

TechTalk  
16CUP191K

Spring 2015



The new PowerPlex II has a built in Ethernet Switch and supports both DNP3 and Modbus TCP/IP.

Copyright © 2015 NovaTech, LLC. All rights reserved. All brand and product names mentioned in this document are trademarks of their respective owners. NovaTech is a registered trademark of NovaTech, LLC. Bitronics is a registered trademark of Bitronics LLC. SEL is a registered trademark of Schweitzer Engineering Laboratories.

- PowerPlex II Datasheet

- PowerPlex II Datasheet
- NovaTech Products for NERC CIP Compliance Document
- NovaTech D20 Upgrade Solution Datasheet

The NovaTech Identity Manager Software video describes the key features of the NovaTech Identity Manager (NIM) and NovaTech Connection Manager (NCM) products.

Visit: [http://www.novatechweb.com/nim\\_overview](http://www.novatechweb.com/nim_overview)

**May 5 - 7**

2015 VM DAEC Engineers & Operations Conference & Vendor Expo in Virginia Beach, VA

**June 16 - 17**

OrionLX/OrionLXm Automation Platform  
Lenexa, KS

## OrionLX Release: 8.5

## OrionLX Release: 8.5

**Orion NCD3 Version: 3.27**

**Bitronics M87x firmware: v4.08.4**

**Bitronics 70 Series Configurator: v4.08**

**Bitronics M57x firmware: v4.08.4**

## Bitronics 50 Series Firmware: v3.09

## Bitronics 60 Series Firmware: v2.02

## Bitronics PowerPlex II Firmware: v1.30

**BiView:** v3.04



## Bitronics PowerPlex II Automation Transducer

The PowerPlex II is a new Ethernet transducer that has found appeal both in OEM control applications in standby generation as well as in a utility application as a general purpose Ethernet transducer. A new display option and universal power supply will be coming Summer 2015.



The new PowerPlex II tethered display option is shown from the front and side.

## Reduce Set-up Time with New Bitronics 878 Configurator

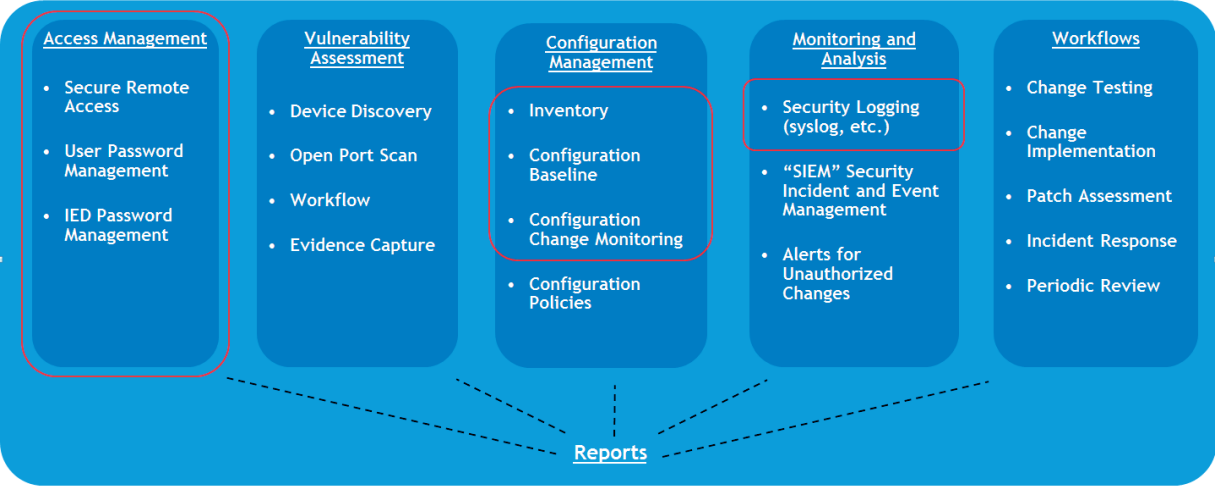
To make setup easier for the most popular option, DNP3, a new version of the 70 Series Configurator is provided that has an 878 mode that reduces the amount of options to be selected for basic setup, greatly simplifying and speeding up configuration. With the ability to support up to 56 I/O in a 3U high 13.5" wide design, the 878 offers excellent value and flexibility for substation I/O applications. Digital inputs, outputs, and transducer inputs are all supported and both serial and Ethernet communications are available to provide Modbus, DNP, or IEC 61850 protocols.



## Bitronics 878 High Density Substation I/O



NovaTech Products for NERC CIP Compliance



Summary of functions required in a complete NERC CIP system. Functions addressed by NovaTech products encircled in red.

NovaTech offers both enterprise products for NERC CIP compliance and OrionLX products for NERC CIP compliance. The two enterprise products are the NovaTech Identity Manager ("NIM") and the NovaTech Connection Manager ("NCM"). The OrionLX products are the Connection Manager Agent, Configuration Manager Agent, Syslog, and Security Monitoring Points.

Summary of Product Capabilities

- A. NovaTech Connection Manager ("NCM" at Enterprise) and Connection Manager Agent (in the OrionLX)
  - i. Establishes encrypted connections to the Orion Cyber Security Gateway in the substations
  - ii. Establishes encrypted connections - through Orion - to serially-connected or LAN-connected SEL® relays at the appropriate user access level (e.g. access level 1, access level 2, etc.)
  - iii. Monitors unpermitted keystroke combinations when accessing SEL® relays (e.g. "PAS", "SET")
- B. NovaTech Identity Manager ("NIM" at the Enterprise)
  - i. User Password Management features:
    - 1. Provides centralized authentication of users
    - 2. Can be configured to set up a Trust with an Active Directory authentication system
    - 3. Supports Role-based Authentication; each user (or group of users) can have their own privileges
    - 4. Supports creation of strong password rules that meet IT industry standards
    - 5. Complete logging of all changes
  - ii. IED Password Management features
    - 1. Provides centralized administration of IED passwords.
    - 2. Currently designed for management of SEL relay passwords.
    - 3. SEL relays can be placed into groups for simplified administration.
    - 4. Rules can be created for specific IED password construction.
    - 5. Complete activity logging provided

- 6. SEL relay Password Change Modes:
  - a. Normal Password Change Mode
  - b. Maintenance Mode
  - c. Emergency Mode (or "Password Checkout" Mode
  - d. Local Password Caching in the security gateway
- C. The NovaTech Configuration Manager Agent
  - i. The Orion Configuration Manager Agent retrieves configuration files from substation cyber assets (currently SEL relay settings and Orion configuration files), names and zips the files, and stores them in non-volatile OrionLX memory.
  - ii. Using the OrionLX "FileMover" feature, stored files are scheduled for automatic SFTP transfer to a Configuration Management server that performs NERC CIP-010 configuration management. If auto-transfer is not desired, stored files can be alternatively accessed and retrieved using a file transfer utility, or transferred to a thumb drive attached to the OrionLX.
  - iii. For users who prefer not to transfer configuration files to upstream servers at all, the Configuration Manager Agent also calculates a checksum on the zipped SEL setting files and Orion configuration files. This checksum can be accessed as a SCADA point.
- D. OrionLX Syslog
  - i. The OrionLX creates a "syslog" of all system alarms and events. These time-stamped logs, which can be sorted and filtered, contain the raw data required for NERC reporting, including access attempts, connection information and packages running on the OrionLX.
  - ii. The OrionLX "System Logger" function can be configured to make user-selected points available in syslog, including circuit breaker position and other events and alarms in Orion database not automatically logged to syslog.
- E. OrionLX Security Monitoring Points
  - i. Security Monitoring Points indicating who is connected and how they are connected can be brought out of the OrionLX. These points can be mapped to SCADA or to an alarm log.

(continued from previous page)

Summary of Commercial Offering

The NovaTech Identity Manager (NIM) and NovaTech Connection Manager (NCM) are sold as a bundled offering. These products can be sold on a hardware server provided by NovaTech, or can be loaded as a Virtual Machine (VM) on to a user-provided server using our Install instructions.

- NovaTech offers an Annual Support and Upgrade Package with the following services:
- Upgrades to maintain compliance with the latest NERC CIP Access Control and Configuration Management requirements
  - Phone support
  - Feature Upgrade (adding new IED support, etc.)

The Orion Connection Manager Agent is sold as a software option on the OrionLX CPX or the OrionLXm. This agent can be installed on an existing OrionLX CPX / OrionLXm in the same

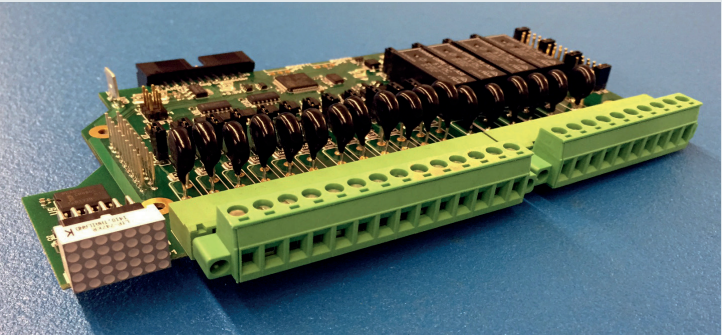
manner as any other software option. There is no support or upgrade fee for this agent.

The two OrionLX security products for monitoring – Syslog and Security Monitoring Points – are included with the OrionLX CPX and the OrionLXm for no extra charge.

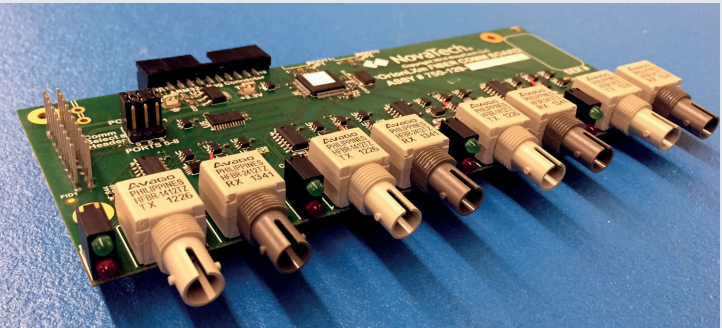
For more details on the NovaTech NERC CIP products, please visit our website to access our document "NovaTech Products for NERC CIP Compliance" and watch the video summarizing key product features at: [http://www.novatechweb.com/nim\\_overview](http://www.novatechweb.com/nim_overview)

New OrionLXm Option Modules Available

- I/O Module**
  - 12 Digital Inputs / 4 Outputs
  - Part Numbers:
    - "IL" = Low Voltage Inputs, and Outputs (12-48V dc nominal turn on voltage)
    - "IH" = High Voltage Inputs, and Outputs (125V dc nominal turn on voltage)
- Bit Synchronous Port Module**
  - For user with "Bit Synchronous" protocols such as Conitel, CDC Type I and II, and Redac.
  - Three RS-232/485 and one Bit Synchronoous (DB9M) port is available.
  - Part Number: T4
- Serial Fiber Module**
  - Four ST Fiber ports
  - Can be configured for single IED or multiple IED connections
  - Part number: F4



Discrete I/O Card



ST Fiber Serial Card