

# DHRIO

## Summary Information

**Communication Driver Name:** DHRIO

**Implementation DLL:** T.ProtocolDriver.DHRIO.dll

**Protocol:** DH+ network

**Interface:** TCPIP

**PLC Types Supported:** PLC5 or SLC500 devices using 1756-DHRIO (ControlLogix DHRIO Communication Module) in ControlLogix PLC

**Manufacturer:** Rockwell

**PC Hardware Requirements:** Ethernet board

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## Channel Configuration

### Protocol Options

**Model:** Select the PLC Model: 5 or 500

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## Node Configuration

### Station Configuration

Station syntax: <IP>;<Port>;<BackPlane>;<DHRIO Slot>;<DHRIO Channel>;<DH+Node>

Where :

- **<IP>** = The IP address of the ControlLogix device in the network
- **<Port>** = The TCP port where the ControlLogix device is listening (default is 44818)
- **<BackPlane>** = Used in the device
- **<DHRIO Slot>** = The slot used for the 1756-DHRIO module in ControlLogix
- **<DHRIO Channel>** = The channel used for the 1756-DHRIO module in ControlLogix
- **<DH+Node>** = The node used in the DH+ network

### Station Example

The PrimaryStation is: 192.168.1.101 ; 44818 ; 1 ; 2 ; A ; 0

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## Point Configuration

### Address

The syntax for the AB Ethernet communication points is: <FileType><FileNumber>.<Address>[Parameter]

- **FileType:** the valid values are:

Term	Read	Write	Bit Read	Bit Write	Data Type	Address Size
N Integer	Yes	Yes	Yes	Yes	Word	2 bytes
B Binary	Yes	Yes	Yes	Yes	Word	2 bytes
F FloatPoint	Yes	Yes	Yes	Yes	Single	4 bytes

O OutputLogical	Yes	Yes	Yes	Yes	Word	2 bytes
I InputLogical	Yes		Yes		Word	2 bytes
S Status	Yes	Yes	Yes		Word	2 bytes
T Timer (Model 500 only)	Yes	Yes			Word or Bit	2 bytes or 1 bit
R Control (Model 500 only)	Yes	Yes			Word or Bit	2 bytes or 1 bit
C Counter (Model 500 only)	Yes	Yes			Word or Bit	2 bytes or 1 bit

- **FileNumber:** The File number related to the FileType
- **Address:** The Element address in the configured File
- **Parameter:** Additional parameter for the Timer, Control, and Counter

Ex.: .Len, .Pre, .ACC, .EN, .TT, .DN, etc.

## Address Example

Address= N7:10

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## Troubleshoot

The status of the driver's execution can be observed through the diagnostic tools, which are:

- Trace window
- Property Watch
- Module Information

The above tools indicate if the operations have succeeded or have failed. A status of 0 (zero) means communication is successful. Negative values indicate internal driver errors, and positive values indicate protocol error codes according to AB specification.