected locally or remotely via IP-based terminal servers. All channels operate in parallel providing high throughput and simultaneous data acquisition. ICG supports multiple protocols on a channel-by-channel basis. Time tagged data can be acquired from external devices and passed through ICG. When the external device does not support time tagging, time tags can be added at ICG.

Data Server

The data acquired by ICG can be served to multiple external systems using multiple protocols. ICG provides complete flexibility for serving data to one or more external systems. Some or all of the acquired data can be combined into one or more slave devices. The slave devices can then be assigned to slave communication channels. Both serial and TCP/IP channels are supported. In addition, each slave channel can contain multiple slave

devices. One or more external systems can then connect to the slave channels and acquire data. Slave data can be served via polling or exception reporting. Since the available data can be configured into multiple slave devices, critical data can be acquired at a shorter interval.

Integrated Gridstream Communication

ICG provides native-mode integration with the Gridstream network. The polling and change detection functions from ICG are downloaded into endpoint radios in the network. These programs then poll the end devices, perform change detection, and report data when changes occur. Data is also reported at periodic intervals when no changes have occurred, as an indication of health. The remote logic performs both digital and analog change detection, with the analog change bands contained in the ICG configuration database. The change bands are downloaded to the endpoint radio along with the change detection logic. This allows for easy management of the analog change bands from a central location. Since the polling logic is contained in the endpoint radios, multiple protocols are supported within the same mesh network.

Utilities can easily mix field devices from multiple manufacturers without the need to worry about communication protocol. Different data reporting methods can also be used within the same protocol, such as polling, report-by-exception, and wake-up report data

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NERC CIP Secure Communication Server

Multiple ICG units can be used to create a secure communication server. Install ICG units in secure remote locations, such as substations. Install a head-end ICG at a central location. Connect the ICG units using cost-effective firewall, encrypted VPN appliances to create a NERC CIP compliant data acquisition and transportation system.

External Applications

ICG supports the SCADA Center External Application Connector (EAC). EAC allows external applications to make a network connection to ICG and send pass-through commands to the radio network. EAC supports both RadioShop and DNP protocol applications.

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