

The Orion DA-Master is a NovaTech Orion with specialized software that allows it to function as an independent Master Controller in a single or multi-feeder, single or multi-substation Distribution Automation System. The DA-Master polls Intelligent Electronic Devices (IEDs) of multiple makes and models for system information, analyzes the data, and initiates trip-close commands to carry out user-defined system reconfiguration in response to abnormal system conditions. If remote monitoring and control is required, the DA-Master can communicate with the existing SCADA Master or RTU via any of a number of available protocol options.

As an enhancement to NovaTech's Orion family of automation platforms, the DA-Master leverages all of the strengths inherent in the Orion family: support for multiple protocols; available onboard RS-232, RS-485, and fiber-optic ports; available internal dial-up modem, Ethernet TCP/IP ports, and discrete inputs and outputs; and easy to use NovaTech Communications Director (NCD) configuration interface. Most importantly, the DA-Master contains no fans, no hard drives, and no moving parts.

Automation logic configuration, similar to configuration of the standard Orion product, is easily accomplished using NCD, providing a simple drag and drop interface. NCD drastically reduces configuration time by pre-packaging IED protocol information to allow the user to focus on the project, rather than learning about protocols and IEDs. Offline configuration allows the user to configure the system without connecting to the IEDs, enabling configuration outside of the substation. Separate polling groups can be configured to allow for various update times on a per point basis, or unsolicited responses from IEDs can be accepted.

State of the art onboard diagnostics allow the user to view port communications, data values, and communication statistics. These tools provide a clear definition of device and point status.

A DA-Simulator software package is also available. The DASimulator package allows the user to model the distribution system, simulate different fault conditions at each IED and verify automation schemes before equipment is installed in the field.

The DA-Simulator combines the functionality of the DA-Master software with the NovaTech NovaView Plus GUI software to allow the user to test automation schemes and view logic feedback graphically in either tabular or operational one-line displays.



## Orion DA-Master

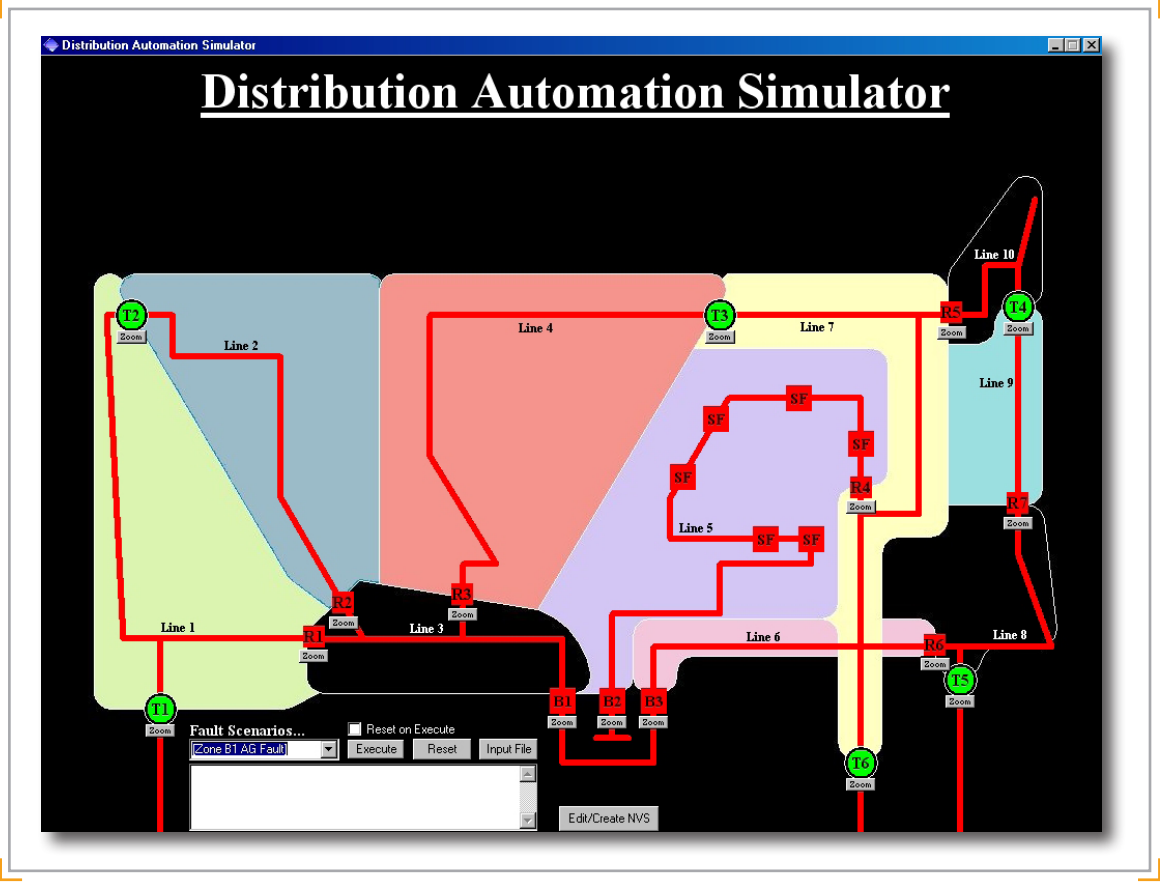
Distribution Automation Controller



DA-Master is a software module for either the Orion5, Orion5r or OrionLX Automation Platform

### Highlights

- Controls one or more automation zones, with each zone typically comprised of multiple IEDs.
- Communicates directly with IEDs in their native protocol, providing a 'one box' solution to Distribution Automation.
- Functions as an RTU; polls IEDs for data, responds to SCADA polls and routes commands to IEDs.
- Interfaces directly with existing IEDs; supports legacy and industry standard protocols. Proprietary protocols also available.
- Supports multiple automation profiles which can be changed remotely.
- Utilizes NovaTech NCD software for configuration with simple drag and drop user interface to drastically reduce set-up time and complexity.
- Supports simultaneous use of different communication media, including radio and fiber.
- Operates in a master/slave mode; supports unsolicited report by exception (protocol dependent).
- Generates a time-stamped event log of system faults and trip-close operations.
- Monitors feeder/substation load to prevent overload during system reconfiguration.



Complicated DA schemes, such as the one depicted above, can be modeled with the DASimulator package

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