

2011 was a record year for utility bookings and new users. Thirty-one companies purchased their first Orion, including nine new users in renewable wind and solar farms, and fifty-nine companies bought their first Bitronics 50 Series instrument. Thank you for making this great year possible.

2012

HAPPY NEW YEAR

LATEST SOFTWARE

Orion5/5r Firmware Version: 1.41.0
OrionLX Firmware Version: 1.42.12
Orion NCD3 Version: 3.22
Bitronics 70 Series Firmware and Configurator: 3.07
Bitronics 50 Series Firmware: 3.03
BiView: 3.02



Bitronics® 50 Series Split-Core CT Option Utility-Grade Engineering Outperforms Competitive Solutions



Clamp-on CTs present a faster, easier way to install power measurement IEDs, but often come with unacceptable compromises to consistent and accurate measurements. Engineers at the Bitronics Power Measurement Group have elegantly addressed this issue with the new external split-core CT option, available for all 50 Series SCADA Meters. The split-core CTs improve on competing designs in three major aspects:

- **High-Permeability Nickel Core** - Bitronics has chosen a high quality, made in the USA CT. The CTs have heat-treated high-permeability ("superm") nickel core material that produces superior low-end response, phase angle response, and repeatability characteristics compared to ferrite core material used by some competitors. Nickel core material is not brittle, a major limitation of ferrite material. Even the tension exerted on a ferrite core CT by its secondary windings is often sufficient to chip or fracture the core, affecting its magnetic characteristics. Rough handling can easily fracture ferrite core CTs.
- **Spring Tensioned 2-Bolt Gate** - The spring-tensioned 2-bolt gate in the core is more durable than the hinge-and-snap type gates used by some competitors. The 2-bolt gate construction also produces less variation in

the magnetic characteristics as a result of repeated opening and closing of the gate. The mating surfaces where the gate closes the core are lapped for a near-perfect mating surface in order to minimize the impact on the magnetic characteristics caused by the necessity of having a break in the core.

- **Individually Calibrated** - The characteristics of excellent response and repeatability of the nickel core material make it possible to further linearize the output in the calibration of the 50 Series meter. The 50 Series meter is calibrated to linearize the response of the transformer, resulting in a significant improvement relative to the accuracy claimed by the CT manufacturer. As a result, the accuracy is equal to that of the standard 50 Series meter (which would operate directly in the primary CT circuit). That's the 0.2S class, defined by the IEC standard that governs revenue meter accuracy (IEC 62053-22 & 23, and generally described as 0.2% of reading).

Download the
 Split-Core CT Metering for 50 Series Datasheet
www.novatechweb.com/splitcore

DISTRIBUTECH® CONFERENCE & EXHIBITION

Join us January 24-26 in Booth 3205 for a
 Gourmet Coffee and demos of all our latest gear:

- RTU Panel Design and Fabrication
- OrionLX Direct HMI Video
- OrionLX IEC 61131-3
- OrionLX Renewable
- Split-Core CTs for Bitronics 50 Series
- New M653 Triple Display
- Hands-on demonstrations
- Bitronics 50 Series configuration



- Bitronics 70 Series recording
- Orion IEC 61131-3 configuration
- Orion WEBserver page creation
- OrionLX Security configuration: users, firewall, encryption, etc.

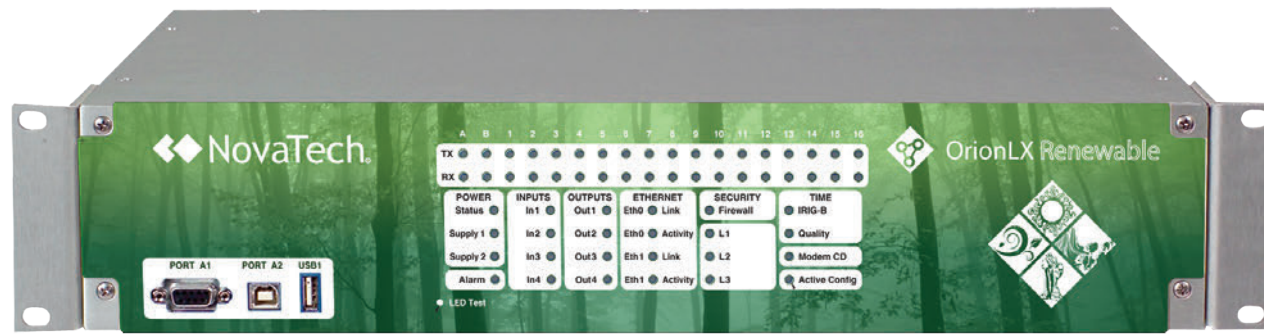
Complete details on shows and symposiums can be found at
www.novatechweb.com/events



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OrionLX Renewable



More than just a pretty faceplate: The OrionLX Renewable is pre-configured for renewable energy applications.

The OrionLX Renewable is an OrionLX with features and commercial terms tailored to the needs of wind, solar hydro, geo and biomass developers, including:

- Full featured standard OrionLX Renewable model with the physical and software options requested on 80% of renewable projects
- Ships within 10 days of order
- 10-year Warranty

Adding to the hundreds of OrionLXs in renewable energy applications is our new customer Pattern Energy LP's Spring Valley Wind Project, Nevada's first commercial wind energy project. NovaTech is committed to supporting renewable energy and sustainability programs. For each OrionLX Renewable sold, NovaTech will make a contribution to an accredited environmental stewardship organization.

More information on the OrionLX Renewable can be found on our website or contact Kevin Johnson, VP Business Development at kevin.johnson@novatechweb.com or (570) 498-4409.

The Wind Farm Applications Datasheet, describing the application of Orion and Bitronics products in wind projects, can be downloaded at: www.novatechweb.com/windfarm

New Bitronics® Firmware

70 Series 3.07

Firmware, Configurator, and Utilities CD were released in early November.

Features include:

- Increased pre- and post-trigger times in the disturbance recorders
- Corrected a minor issue detected in v3.05 and v3.06 that made the Configurator incompatible with older versions of firmware under rare occurrences.
- Improved BiView functionality with multi drop RS-485 (BiView v3.020).
- Improved Retriever software for bringing back record files via Modem (Retriever v1.18).

- Reduced available recording space when no extra flash is ordered from 4MB to 1MB (Firmware v3.070 and v2.240) to prevent issues related to sharing RAM space between firmware and recording.
- The 64MB flash memory option will be eliminated effective January 1, 2012, leaving the 256MB and 512MB options for recording needs.

50 Series 3.03

Firmware released in early December.

Features include:

- Modbus and DNP serial address settings are now configurable in front panel menu.
- Provided detection for clipping of the A/D signal.
- Provided error reporting on front panel display for signal clipping, out-of-calibration, measurement halt for firmware load, and protocol configuration errors.

OrionLX Direct VGA Video



With PCs applied in critical substations now being designated by NERC as "critical cyber assets", engineers need to consider alternatives to the substation PC. With the OrionLX and the new Direct Video option, the substation HMI PC can be replaced with a simpler VGA terminal, eliminating HMI-related security concerns.

The OrionLX Direct Video option is comprised of a new Multimedia Board with VGA port, audio port, USB ports and a third Ethernet port (with separate NIC). A High-Performance 1.33GHz CPU is also included to provide the additional support for

video, communications processing, protocol conversion and logic. Both Multimedia Board and High Performance CPU can be factory retrofitted into existing OrionLX Automation Processors.

The pages viewable as "Direct Video" are the same OrionLX pages that can be viewed as VGA video or secure webpages, including the OrionLX online Configuration and diagnostic pages, Alarm pages, Trending pages, Sequence of Event pages and custom user-design pages. An open source SVG graphics editor produces the Orion WEBServer HMI screens.

OrionLX drives graphics on local Substation HMI and presents screens to remote web browsers

Rear View with Multimedia Board installed

Multimedia Board

A complete security package is included with the Direct Video option including user sign-on, firewalling, user activity logging and authorization for executing controls, applying tags or acknowledging alarms.

As with all NovaTech Orion products, no special software needs to be purchased to setup and use the Direct Video option and no licensing fees are required.

Download the OrionLX Direct VGA Video Datasheet at www.novatechweb.com/directvideo

Training Courses in Lenexa, Kansas

Two standard training courses will be offered in Lenexa, KS at the end of February 2012:

2/28 – 2/29: **OrionLX Automation Platform** – Full Course (1½ days)

2/29 – 3/1: **Ethernet for the Utility Professional** (1½ days)

Attend either, or both. For details and reservations please contact BJ Weil at (913) 451-1880. For a description of these two training courses and a complete listing of Orion and Bitronics training courses please visit our utility educational services webpage at: www.novatechweb.com/utilitytraining