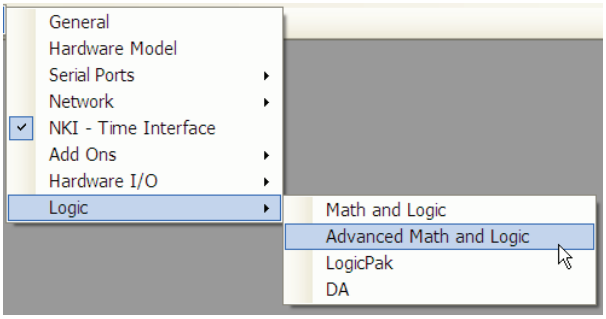
Advanced Orion Math and Logic

Advanced Orion Math and Logic provides OrionLX™ users with a sophisticated logic engine for evolving OrionLX applications. This new logic editor allows users to access and manipulate data – not just data from IEDs, but data from the Orion SQL database and data from tables, arrays and strings. In addition, larger Orion math and logic configurations execute faster while imposing less burden on the OrionLX CPU.

Based upon the Lua programming language (www.lua.org/), Advanced Orion Math and Logic is a "programmers language" that maintains similar syntax and ease-of-use of the existing Orion Math and Logic.



Compatibility and Requirements

- For OrionLX only, firmware version 6.0 or higher
- Requires NCD3 version 3.11 or higher
- Users can configure either Orion Math and Logic or Advanced Orion Math and Logic, but not both in the same configuration.
- OrionLX can be "keyed" with both Orion Math and Logic and Advanced Orion Math and Logic. This enables the OrionLX to run a configuration with Orion Math and Logic **or** a configuration with Advanced Orion Math and Logic.
- Other OrionLX options will run with Advanced Orion Math and Logic, including Orion LogicPak and DA Logic.

Conversion Utility

A no-charge conversion utility is provided in NCD3 version 3.11 or higher that converts the Orion Math and Logic .bas file to Advanced Orion Math and Logic .lua file.

Steps:

Select .bas file
NCD will create a .lua file with same name
Option to rename file if desired
(Operates in a similar manner to the Orion5r-to-OrionLX conversion utility in NCD3)

Availability

- Advanced Orion Math and Logic is supported in the latest NCD3 version 3.11 release and the latest OrionLX version 6.0 firmware release. Both available now.
- Latest Logic manual (in version 3.11 "Docs" directory) describes operation and commands in Advanced Orion Math and Logic.

Ordering Information

Advanced Orion Math and Logic (option #99)

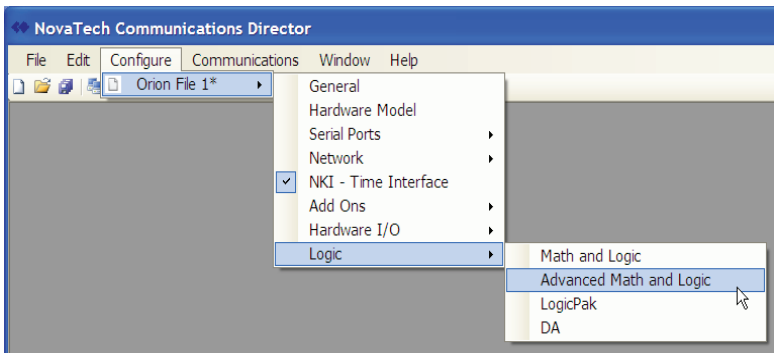
Advanced Orion Math and Logic Features

- Performs all of the math and logic functions in the existing Orion Math and Logic software module (option #83)
- Executes much faster than standard Orion Math and Logic - 100 times faster for most applications
- Imposes 90% less burden on OrionLX CPU compared to Orion Math and Logic – a typical application showed a reduction from 11% CPU burden to less than 1%
- Retrieves data from OrionLX PostgreSQL database
- Reads from and writes to serial communication ports and TCP sockets
- Handles file I/O (open/read/write/close)
- Retrieves and processes a .csv file with points in an array
- Provides new standard library functions for:
  - Threading support
  - String manipulation / Regular Expressions / Pattern Matching
  - Real-time OrionLX poll modification (in development)

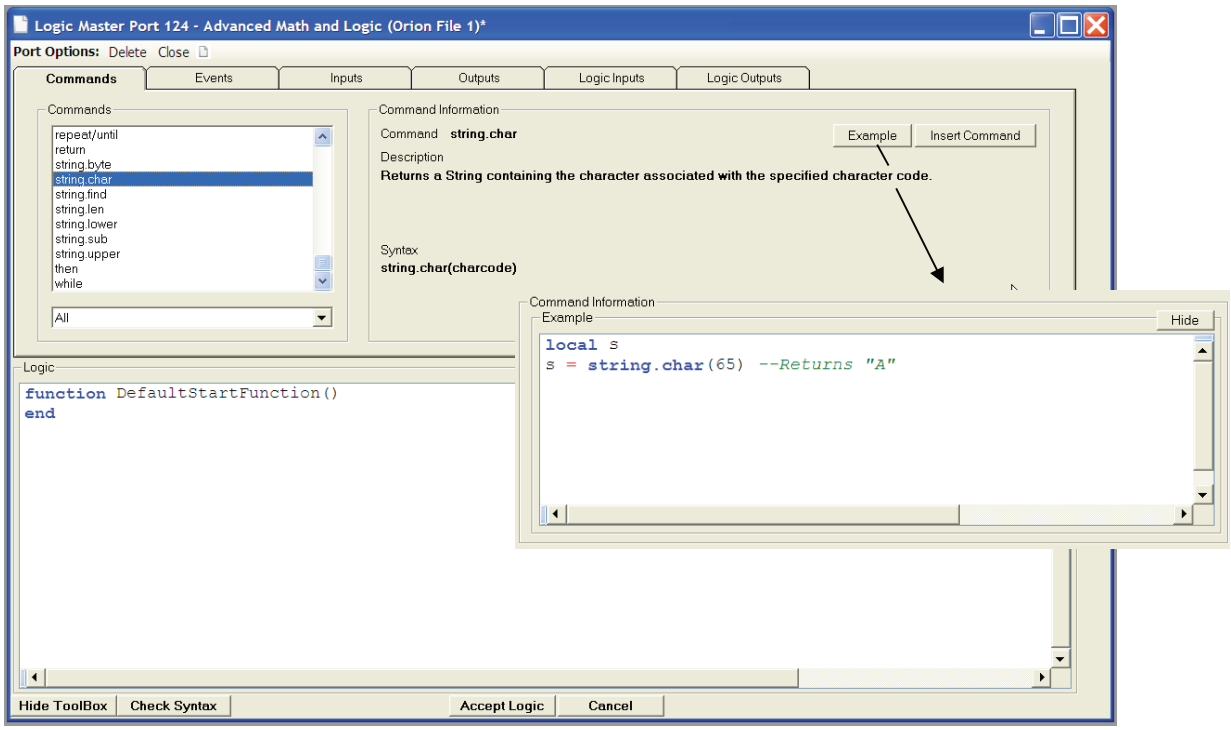
New Applications Supported

- Advanced Load Checking in Distribution Automation schemes can be accommodated by instructing the OrionLX to load tables of historical utility load data upon start-up.
- Send data to a serial printer
- Real-Time Poll Modification will enable pole-mounted devices to be polled less frequently if power is interrupted, preserving battery life.
- Fast control logic and larger control schemes can now be handled with lower CPU burden.

NovaTech®



Four Orion math and logic options are now available. When ordered, the new Advanced Math and Logic is listed under the "Logic" selection in NCD3 (version 3.11 or higher) along with the other three options: "Math and Logic," "LogicPak" and "DA Logic," if ordered.



The Advanced Orion Math and Logic configuration screen is similar to the existing Math and Logic screen. For each command, a description, syntax and example are provided. A "Check Syntax" feature is provided to check syntax prior to loading to OrionLX. Customers can work with NovaTech Engineering to add libraries of other functions (example library at http://www.keplerproject.org/luasql/).

NovaTech

novatechweb.com