



## Orion5rL Upgrade



The Orion5rL Upgrade provides the OrionLX CPU, operating system and software features plus conversion utilities to update your existing Orion5r. As with the OrionLX, the Orion5rL is designed for larger and more advanced substation automation applications requiring:

- **Increased Security** - All ports, including front port, locked down with strong passwords, security logging, a firewall and secure protocols
- **More SCADA Points** - increased from 5,000 to 20,000
- **More Ethernet Connections** - increased from <32 to 96
- **Multiple Orions in Larger Substations** - new cascaded Orions option maintains one configuration for all Orions and reduces configuration steps
- **More Flexible SOE and Alarm Reporting** - now includes Alias function to create new name for points, expanded alarm messaging and retentive function on power down
- **More Time Management Options** - now receive IRIG-B and send out NTP, receive NTP and send out IRIG-B
- **More Options to Process Non-Operations Data** - upgrade provides the option for expanded memory (256MB, 1GB or 4GB) plus a new PostgreSQL relational database
- **New Data Dissemination Options** - Email option, .csv SER record retrieval

Although all Orion5rLs will include IRIG-B (whether or not the Orion5r has IRIG-B), all other physical features on the Orion5rL remain the same as on the Orion5r that was upgraded - number and type of Ethernet port(s), modem, physical front port, serial cards, etc.

### Upgradeable Orion5r Models

Any Orion5r with at least one Ethernet port can be upgraded to an Orion5rL. All Orion5r protocols and software options, with the exception of Modbus Plus and customized webpages, can be converted using a conversion utility in the latest Orion configuration tool: NCD3.

The current Orion5r options, "Web Alarms" and "Archive," are not offered on the Orion5rL/OrionLX. These have been superseded in the Orion5rL/OrionLX by the Alarm/Archive/Retentive option (AAR) which provides all of the functionality of Web Alarms and Archive but uses an open relational database and provides more advanced display and dissemination options. Note that AAR requires optional expansion memory on the Orion5rL/OrionLX: 256MB, 1GB or 4GB.

### Physical Upgrade Procedure

In order to fully test and burn-in upgraded units, NovaTech suggests the Orion5rL physical upgrade be performed at our Kansas production center:

**NovaTech LLC, 13555 W. 107th St, Lenexa, KS 66215**

If other physical upgrades are required, (addition of Ethernet port(s), modem, comm cards, etc), these can be priced and included in the upgrade proposal.

### Orion5r-to-Orion5rL NCD (.ncd) Configuration Conversion

A software utility is provided in NCD3 to convert configured protocols and software options to a format compatible to the Orion5rL and OrionLX, plus remove the time settings and security sensitive settings from the Orion5r configuration. The time and security settings must be re-entered through a secure web browser interface to the Orion5rL. The NCD3 conversion utility partially converts Web Alarms and Archive to AAR, with some remaining settings required to be made manually.

The **Orion5r-to-Orion5rL Math and Logic (.bas) conversion** is also performed in the NCD3 conversion utility. Depending on how the specific Math and Logic is written, a few names may need to be manually changed. See Orion5rL User Manual for details.

The **Orion5r-to-Orion5rL custom webpage conversion** is accomplished by our factory application engineers, who use an internal conversion utility. Please contact NovaTech Customer Support at 913.451.1880 or 888.451.1881 to set up conversion support.

NovaTech systems engineers can convert and test user .ncd, .bas and web page configurations. Please request a proposal for this service as part of the upgrade.

### Warranty

NovaTech provides a one-year limited warranty.

### Getting Started

Contact your local NovaTech representative to obtain a proposal for:

- 1) The basic Orion5rL physical upgrade
- 2) Additional expansion memory if required
- 3) Other physical upgrades if required
- 4) Other Orion5rL-supported software options (email, Cascaded Orions, etc.) if required
- 5) Configuration conversion services if required

### Contact:

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