

HC-LINK COMMUNICATION SUITE

Holland-Controls proudly presents its PC application software HC-LINK. This application provides an extremely fast and redundant data & logging connection to the HC-CORE3 turbine control system without the need of any additional drivers.

Most PLC manufacturers do provide an OPC server for their product. It is our experience that ease of installation & configuration, features, robustness, PC platform compatibility and price level do not meet reasonable expectations. It is for this reason that Holland-Controls initially developed its own OPC / DDE server suite for direct and autonomous redundant connection to Siemens PLCs.

Since initial development, additional features have been added such as an integrated high-speed data logger and a multiple-instance Pre-Post Trip event-driven logger.



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Key features

- OPC DA Server – connects to almost any HMI application
- DDE Server – make live data connections to your own Excel spreadsheets possible
- OPC Client (future – connects to third-party OPC servers not already supported natively by HC-Link)
- Siemens S7 Communication via Ethernet (Supporting S7-200, 300, 400, 1200 and 1500 PLCs)
- Rockwell Control/Compact Logix communication (future) via Ethernet (supporting all Lxx-range CPUs)
- Connection to multiple S7 nodes simultaneously
- Integrated handling for fully dual-redundant communication using standard PC hardware
- True 10 ms high speed data logger on a vast quantity of tags (>1000); actual speed depending on quantity of data and PLC CPU model
- True 10 ms high speed event driven PPT (Pre-Post-Trip) logger. Multiple instances for multiple nodes can be set up.
- Easy configuration with human readable XML/CSV files or via the intuitive user interface
- Communication test diagnostics tool and internal diagnostics logging system eases troubleshooting
- Changes in configuration (IP addresses, Tags) can be applied without requiring a restart
- Runs standalone
- No system registry trashing. Only the necessary entries for the OPC server are made on the fly
- Installs in seconds

All protocols in one application

Combining the OPC, DDE, S7 and Control Logix communication (future) and further standards in one application reduces the effort required for configuration.

Because of synchronized refreshing in one application, all data is passed through at maximum rate without the possibility of data loss. With stand-alone applications this would not be possible to achieve.

Viewing data

Holland-Controls has developed a unique viewing tool HC-PLOT. This can read multiple HC-LINK files and you can overlay them any way you like (multiple X and Y-axes), carry out diagnostics and view as scatter plots. It features a phenomenal ability and speed to read huge log files (14 GB tested) that even Office applications cannot manage.

Native communication with Siemens S7 and Rockwell PLCs

HC-LINK is capable to communicate directly via Ethernet with most Siemens and Rockwell PLC's (under development). This helps building a light weight visualization of process data without loss of performance. Having direct control of the data that is passed to the PLC's it is possible to permit write operations only for a specific memory type (e.g. DB –memory – for Siemens). This prevents unwanted situations where PLC tags are written unintentionally by the HMI application.

HC-LINK offers its own redundancy control mechanism able to use standard network interface cards. By using two PC network cards and two PLC network cards up to four communication routes are achieved and monitored. No special hard-net cards required! HC-LINK provides extensive live status information about the defined interfaces via its OPC and DDE Servers towards the HMI application. Beside link-alive information this includes statistics on the link performance.

Integration of customer specific protocols

Using a modular software design and having developed HC-LINK in-house makes it possible for Holland-Controls to implement customer specific protocols on-demand.

Siemens S7 - Configuration Test

Selected

Test-1

Results:

Running Configuration Tests...

System Details:

Name: Test-1

Prefix: Test

Amount Items: 869

Amount Connections: 1

Verifying connections:

- Connection (172.11.11.1 -> 172.22.2.2)

Active Connection: 172.11.11.1 -> 172.22.2.2

All Item Data Has Successfully Been Collected!

Collection Of Data For All Items Took: 4ms (average = 4.00ms, n = 1)

Finished Configuration Tests!

Simple licensing model

HC-LINK comes with a non-expiring single system license. This means it only needs to be activated once by linking it to the PC hardware it runs on. It then keeps running without interruptions due to licensing issues.

Further extensions

The following extension is currently planned:

- MS-SQL server based data logging
- Native Rockwell communication
- OPC-DA client