

CDN466 Application Note

1 General

This application note was developed for the **CDN466_CompactLogix.ACD**, a simple ladder logic PLC application using Allen Bradley RSLogix500, that shows user how to configure and commission the CDN466 DNET-Serial gateway.

NOTE:

- 1 Example used Allen Bradley CompactLogix system L-32E and 1796-SDN DNET Scanner and RSLogix5000 for ladder logic code application.
- 2 The example was based on unit default configuration (4 overhead bytes + 12 length/data bytes = 16 IO produced/consumed bytes)
- 3 Example PLC code use TeraTerm on a PC to simulate one byte of data input on the serial RS232 in TimeOut Mode (again, this is CDN466 default configuration)
- 4 CDN466 gateway will return several different strings for demonstration purposes, depending on what data byte value was entered.

2 Configuration

This section demonstrates how to configure a CDN466 gateway using the Rockwell RSNetworx™ software (or similar software) and the Electronic Data Sheet (EDS).

2.1 Register EDS file

1. Run RSNetworx™ and select the *Online* operation from the *Network* Menu. A pop up box should appear showing all the networks connected to the workstation.
2. Expand the DeviceNet network and search for the unrecognized device that matches the node address of the CDN466 gateway.



Note

Devices are unrecognized until the EDS file for the device is registered with RSNetworx™.

3. Click *Cancel* to close the *Browse for Network* window

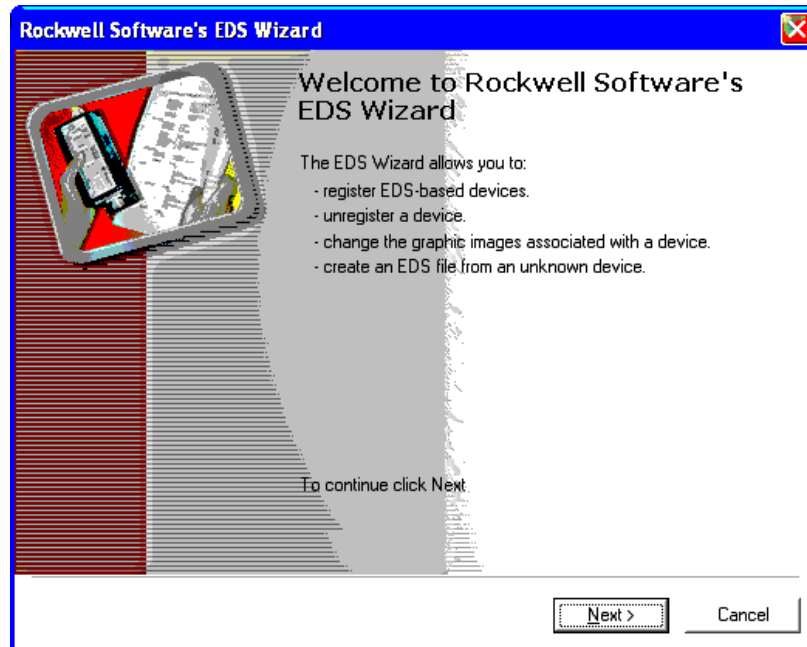


Figure 1 RSNetworkx EDS Wizard screen.

4. Select the *EDS Wizard...* operation from the *Tools* menu. Click *Next* to continue.

5. Select the *Register an EDS file(s)* option and click *Next*.



Figure 2 Prompt for registering EDS

6. Select *Register a single file* option. *Browse* for the CDN466 EDS file. Click *Next* when the file path is in the *Named:* field.



Note

The latest EDS and icon files can be downloaded from www.mksinst.com



Figure 3 Prompt for path to the location of EDS file

7. The next screen shows the RSNetworkx installation results. Click *Next* to continue.



Figure 4 Result/info for registering EDS file.

8. The next screen establishes the icon used for the CDN466. Click *Change icon...* to browse for an icon file. The screen on the right will appear. Select *Browse* and navigate to the icon file.

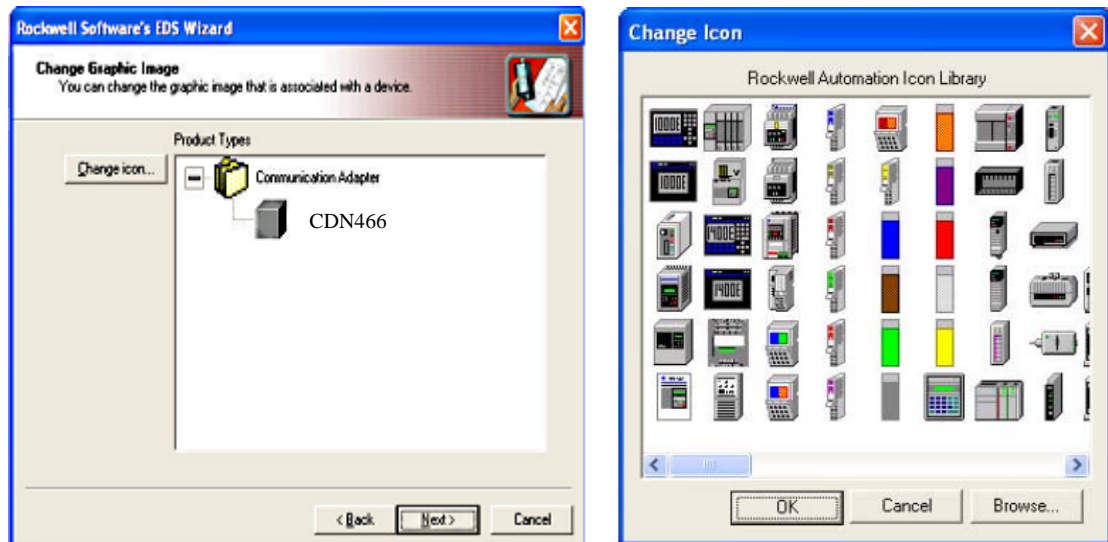


Figure 5 Selecting icon

9. The CDN466 icon should have changed to the proper icon.



Figure 6 Icon image change after selection

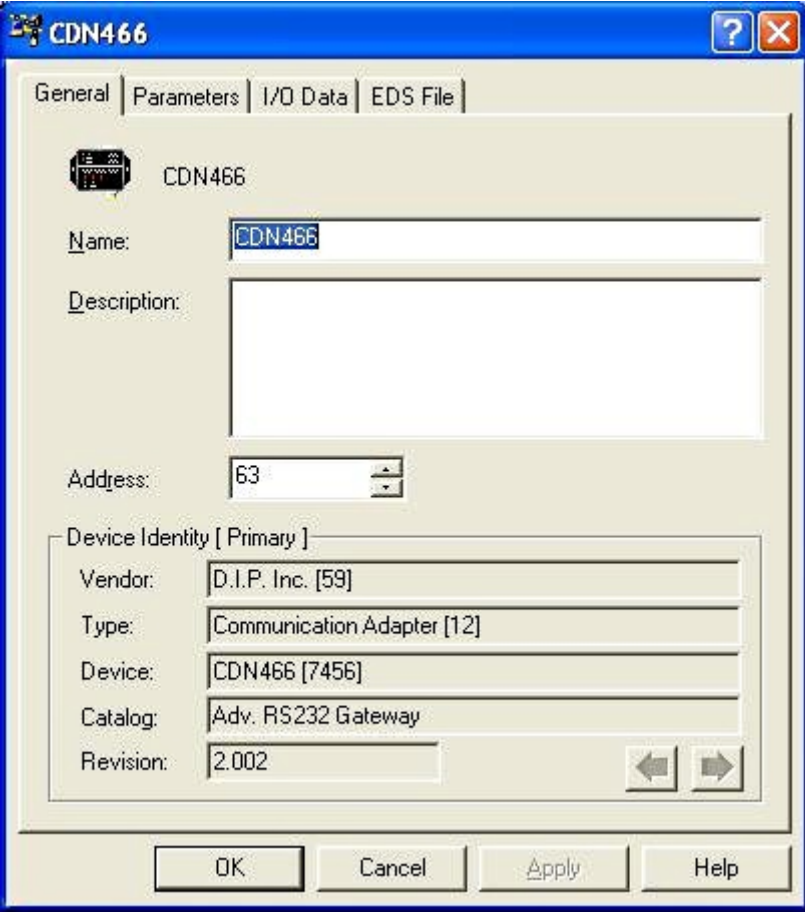
10. To finish the registration of the EDS file, click *Next* and then *Finish* at the next two screens. Once the EDS wizard closes, click the *Online* operation from the *Network* menu. View the DeviceNet network and ensure the

CDN466 is labeled CDN466 and not Unregistered Device. Click *Cancel* when finished.

3 PLC Ladder Logic Example

Please follow below steps to exercise the example PLC code (*CDN466_CompactLogix.ACD*).

- 1 Figure 1 shows CDN466 general information after CDN466 is registered with the system through an EDS file (**right-click on unit _> Properties**).



The screenshot shows a Windows-style dialog box titled "CDN466". It has four tabs: "General", "Parameters", "I/O Data", and "EDS File". The "General" tab is selected. Inside the dialog, there is a small icon of a PLC unit next to the text "CDN466". Below this, there are fields for "Name:" (containing "CDN466"), "Description:" (empty), and "Address:" (containing "63"). A section titled "Device Identity [Primary]" contains several fields: "Vendor:" (D.I.P. Inc. [59]), "Type:" (Communication Adapter [12]), "Device:" (CDN466 [7456]), "Catalog:" (Adv. RS232 Gateway), and "Revision:" (2.002). At the bottom of the dialog are four buttons: "OK", "Cancel", "Apply", and "Help".

Figure 7 CDN466 general information

- 2 CDN466 default parameters can be seen at the unit's parameter tab in figure 2.

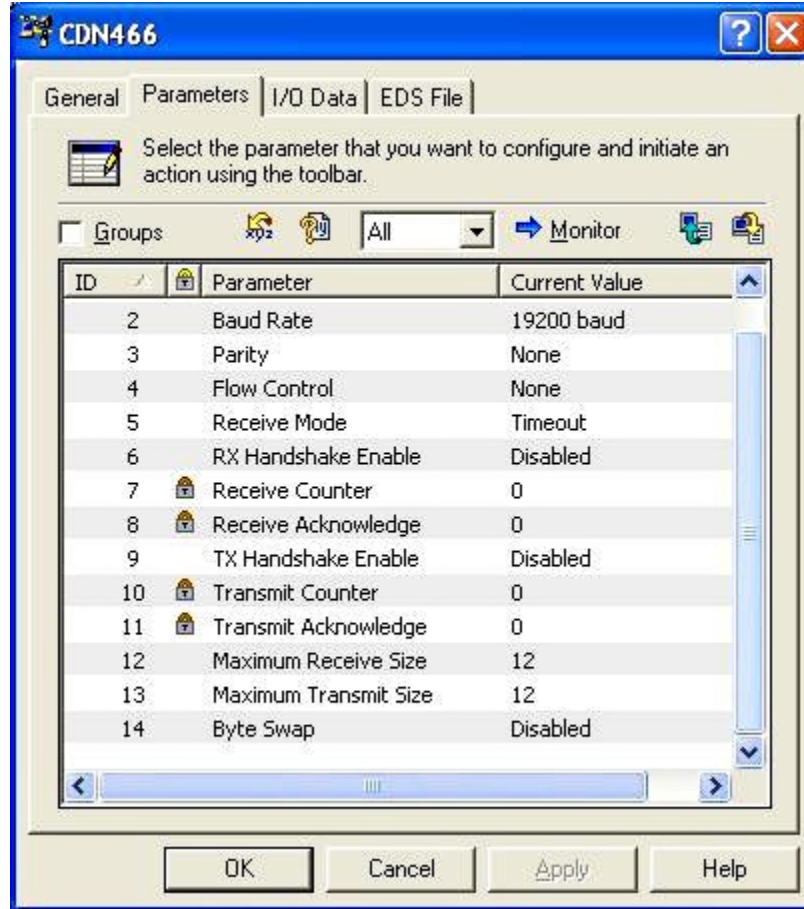


Figure 8 CDN466 default configuration

- On DNET Scanner (right-click on scanner->Properties->Scanlist tab), make sure Scanner IO size matches with unit configuration as shown below.

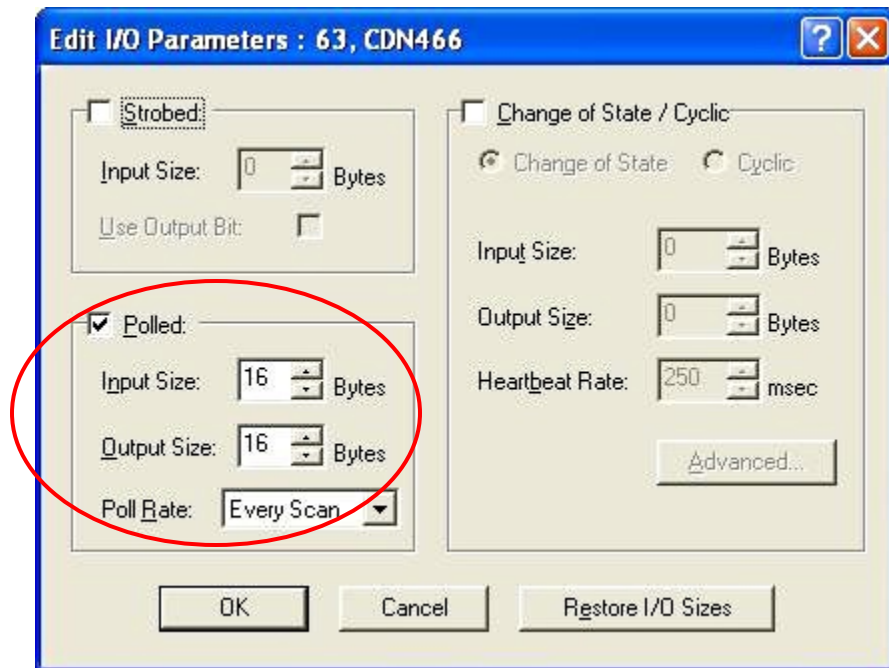


Figure 9 Produced/Consumed IO size

- Memory mapping for Input and Output for CDN466 on CompactLogix can also be verified from Input/Output Tab as shown below (NOTEL: There is only one device CDN466 on this DNET network and memory is auto-mapped):

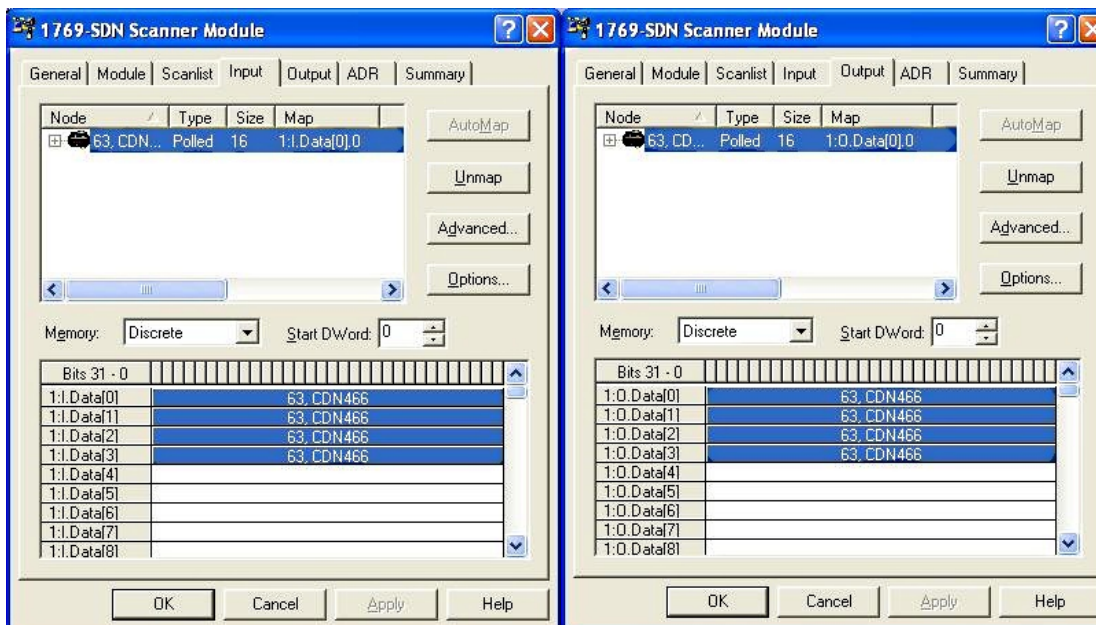


Figure 10 DNET master memory IO mapping

- 5 On RSLogix5000, open the example file *CDN466_CompactLogix.ACD*
- 6 Make sure that Controller Request Packet Interval on RSLogix5000 and DNET master Scan Interval for 1769-SDN Scanner matches (figures 11 and 12)

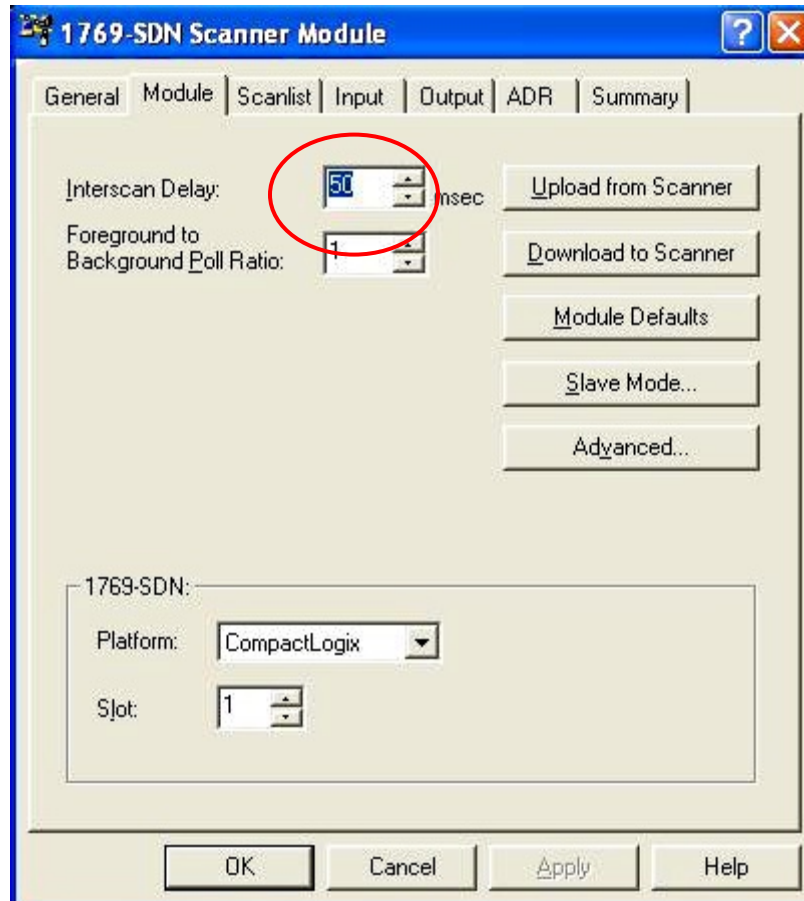


Figure 11 DNET Master Scanner Interscan Delay

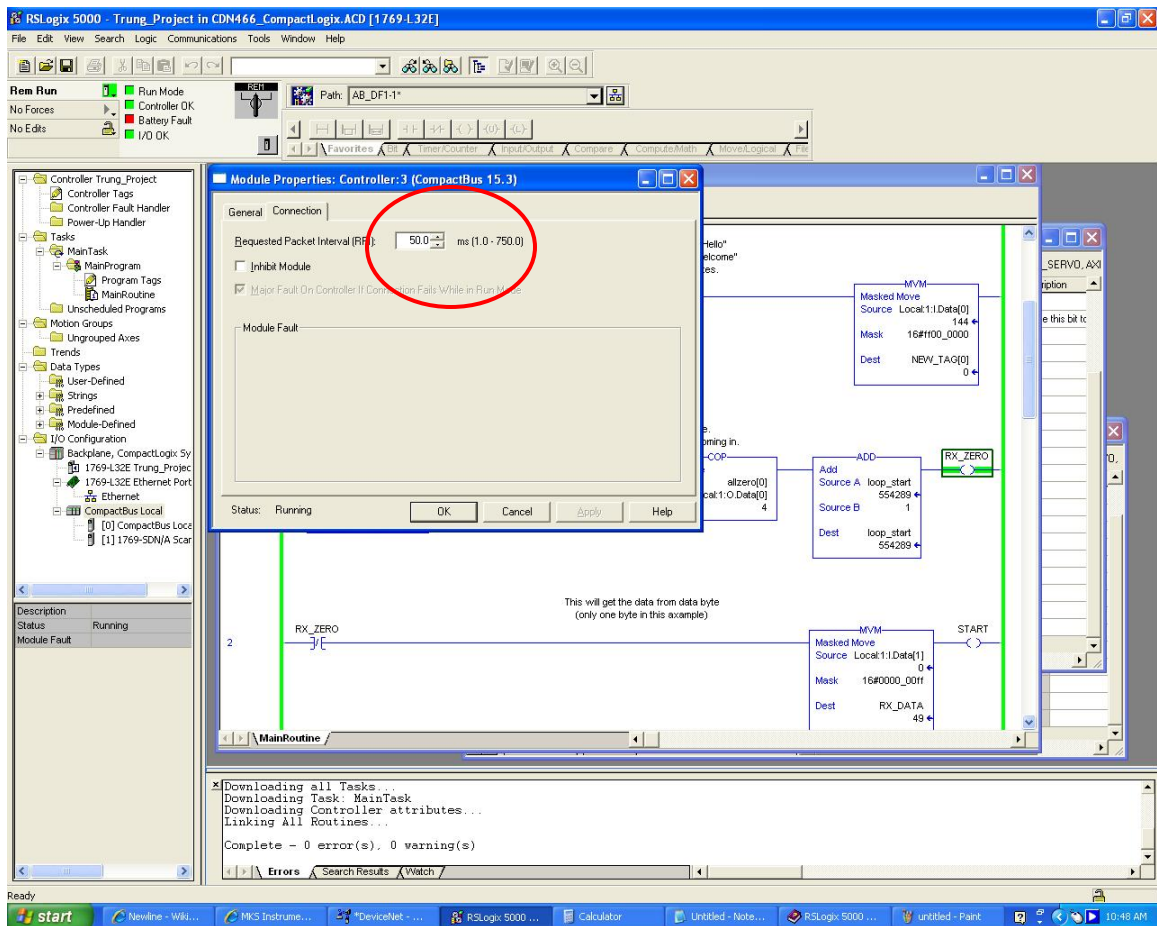


Figure 12 RSLogix5000 Requested Packet Interval (RPI)

- 7 Now connect a straight through serial cable from CDN466 to PC serial port. Default setting for CDN466 serial side is: 19200 baud, 8 bit data, no parity, no flow control, 1 stop bit. Make sure PC serial port is configured to match CDN466 gateway.
- 8 Type “1” on the TeraTem and PLC code will send back through gateway “Hello”
- 9 Type “2” on the TeraTem and PLC code will send back through gateway “Welcome”
- 10 Any other value PLC will send “Not ½”
- 11 Each of the string send to serial side contain a carriage return <CR> and Line Feed <LF> characters.

NOTE: Both CDN466 NET and MOD LED light should be solid green for unit to be functioning correctly.