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Legacy Panel Meter

Easy Retrofit of Legacy Panel Meters with **Bitronics® SCADA Meters and SUSI Adapters**

A new switchboard/socket meter replacement option for the M650 in conjunction with SUSI Adapters is available for immediate order. Older style switchboard and socket meters can be removed and replaced with the M650 in one of many different cases without having to change existing wiring. This allows an upgrade to a reliable, modern SCADA meter with full (serial and/or Ethernet) Modbus or DNP3 communications capability. A wide variety of cases covering GE, Westinghouse, Basler style, and other products are available.

SUSI Adapters, Inc. of Johns Creek, Georgia, is a leading manufacturer of panel adapters for a wide variety of socket meters and other complementary products. For nearly twenty years, their unique patented products have provided a cost effective solution for old or new panel metering applications. Bitronics[®] 50 Series SCADA Meters are designed to provide value and simplicity in SCADA and stand-alone metering applications. With advanced Ethernet communications, web-based configuration, rugged design, and unmatched flexibility, the 50 Series reduces cost of ownership in all areas: configuration, integration, commissioning, and spares. The 50 Series split-core CT option further reduces installation costs.

A video of the Bitronics M650 being retrofitted with SUSI Adapter is available at: https://www.youtube.com/watch?v=DG5LWByJNnI

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2014 UTILITY TECHNICAL SYMPOSIUM SERIES

For 2014, this valuable series focuses on customer application papers and tutorials on Cyber Security, IEC 61850, IEC 61131-3, PRC-002 Recording and webbased SCADA and HMI. Certificates will be provided to attendees for the non-commercial application and training portion of each symposium, typically four to six hours.

We invite you to join us for these upcoming technical symposiums:

May 13 - 14 in Minneapolis, Minnesota July 15 in Overland Park, Kansas

To register for these and all upcoming events and webinars online, please visit: http://www.novatechweb.com/events/



Customer presents on OrionLX at the 2013 Kansas Technical Symposium

NovaTech, LLC

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Bitronics M650 in SUSI Adapter Case

Retrofit Panel Upgraded in Minutes

Bitronics® 878 DIOD: Recent Applications

The Bitronics 878 DIOD, a self-powered, distributed I/O device that provides combinations of digital inputs, digital outputs, and transducer inputs, has had recent success in a number of applications. The 878 was selected for mounting within a high voltage breaker cubicle because of its I/O density per size, ability to reduce breaker status wiring between breaker cabinet and RTU, and fiber optic Ethernet connection. The 878 was also selected along with the OrionLX for several RTU panels where higher density I/O was required. The first order was for three RTU panels with a total of approximately 700 digital inputs, 200 digital outputs, and 300 analog (transducer) inputs---not counting spares. These RTU panels were jointly designed by NovaTech and the end user, and are being built and factory accepted tested at NovaTech in Lenexa, Kansas.

Key Features of the 878 DIOD include:

- Flexibility back of panel mounting, three chassis sizes, digital inputs and outputs and transducer inputs, monitored NO/NC outputs
- Complete Protocol Support IEC 61850 8-1 with GOOSE messaging, DNP3 and Modbus, Serial and TCP
- High I/O Count up to 56 digital inputs or 48 analog inputs possible
- Boolean Logic Fast local control schemes can be accomplished on the 878 DIOD



Bitronics 878 DIOD



Figure 1: NovaTech, PAS and utility components in a complete NERC CIP compliance solution

System Functions include:

Password Management

User passwords and host passwords are centrally managed in the NovaTech Password Manager authentication server. Each user receives a strong individual password (strength and change rules defined by administrator), and is assigned to groups and roles with specific privileges for simplified administration. Relay and other IED passwords can be automatically changed to either random or userdefined passwords (based upon strength rules). An optional "Emergency Password Checkout" mode will be available to temporarily, manually provide an IED password to substation personnel when the communication is lost between the substation and the authentication server.

CIP-Compliant Remote Access

The NovaTech Connections Manager – both enterprise server and "agent" running in the OrionLX – will work together to create an encrypted connection to substation IEDs. All user interaction with substation relays and other IEDs goes through the Connections Manager and is monitored and logged.

Inventory

Cyber Assets are entered into the PAS Cyber Integrity Server and classified into BES Cyber Systems. The "Baseline Configuration" is also loaded for each Critical Cyber Asset, including settings files, patches, logic files, and other attributes.

NovaTech and PAS Developing NERC CIP Solution

NovaTech and PAS (Houston, TX) are jointly developing a NERC CIP compliance solution to address the latest Version 5 requirements. NovaTech will provide CIP-compliant Remote Access and Administration of IEDs, including Password and Connections Management. PAS will provide compliant products for Inventory, Configuration Management, Change Control and CIP Reporting for Bulk Electric System assets. System components are diagrammed to the left in Figure 1.

Please contact your regional sales representative and we'll coordinate a demonstration of this joint NovaTech PAS System.

Configuration Management and Change Control

The active configurations from Critical Cyber Assets in substations are automatically accessed by the OrionLX and transferred via SFTP to the PAS Cyber Integrity Server. The PAS Cyber Integrity Server compares these active configurations to the Baseline Configuration on file. The work processes to manage changes and violations are set-up and managed on the Cyber Integrity Server.

NERC CIP Reporting

The PAS Cyber Integrity Server facilitates continuous compliance monitoring, documents compliance, and full reporting to support annual filing requirements as well as adhoc reports for audit support.

Did You Know?

It is not necessary to modify the default points list in most DNP3 IEDs when integrating with OrionLX.

Some utility engineers tell us that each DNP3 IED applied in their substations must have its DNP3 point list custom configured, and this time-consuming step is required because they do not want the IED to report back every DNP3 point in response to the Integrity Poll by the RTU. When using the OrionLX as an RTU, this configuration step is not required for most IEDs.

Reason: Selecting OrionLX "Smart Reading" during DNP3 Master configuration in NCD results in the OrionLX performing a modified Integrity Poll where only the selected points are requested. So, if analog point #2, #3-5, #17-58, and #297 have been selected for access in the OrionLX configuration, the OrionLX will structure a customized poll using the objects (Analog, Binary, Counter...), variations and ranges for the desired points. Most IEDs (including SEL® relays) support this type of poll. Smart Reading works for all types of DNP3 data points.

OrionLX Release 8 Upgrades

This recent upgrade includes new features to simplify use, improve diagnostics, and enhance security.

Highlights:

- New Security Points to Meet NERC CIP Version 5 These new points indicate who is logged in or locked out, who is logged in at "root," or at SSH, or HTTP, etc. These points can be mapped into any Orion application: presented to SCADA, placed on an HMI screen, emailed out, etc.
- **Points Blocking** This is a new option that has NCD configuration and OrionLX web pages.
- **Ethernet Bonding** Enables Eth0 and Eth1 to work together as one redundant pair.
- **Static Routing** The new link called "Advanced Networking" allows you to configure static routes.
- Adding Background Color to Alarm page The user can already configure font color. Background color will have the same settings (Normal, HiHi, Alarm/Hi, Lo, LoLo, Acked).

