

KB2014-01: USING THE AN-X2-AB-DHRIO GATEWAY

The Prosoft Technology AN-X2-AB-DHRIO Gateway connects a TCP/IP network to a Data Highway Plus network by emulating a ControlLogix rack with a 1756-ENET and a 1756-DHRIO module. This document describes the steps to configure DHX software to use the AN-X2-AB-DHRIO Gateway.

Applies To:

Any system running DHX software that needs to communicate to nodes on a Data Highway Plus network by going through an AN-X2-AB-DHRIO Gateway.

Requirements:

- Cyberlogic ControlLogix Gateway Driver, found in all DHX Suite products.
- AN-X2-AB-DHRIO Gateway (<http://www.prosoft-technology.com/>) by Prosoft Technology Inc.
- A Data Highway Plus network connected to the AN-X2-AB-DHRIO Gateway and, at least, one other node.
- A TCP/IP network connected to both the AN-X2-AB-DHRIO Gateway and the system running the DHX software.

Note

Third-party products mentioned in this document are posted for informational purposes only. Cyberlogic is not affiliated with Prosoft Technology Inc. Cyberlogic does not endorse, promote or warrant the operation of the AN-X2-AB-DHRIO Gateway, or any other products or services offered by Prosoft Technology Inc, for any purpose or fitness. Other software or hardware products with similar or equivalent features and functions may be available on the market.

Objective:

Communicate with a node on the Data Highway Plus network via the AN-X2-AB-DHRIO Gateway.

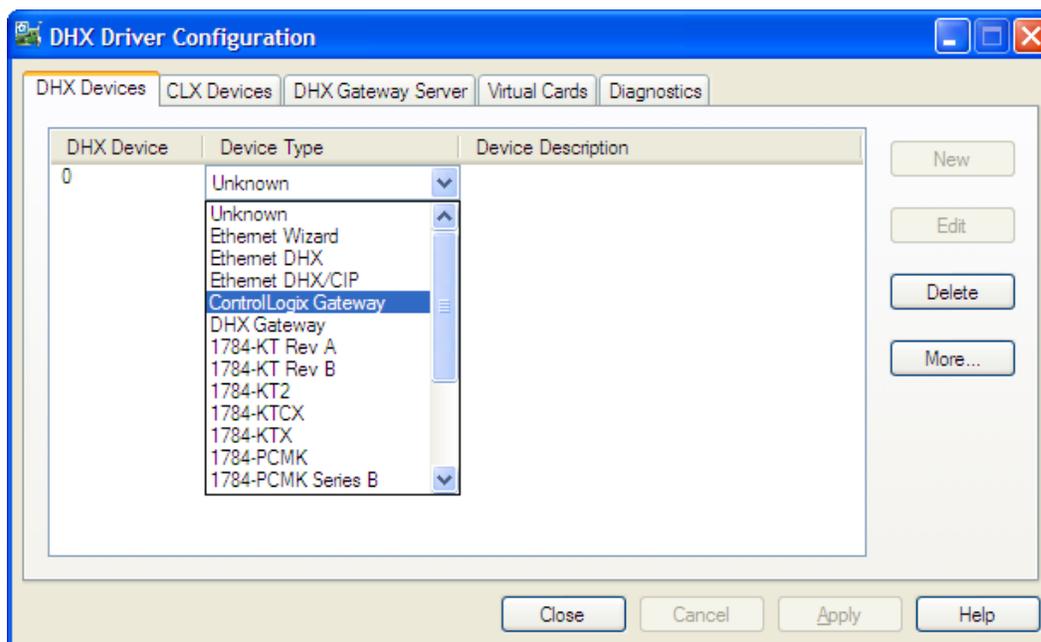
Procedure:

Note

The following procedure assumes the AN-X2-AB-DHRIO Gateway is already configured with a valid IP address and is already configured to operate as a node on a Data Highway Plus network with a valid Data Highway Plus address. See the documentation that came with the device for more information.

It also assumes that a copy of one of Cyberlogic's DHX software suites has been installed on the system. See www.cyberlogic.com for more information on installing the DHX software suites.

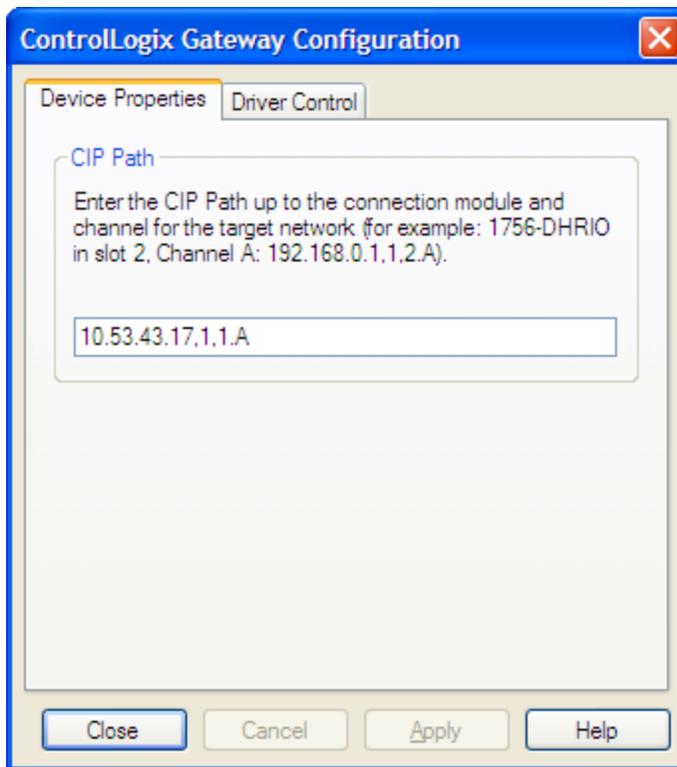
1. Start the DHX Driver Configuration editor.
2. Click **New** and create a new ControlLogix Gateway device.



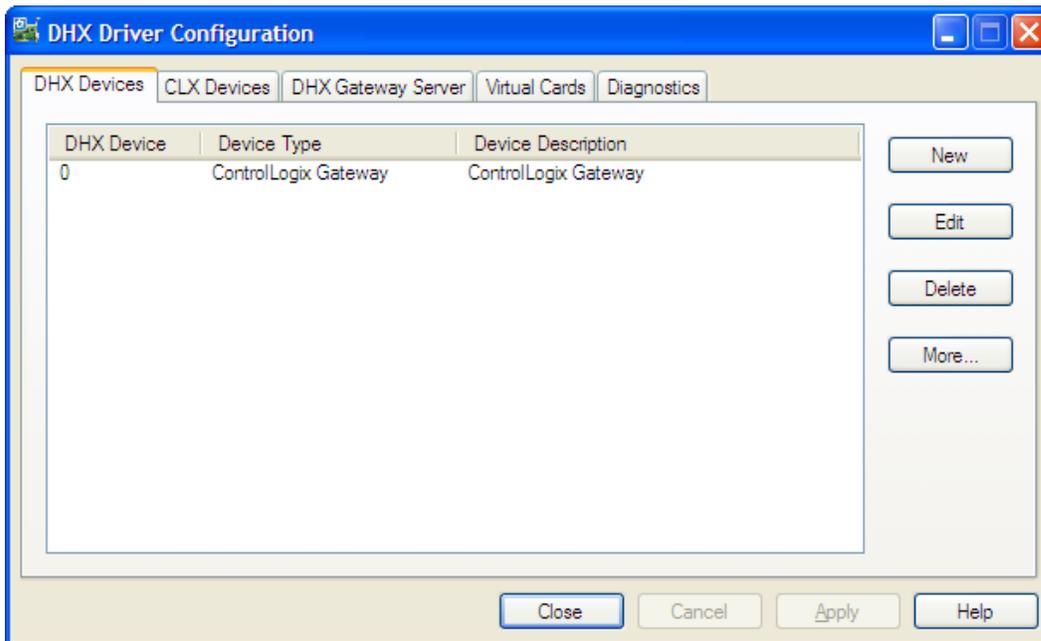
3. You are now asked to enter a CIP path. The correct form for the AN-X2-AB-DHRIO Gateway is:

GatewayIpAddress,1,1.A

where GatewayIpAddress is replaced with the IP address of the AN-X2-AB-DHRIO Gateway.

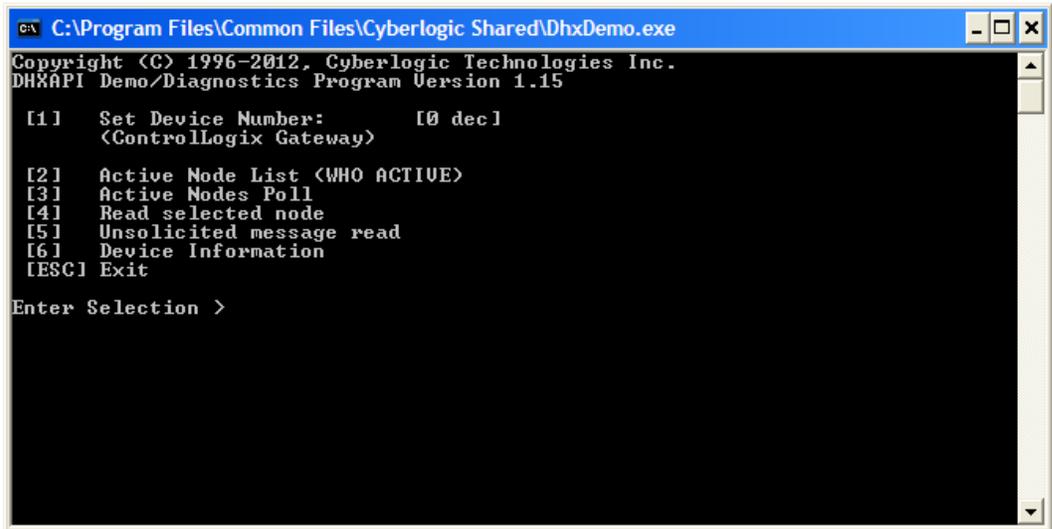


4. Click **Close**.
5. You are now asked if the ControlLogix Gateway Driver should be started. Click **Yes** and then click **OK** after the driver starts.



The DHX software has now been configured and should be able to communicate to nodes on the Data Highway Plus network. These next steps will test those communications.

6. Click on the ***Diagnostics*** tab of the DHX Driver Configuration editor.
7. Click the ***DHX Demo*** button.



```

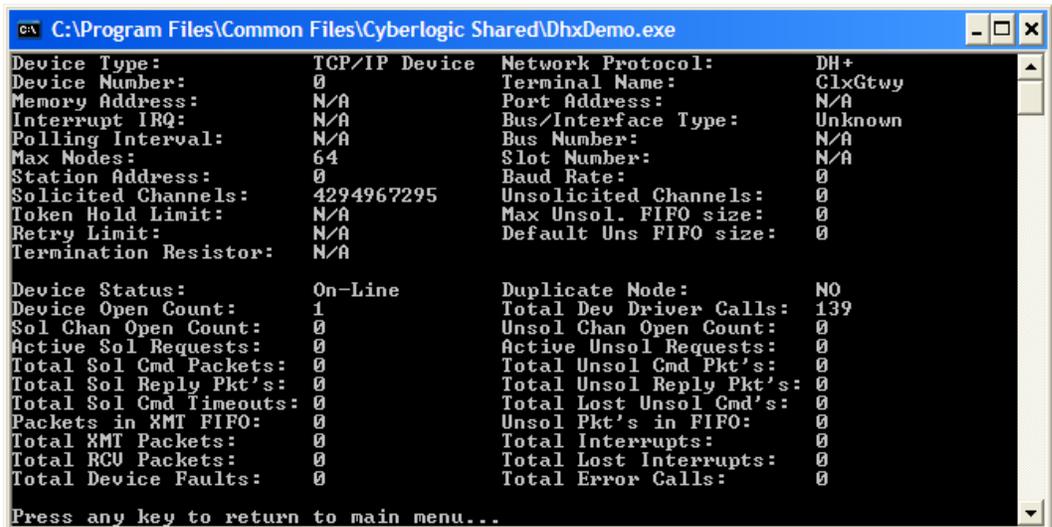
C:\Program Files\Common Files\Cyberlogic Shared\DhxDemo.exe
Copyright (C) 1996-2012, Cyberlogic Technologies Inc.
DHXAPI Demo/Diagnostics Program Version 1.15

[1] Set Device Number:      [0 dec]
    <ControlLogix Gateway>

[2] Active Node List <WHO ACTIVE>
[3] Active Nodes Poll
[4] Read selected node
[5] Unsolicited message read
[6] Device Information
[ESC] Exit

Enter Selection >
  
```

8. Press **6**. You should see a screen with a lot of information. This verifies that the driver is running.



```

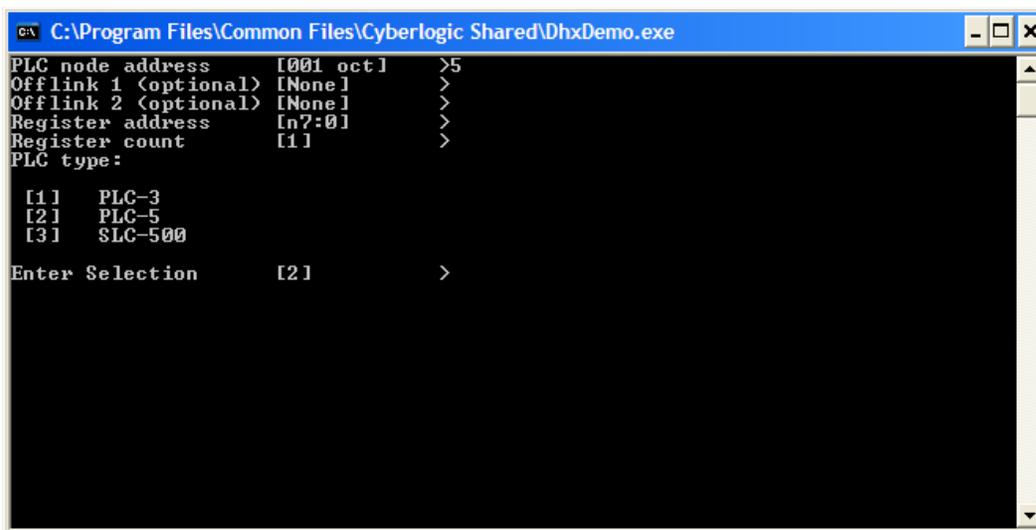
C:\Program Files\Common Files\Cyberlogic Shared\DhxDemo.exe
Device Type:      TCP/IP Device   Network Protocol:  DH+
Device Number:   0                Terminal Name:    ClxGtwy
Memory Address:  N/A              Port Address:    N/A
Interrupt IRQ:   N/A              Bus/Interface Type: Unknown
Polling Interval: N/A            Bus Number:      N/A
Max Nodes:       64              Slot Number:     N/A
Station Address: 0                Baud Rate:       0
Solicited Channels: 4294967295    Unsolicited Channels: 0
Token Hold Limit: N/A            Max Unsol. FIFO size: 0
Retry Limit:     N/A            Default Uns FIFO size: 0
Termination Resistor: N/A

Device Status:    On-Line        Duplicate Node:   NO
Device Open Count: 1            Total Dev Driver Calls: 139
Sol Chan Open Count: 0          Unsol Chan Open Count: 0
Active Sol Requests: 0          Active Unsol Requests: 0
Total Sol Cmd Packets: 0        Total Unsol Cmd Pkt's: 0
Total Sol Reply Pkt's: 0        Total Unsol Reply Pkt's: 0
Total Sol Cmd Timeouts: 0       Total Lost Unsol Cmd's: 0
Packets in XMT FIFO: 0          Unsol Pkt's in FIFO: 0
Total XMT Packets: 0            Total Interrupts: 0
Total RCU Packets: 0            Total Lost Interrupts: 0
Total Device Faults: 0          Total Error Calls: 0

Press any key to return to main menu...
  
```

Press **ESC** to return to the main menu.

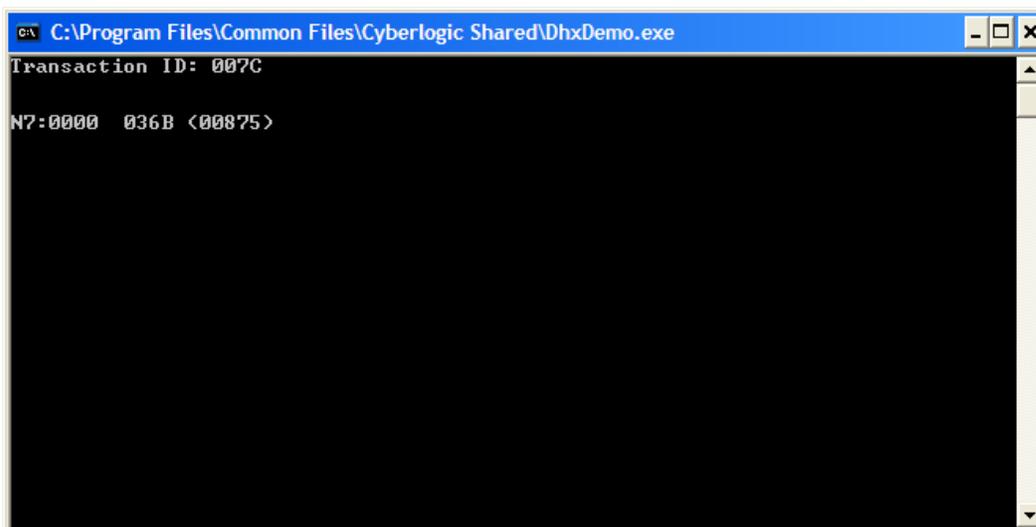
9. Press **4** to read from one of the nodes on the network.



```
C:\Program Files\Common Files\Cyberlogic Shared\DhxDemo.exe
PLC node address [001 oct] >5
Offlink 1 (optional) [None] >
Offlink 2 (optional) [None] >
Register address [N7:0] >
Register count [1] >
PLC type:
[1] PLC-3
[2] PLC-5
[3] SLC-500
Enter Selection [2] >
```

Enter the address of the node to read from (5 was chosen for this example). Press Enter for Offlink 1 and Offlink 2. Choose a register to read (N7:0 is the default). Leave the Register Count at 1. Finally, select the PLC type.

10. You will see a screen that shows you the value of the register that was selected.



```
C:\Program Files\Common Files\Cyberlogic Shared\DhxDemo.exe
Transaction ID: 007C
N7:0000 036B <00875>
```

Press **ESC** to return to the main menu.

11. Press **ESC** to close DhxDemo.

Note

Menu option 2, Active Node List, is not supported by the AN-X2-AB-DHRIO Gateway. To see the list of active nodes on the Data Highway Plus network, attach to the AN-X2-AB-DHRIO Gateway with a web browser. For more information, see the device documentation.

Technical Support

You can get detailed information on how to install, configure and use the DHX family of drivers by referring to the help files for each specific driver.

Cyberlogic's website, www.cyberlogic.com, has information on related products, news, software downloads and contact information.

Cyberlogic Technologies
5480 Corporate Drive
Suite 220
Troy, Michigan 48098 USA

Sales: 248-631-2200
sales@cyberlogic.com

Technical Support: 248-631-2288
techsupport@cyberlogic.com

Copyright © 2014, Cyberlogic® Technologies Inc. All rights reserved.

This document and its contents are protected by all applicable copyright, trademark and patent laws and international treaties. No part of this document may be copied, reproduced, stored in a retrieval system or transmitted by any means, electronic, mechanical, photocopying, recording or otherwise, without the express written permission of Cyberlogic Technologies Inc. This document is subject to change without notice, and does not necessarily reflect all aspects of the mentioned products or services, their performance or applications. Cyberlogic Technologies Inc. is not responsible for any errors or omissions in this presentation. Cyberlogic Technologies Inc. makes no express or implied warranties or representations with respect to the contents of this document. No copyright, trademark or patent liability or other liability for any damages is assumed by Cyberlogic Technologies Inc. with respect to the use of the information contained herein by any other party.

Cyberlogic®, DHX®, MBX®, WinConX® and Intelligent • Powerful • Reliable® are registered trademarks and DirectAccess™, OPC Crosslink™ and DevNet™ are trademarks of Cyberlogic Technologies Inc. All other trademarks and registered trademarks belong to their respective owners.