

National Instruments read-only Communication Driver

This document has the specific information related to the driver configuration. For a generic explanation on Devices, Channels, Nodes and Points configuration, please refer to reference guide.

This driver allows only to READ the channels, not write. The reason to have a read-only hardcoded driver to run on critical proceses where the project should not be allowed to have a writing configuration option.

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Section 1 – Summary Information

Communication Driver Name: NIDataSockets

Implementation DLL: T.ProtocolDriver. NIDataSockets.dll

Protocol: National Instruments Data Sockets

Interface: TCP/IP

Description: NIDataSockets communication driver implements communication with National Instruments softwares, including LabView and others which are compatible with the National Instruments Data Sockets interface.

PLC types supported: National Instruments Labview

Multi-threading: user defined

Max number of nodes: user defined

PC Hardware requirements: Standard PC Ethernet interface board

Supported Operands: Any tag defined on target system

Section 2 – Channel Configuration

Protocol Options

- **Maximum size of blocks:** Defines the maximum of addresses in a read block.
- **Message Format:** defines the protocol used for the Data Sockets communication
Options: DSTP, OPC, LOOKOUT, HTTP and FTP

Settings

TCP/IP:

- **NodeConnections:** Defines the maximum number of parallel requests that will be sent to each node (asynchronous communication)

Section 3 – Node Configuration

Station Configuration

TCP/IP:

- Station syntax: <IP address>

Where : <IP address> = IP address of the slave device in the network

You can also add /<Branch> at the Station name

Ex: 192.168.1.1

Ex.: 122:168.1.1/MyTags

Section 4 – Point Configuration – Address field

The syntax for the communication point is:

InitialBranch/TagList/Tag1

Note: If you have many tags sharing the initial branches, you can also remove the InitialBranch from the Point address and move it to the Node-Station address

Section 5 – Troubleshoot

The status of the driver execution can be observed through the diagnostic tools:

- Trace window
- Property Watch
- Module Information

The above tools indicate if the operations have succeeded or have failed where the status 0 (zero) means success. Negative values are internal error codes and positive values are protocol error codes.

Refer to product online documentation for more information on using the debugging tools

Revision History

Revision	Description	Date
A	Initial Revision	September, 2014