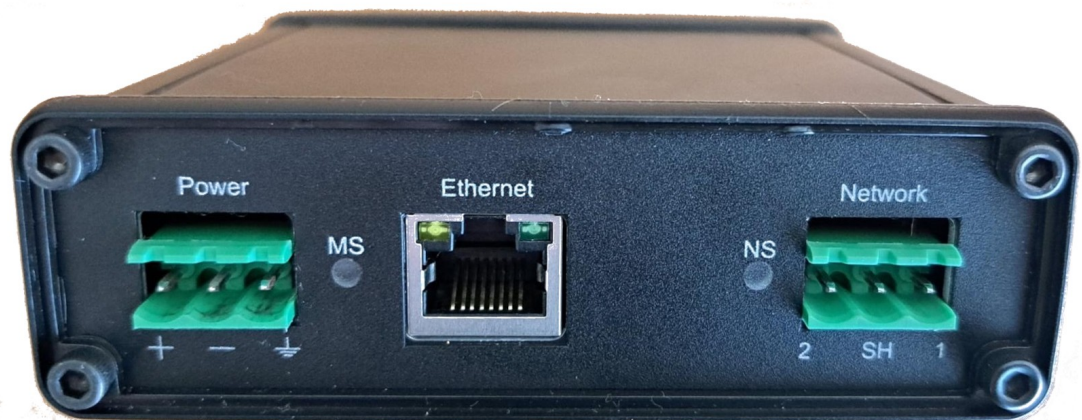


**CIP Data Table Read/Write
Operations of the
AN-X-DHP Firmware
on the
AN-X4-AB-DHRIO Module**

Technical Note



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Introduction

On later versions of ControlLogix processors, when using redundancy, messaging to PLC-5 and SLC legacy controllers has been removed.

AN-X4-AB-DHP firmware version 4.16.01 or later supports CIP Data Table Read and Write to access legacy PLC's on Data Highway Plus.

HMI IP Alias is used to map IP addresses to Data Highway Plus stations and PLC address are entered as a symbolic address.

Supports I, O, S, B, T, C, N and F file read.

Supports B, N and F file write.

HMI IP Alias

The IP Alias defines a link between an AN-X aliased IP address and a Data Highway Plus station.

AliasEnetIP must be specified to enable aliasing for Ethernet/IP commands.

By default the AN-X uses PLC-5 Typed Read/Write commands for CIP Data Table Read/Write.

The CipSlc option defines a station as a SLC so Protected Typed Logical Read/Write commands are used instead.

Here's a sample HIM IP Alias configuration file:

```
AliasEnetIP    ; Enables Ethernet/IP Alias
```

```
AliasIP x.x.x.170 -> DHP 0o70
```

```
AliasIP x.x.x.172 -> DHP 0o72  CipSlc
```

```
AliasIP x.x.x.174 -> DHP 0o74
```



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ControlLogix MSG Example

Communication

The screenshot shows the 'Message Configuration - MsgWrt' dialog box with the 'Communication' tab selected. The 'Path' field is set to 'EnBtLocal, 2, 10.10.0.170'. The 'Broadcast' field is empty. The 'Communication Method' section has 'CIP' selected, with 'Channel' set to 'A', 'Destination Link' set to '0', and 'Destination Node' set to '0' (Octal). The 'CIP With Source ID' option is also visible. The 'Connected' and 'Cache Connections' checkboxes are checked. At the bottom, the 'Enable' radio button is selected, and the 'Done' radio button is also selected. The 'Done Length' is set to '5'. The 'Error Code', 'Extended Error Code', and 'Timed Out' options are unchecked. The 'Error Path' and 'Error Text' fields are empty. The 'OK', 'Cancel', 'Apply', and 'Help' buttons are at the bottom right.

EnBtLocal is the Ethernet module in the local ControlLogix rack.

2 indicates Ethernet port on that module.

10.10.0.170 is the aliased IP address for the PLC-5 on the AN-X DH+ network.

Configuration

In later versions of programming software the CIP Data Table Read Source Element or CIP Data Table Write Destination Element may not allow a colon in the address (N7:100 for example). In this case, an underscore may be used instead (N7_100 for example).

Message Configuration - MsgWrt

Configuration* | Communication | Tag

Message Type: CIP Data Table Read

Source Element: N7_100

Number Of Elements: 5

Destination Element: RdIntData

New Tag...

☒ Enable ☐ Enable Waiting ☐ Start ☒ Done Done Length: 5

☐ Error Code: Extended Error Code: ☐ Timed Out

Error Path:

Error Text:

OK Cancel Apply Help

Message Configuration - MsgWrt

Configuration | Communication | Tag

Message Type: CIP Data Table Read

Source Element: N7:2

Number Of Elements: 5

Destination Element: RdIntData

New Tag...

☒ Enable ☐ Enable Waiting ☐ Start ☒ Done Done Length: 5

☐ Error Code: Extended Error Code: ☐ Timed Out

Error Path:

Error Text:

OK Cancel Apply Help