Quick-Start Guide for Freedom DN65 DeviceNet I/O Module using
Eaton Cutler-Hammer NetView 2.0

This Quick-Start Guide provides instructions for configuring a Cutler-Hammer Freedom full voltage, non-reversing (FVNR) or full voltage, reversing (FVR) starter with a DN65 DeviceNet I/O Module.

Firmware Version Notes:

Firmware version 1.01 (or later) of DN65 is supported.

EDS Files:

Electronic Data Sheet (EDS) files are available from the Cutler-Hammer Motor Control Center Intranet site location at...

http://www.ch.etn.com/mcc_2/products/devicenet_mcc_techinfo_eds_files.html

Due to changes in ODVA specifications and enhancements to DeviceNet configuration software tools, it is recommended that Cutler-Hammer Technical Support (1-800-809-2772) be contacted for information about the latest EDS files. When inquiring about EDS files, have the following information ready:

✓ Which Cutler-Hammer motor starters are being used?
✓ What DeviceNet interface is installed?
✓ Are reversing starters being used?
✓ Are reduced voltage (across-the-line) starters being used?
✓ Are Advantage Control Modules (ACM's) used on non-reversing starters?
✓ The Firmware # or Rev. code letter for the DeviceNet interface.
✓ NetView or RSNetWorx software revision number.

Product Information:

For additional information on the DN65 DeviceNet I/O Module, Technical Data Publication Number TD.09F.01.T.E is available from Literature fulfillment, the Cutler-Hammer MCC Intranet and Internet.
**Equipment Setup:**

1. Connect the DeviceNet Trunk cable to the DeviceNet scanner interface being used.
2. Connect the DN65 DeviceNet I/O Module to the network using the DeviceNet terminals located on the top of the unit. Note that the DeviceNet cable Shield is not terminated at the DN65.
3. Check that the 24Vdc Power Supply disconnect switch is ON and that 24Vdc is present on the DeviceNet network cable (V+ & V- at any location).

**Network Setup:**

1. Have NetView 2.0 software installed.

2. Confirm proper Driver setup to either the PCMCIA external scanner or the ISA bus internal scanner as needed.
Connecting to the DN65 DeviceNet I/O Module:

With NetView open, click on the On-Line icon.

If NetView goes On-Line successfully, then the MS/NS status LED will be flashing green.

The DN65 should now be listed in the right-hand window of NetView as shown.

Highlight the DN65 and click on the Connect icon to establish a direct link between NetView and the DN65.

The hourglass icon will show up next to the DN65 and the MS/NS status LED will be solid green.

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1 MS/NS indicators are for the Module Status and NetWork Status diagnostics. See the DN65 Technical Data Pub for more information.
Setting Properties:

With the DN65 "connected", click on the Properties icon.

The Properties Window opens showing the General information and the other setup option Tabs. Note: The Identify tool to allow control of the MAC ID indicator is not supported as of this release.
Setting the MAC ID:

Note: Since Cutler-Hammer motor control assemblies are pre-tested prior to shipment, the DN65 will have a MAC ID assignment other than the ODVA default of “63”. If multiple MCC’s are connected to a single DeviceNet trunk network, there may be duplicate MAC IDs. Although NetView can function with duplicate MAC IDs, it is a good practice to ensure that only one MCC lineup at a time is connected to the DeviceNet trunk network. When all MAC IDs in all MCC’s have been assigned a unique number, then connect the MCC DeviceNet trunk cables together. If a duplicate MAC ID is encountered, you will need to identify the nodes using the MS/NS status LED and remove all duplicate nodes and reconnect one at a time giving them unique MAC IDs.

Select a new and unique MAC ID by clicking on one of the available numbered boxes. If a MAC ID is already used, the box will be empty.

Click on OK. NetView will re-assign the MAC ID. The node will disappear from NetView for several seconds while NetView reconnects to the new MAC ID.

Setting the Baud Rate:

The factory default is 125Kb/s. This is suitable for most applications. Increasing the Baud Rate will limit the overall distance allowed for the network Trunk cable. If the network is to operate at a higher Baud Rate, click on the Baud Rate Tab. Select the new Baud Rate (250 or 500). Click on OK. If the Baud Rate is changed, NetView must be re-configured for the new Baud Rate. This is done by going Off-Line, then choosing Settings then Configuration.
MAC ID and Baud Rate are the only two parameters that typically need to be checked or changed. An alternate method to accomplish this is using the Scan Device parameter list upload.

While On-Line, choose Node then Device Configuration.

When the Device Configuration window opens, choose Scan Device. After a few seconds, the Device Configuration window will display the device general information and the entire parameter list.
The MAC ID and/or Baud Rate can be modified using this window. Open the 
drop down list for the Parameters and select MAC ID. Notice that the fields 
under Decimal and Hex have a white background. This indicates that the 
parameter is Read/Write. Type is a new Decimal value and click on Apply.

A "Lost Connection" message will appear. Click OK, then Exit. Notice that the 
MAC ID has changed in the network listing.

Testing the DN65 connection:

Using NetView's I/O 
messaging capabilities, you 
can test the DN65 
connection by cycling the 
Output Relays on and off.

With the DN65 "connected" 
(hourglass icon), choose the 
Messages icon.
This will open up a command window for sending I/O Poll messages to the DN65. Create three I/O Poll messages as shown below. This is done by clicking on the New Message I/O Poll button, then entering in the value shown in the Data field.

<table>
<thead>
<tr>
<th>Service</th>
<th>Class</th>
<th>Instance</th>
<th>Data</th>
<th>Response</th>
<th>Comments</th>
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Highlight all three messages using Shift-Click. Click on the Start Scan button to have NetView transmit the messages to the DN65.

The first message turns the outputs OFF. The second message turns ON output number 1. The third message turns ON output number 2. They will continue to cycle ON/OFF until the Stop Scan button is clicked.

You have now successfully commissioned a DN65 Freedom Motor Control DeviceNet interface. Depending on the PLC/PC platform you are using for control, you may need to create ladder logic elements to move the DeviceNet data from the scanner to the PLC/PC memory.

For any questions regarding the hardware, software or procedures mentioned in this document please contact Cutler-Hammer Technical Support at 1 (800) 809-2772.