# D0–DEVNETS and Allen–Bradley Set up

In This Appendix....

— Setup D0-DEVNETS with Allen-Bradley RSNetworx™

## Setup D0–DEVNETS with Allen–Bradley RSNetWorx<sup>™</sup>

For those who are using the D0–DEVNETS as a slave with an Allen–Bradley PLC, the examples on the following pages will step you through the process of setting up your Allen–Bradley DeviceNet network using RSNetWorx<sup>™</sup>.

RSLinx

Begin by opening your RSLinx to configure the DeviceNet driver.

- 1. Click on Communications.
- 2. Click on **Configure Drivers**.



- 3. Click on the down arrowhead, ♥, and select a driver from the drop-down list.
- 4. Click Add New.

A DF1 driver is selected in this example.







Note: Selecting a new driver may prompt you to reboot or to restart your computer.

5. Click **OK** in the pop–up window.



This window will appear.

6. Click on **Auto–Configure** to setup the communication parameters.

configure Alterroraties DET Communications Device
Device Name: AB_DF1-1
Comm Port: COM1  Device: PLC-CH0
Baud Rate: 19200  Station Number: 0 (Octal)
Parity: None   Error Checking: BCC
Stop Bits: 1 Protocol: Full Duplex 💌
Auto-Configure
Use Modem Dialer Configure Dialer
Ok Cancel <u>D</u> elete <u>H</u> elp

Auto Configuration Successfull will appear.

7. Click OK.

Configure Allen-Bradley DF1 Communications Device		
Device Name: AB_DF1-1		
Comm Port: COM1   Device: SLC-CH0/Micro/PanelView		
Baud Rate: 19200 Station Number: 00 (Decimal)		
Parity: Even Error Checking: BCC		
Stop Bits: 1 Protocol: Full Duplex 💌		
Auto Configure Auto Configuration Successful!		
Use Modem Dialer Configure Dialer		
Ok Cancel <u>D</u> elete <u>H</u> elp		

The Configure Drivers window will now appear showing the **Status** as Running.

Configure Drivers		
Available Driver Types: RS-232 DF1 Devices	Add New	<u>C</u> lose
Configured Drivers:		Пар
Name and Description	Status	
AB_DF1-1 DH485 Sta: 0 COM1: RUNNING	Running	Configure
		Startup
		<u>S</u> tart
		Stop
		Delete

The next step is to add a DeviceNet driver.

- 8. Click on the down arrowhead, ▼, and select your choice of drivers from the drop–down list.
- 9. Click on Add New.

Configure Drivers	
Available Driver Types:	
DeviceNet Drivers     ▲       BS:232 DF1 Devices     Ethernet to PLC-5/SLC-5/5820-EI       CAlen-Bradley 1784-KTC/KJ devices     1784-KTC/KJ for ControlNet devices       1784-KTC/KTX(D)/PKTX(D)     Status       DF1 Folling Master Driver     Running       1784-FCIC PCMCIA for ControlNet)     1784-PCIC PCMCIA for ControlNet)       T84-PCIC ControlNet Driver     PCI-5 (DH-1) Ernulator       S-S 50/SD2 Driver     DeviceNet Driver       PLC5 (DH-1) Ernulator     SLC 500 (DH-485) Ernulator       SLC 500 (DH-485) Ernulator     SLC 500 (DH-485) Ernulator	Configure Startup Start Stop
SoftLogist Remote Devices via Linx or 1756-ENET Gateway	Delete

This window will appear.

10. Select the proper driver, then click **Select**.

Configure Drivers	
Available Driver Types:	lose
Di DeviceNet Driver Selection - RSLinx DeviceNet-2	×
Con Available DeviceNet Drivers: Allen-Bradley 1770-KFD Allen-Bradley 1771-SDNPT Allen-Bradley 1747-SDNPT Allen-Bradley 1747-SDNPT	e ) e

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D0–DEVNETS DeviceNet Slave Module User Manual, Rev A

#### RSLogix

You are ready to connect to the PLC using your RSLogix software.

1. Click on **Communications** and select <u>Who Active Go</u> **Online.** 



- 2. When this window appears, select the PLC to connect to.
- 3. Click OK.



This window will appear with the relay ladder program. You now want to configure the I/O. This must be done **OFFLINE** in order to change the configuration.

4. Select I/O Configuration.

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Ele Edit View Search Commo Lools Windo	* Help	
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Former Development		
Driver 48 DF1-1 Node: 10	H Buser ABt & Timer/Counter & Input/Output & Compare	
	40.2	
	40 2	
	83/1	020
Controller		
Controller Properties		1746-OW8
Second Se		
CIII IO Configuration 000	· · · · · · · · · · · · · · · · · · ·	(END)
- Re Change Comparison		
Multipoint Monitor		
B- C Program Files		
-SYS 0 -		
N 5151.		
Colo 2 .		
Cross Baferarce		
- 00 - OUTPUT		
H - NPUT		
S2 - STATUS		
- DNARY		
T4 - TMER		
CS - COUNTER		
R6 - CONTROL		
- N7 - INTEGER		
Pre-PLOAT		
D N11		
Figure Fles		
- O co-output		
	File 2	2
For Help, remov F1		TOTO OTOT LAPP (READ)



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Configure D0–DEVNETS with RSNetWorx You are now ready to configure the D0–DEVNETS installed in your DL05. First, open RSNetWorx. Look for Koyo Electronics in the hardware tree listed under **Vendor**. Click on the + to show the devices for Koyo. The following example shows two devices, D0–DEVNETS and T1K–DEVNETS.

orx for D

RSNetWorx opened.



C

Hardware	× ×	
DenicoNet     DenicoNet	a. Irc.	ar75k   4 ]
Message Code Description		
sa 66 8 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	and the second second	

**Using the EDS file** If you do not see your device listed, it will need to be added from the EDS file (refer to page 2–7). The following example will guide you through the procedure of installing the device from the EDS file.

Click <u>Tools</u> and select <u>EDS</u> Wizard....



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The EDS Wizard will open. EDS Wizard Simply follow the instructions Welcome to the EDS Wizard to register the device. The EDS Wizard allows you to: register EDS-based devices.
 unregister a device. [File] DescText CreateDate CreateTime NodTime Revision change the graphic images associated with a device.
 create an EDS "Stub."
 upload of EDS data from an "unknown" online device. ----ProdType To continue click Next Next > Cancel EDS Wizard X Register the EDS file. • Options The EDS Wizard provides you with several tasks. Register an EDS file(s). This option will add a device(s) to our database. C Unregister a device. This option will remove a device that has been registered by an EDS file from our database. ۳ĵ Change a device's graphic image. This option allows you to replace the graphic image (icon file) associated with a device. Create an EDS Stub. This option creates an EDS file with information that describes the file, device and I/O characteristics. C C <<u>B</u>ack <u>N</u>ext > Cancel

Enter the path for the EDS file.



EDS file installation results.



Change the icon image for your device, if you desire to.

EDS Wizard	×
Change Graphic Image. You can change the graphic image that is associated with a device.	
Change icon  Product Types Generic Device D0-DEVNETS	
< Back Next > 0	Cancel

Review what you have done.

EDS Wizard	×
Final Task Summary This is a review of the task you want to complete.	
You would like to register the following dev D0-DEVNETS	GC.
Τα	o complete the above task, click Next.
< <u>B</u>	ack <u>N</u> ext> Cancel

#### EDS Wizard complete.

EDS Wizard	×
	Completing the EDS Wizard You have successfully completed the EDS Wizard.
[File] DesoText = "" CreateFlace = 05 HodDate = 05 Revision [Device] VendCode = 00 ProdType = 00 ProdType = 00 ProdType = 00 HajRev = 21 HinRev = 11	
	Frish

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H + + H Graph ( Spreadsheet ) Master/Sk

Q

#### Go on line

You will want to go on line with the network now.

In the main RSNetworx window,

1. Click on <u>Network</u> to select\_ <u>Online</u>.

2. Select your network from the pop-up window.
3. Click OK.

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### Set up I/O parameters

Now you can set up the I/O parameters for the devices. The scanner needs to be configured first. This is done by accessing the scanner properties.

1. Select the scanner module.

This can be done in two different ways.

2. Click on the scanner name, then right click the mouse,

or

3. Click on **Device**, then click on properties in the pop–up window.

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			TZ-Z-SQN Ceaner Control X Cu X Cu X Ra Cuy Relate Upload tool Downlad to Case Instruct Quarter	Daši Dni- Uni- Drivica Nevica Nevica
Harran Code Description				
I DEFENSE AND LODGE IN COMPANY				

The properties window will appear. 4. Click <b>Module</b> .	General Module Scanlist Input Dutput ADR Summary  1747-SDN Scanner Module  1747-SDN Scanner Module  1747-SDN Scanner Module
	Name:         Interference           Description:         Interference
	Address:
5. Click <b>Upload</b> .	Scanner Configuration Applet       Image: Configuration Applet         Op you want to upload the configuration from the device, updating the software's configuration to the device, updating the device?         For more information, press F1         Upload       Download
Uploading network information.	Uploading from Scanner



Note: Do not cancel. The entire network data must be allowed to upload.

The data appears.

- 6. Select the correct slot number which the DeviceNet scanner module is residing.
- 7. Click Scanlist.



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If the node that you want is not	1747-SDN Scanner Module (3)
in the <u>S</u> canlist, it needs to be	General Module Scanlist Input Output ADR Summary
moved to the list.	Available Devices Scanlist
8. Highlight D0–DEVNETS	1. TIK-DEVNETS
9. Click the right arrow.	
	Image: Automap on Add       Image: Automap on Add         Upload from Scanner       Electronic Key:         Download to Scanner       Device Stype         Download to Scanner       Product Code         Edit I//0 Parameters:       Minor         OK       Cancel       Apply         OK       Cancel       Apply
Now that D0–DEVNETS is in the list, be sure that it is selected. 10. Click <u>Edit I/O</u> Parameters	Image: Scanner Module (3)       ? ×         General Module Scanlist Input Output ADR Summary       ? ×         Available Devices:       Scanlist:         Image: Scanlist Input Output ADR Summary       01, T1K-DEVNETS (6)         Image: Optimized and the scanlist Input Output ADR Summary       Image: Scanlist
r araineiers.	<ul> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓ Automap on Add</li> <li>✓ Node Agtive</li> <li>✓ Upload from Scanner</li> <li>✓ Device Lype</li> <li>✓ Vendor</li> <li>✓ Product Code</li> <li>✓ Migor Bevistori</li> <li>✓ Migor Contaiter</li> </ul>
11. Set the <b>Bx Size</b> and the <b>Tx</b>	Edit 1/0 Parameters : 02. D0-DEVNETS
Size to match the polled data size for the number of I/O bytes (refer to tables in Appendix C).	Strobed:       Change of State / Cyclic         Bx Size:       Bytes         Use Tx Bit       Rx Size:         Bytes       Bytes
	Polled Tx Size:
Refer to page G–18 (Set Class Instance Attribute) if the total number of Rx and Tx bytes are not known.	Rx Size:     4 • Bytes     Heartbeat Rate:     50 • msec       Ix Size:     • Bytes     Advanced.       Poll Rate:     Every Scan     •
	OK Canad Restard UR Care

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This window will appear. 13. Click <u>Y</u>es.



#### Map the nodes

Map each node.

1. Click the **Input** tab in the properties window.

Be sure that D0–DEVNETS is selected.

- 2. Select **Discrete** for **Memory**, and **0** for **Start Word**.
- 3. Click AutoMap.

NOTE: M file is used with explicit messaging.

1747-SDN Scanner Module (3) ? × General Module Scanlist Input Output ADR Summary Node Type Rx Map Auto<u>M</u>ap 1. T1K-DEVNE... Polled 3 1:9.1.0 202, DO-DEVNETS Polled 4 No Advanced... Options. Memory: Discrete Start Word: 0 Bits 15 · 0 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1:9.0 1:9.1 01, T1K-DEVNETS (6) 1:9.2 01, T1K-DEVNETS (6) 1:9.3 1:9.4 1:9.5 1:9.6 1:9.7 ..... 1:9.8 OK Cancel Apply Help

At the completion of the input AutoMapping, the window will look like this example. The D0–DEVNETS node is now shown.

Node		Туре	Bx	Мар		AutoMag
🗐 01, T1K	DEVNE	Polled	3	1:9.1.0	<u></u>	
2 <b>0</b> 02, DO-D	DEVNETS	Polled	4	1:9.2.8		Unmap
						Advanced
						Options
Memory:	Discrete		]	Start Word:	0	<b>.</b>
Memory: Bits 15 - 0	Discrete	3 12 11	] 10 9	Start Word:	0	3210-
Memory: Bits 15 - 0 1:9.0	Discrete	31211	] 10 9	Start Word:	0	3210
Memory: Bits 15 - 0 1:9.0 1:9.1 1:9.2	Discrete	3 12 11 1 0 00-DEVN	] 10 9 1, T1	Start Word: 876 K-DEVNET	0 5 4 5 (6) T1K-DE	3210 VNETS (6)
Memory: Bits 15 - 0 1:9.0 1:9.1 1:9.2 1:9.3	Discrete 15 14 13 02,	3 12 11 1 0 00-DEVN	] 10[ 9 1, T1 IETS 02, [	Start Word: 876 K-DEVNET 01, D0-DEVNE	0 5 4 5 (6) T1K-DE	3210 VNETS (6)
Memory: Bits 15 - 0 1:9.0 1:9.1 1:9.2 1:9.3 1:9.4	Discrete 15 14 13	312111 0 00-DEVN	] 10 9 1, T1 IETS 02, I	Start Word: 8 7 6 K-DEVNET 01, D0-DEVNE	0 5 4 <u>5 (6)</u> <u>7 1K-DE</u> TS 2, D0-D	3 2 1 0 • VNETS (6) EVNETS
Memory: Bits 15 - 0 1:9.0 1:9.1 1:9.2 1:9.3 1:9.4 1:9.5	Discrete 15 14 13 02,	31211 0 00-DEVN	] 10 9 1, T1 IETS 02, I	Start Word: 8 7 6 K-DEVNET 01, D0-DEVNE 0	0 5 4 <u>5 (6)</u> T1K-DE TS 2, D0-D	3 2 1 0 • VNETS (6) EVNETS
Memory: Bits 15 - 0 1:9.0 1:9.1 1:9.2 1:9.3 1:9.4 1:9.5 1:9.6	Discrete 15 14 13 02,1	3 12 11 0 00-DEVN	] 10 9 <u>1, T1</u> IETS 02, I	Start Word: 8 7 6 8 7 6 K-DEVNET 01, 00-DEVNE	0 5 4 5 (6) T1K-DE TS 2, D0-D	3210 • • • • • • • • • • • •

Now, map the outputs just the way you mapped the inputs. This time:

1. Click the **Output** tab in the properties window.

Be sure that D0–DEVNETS is selected.

- 2. Select **Discrete** for **Memory**, and **0** for **Start Word**.
- 3. Click AutoMap.

At the completion of the output AutoMapping, the window will appear like this example. The D0–DEVNETS node is now shown.

Node	Ту	ре Тх	Мар		AutoMan
🗐 01, T1K-C	EVNE Po	lled 3	0:9.1.0		Hato <u>m</u> ap -
2 <mark>9</mark> 02, D0-DI	EVNETS Po	lled 4	No		Upman
					El meb
					Advanced.
					Options
					and the second
and the second	de la competition de	in the second second			and the second second
Memory:	Discrete		Start Word:		2110
Memory:	Discrete	• <u>11</u>	Etart Word:	0	210
Mgmory: Bits 15 - 0 0:9.0 0:9.1	Discrete	11 10 9	Etart Word:	0 <u>;</u> 5 4 3	210-
Mgmory: Bits 15 - 0 0:9.0 0:9.1 0:9.2	Discrete	11 10 9 01, T11 01, T11	Etart Word:	0 5 4 3 (6) (6)	210
Mgmory: Bits 15 - 0 0:9.0 0:9.1 0:9.2 0:9.3	Discrete 15 14 13 12	11 10 9 01, T11 01, T11	Etart Word:	0 <u>:</u> 5 4 3 6 6	210*
Mgmory: Bits 15 - 0 0:9.0 0:9.1 0:9.2 0:9.3 0:9.4	Discrete	11 10 9 01, T11 01, T11	Etart Word: 876 C-DEVNETS	0 5 4 3 (6) (6)	2 1 0 •
Mgmory: Bits 15 - 0 0:9.0 0:9.1 0:9.2 0:9.3 0:9.4 0:9.5	Discrete	11 10 9 01, T11 01, T11	Etart Word:	0 5 4 3 (6) (6)	210
Mgmory: Bits 15 - 0 0:9.0 0:9.1 0:9.2 0:9.3 0:9.4 0:9.5 0:9.6	Discrete	• 1 11 10 9 01, T11 01, T11	Etart Word:	0 5 4 3 6 6	

Constant Application (Constant)     Constant Application (Con	Summary
Node         Type         Tx         Map           101, T1K-DEVNE         Polled         3         0:9.1.0           102, D0-DEVNETS         Polled         4         0:9.3.0	AutoMap
	Advanced
Memory: Discrete  Start Word: 0	
Bits 15 - 0 15 14 13 12 11 10 9 8 7 6 5 4 0:9.0 Best Only 0:9.1 01, T1K, DEVNETS (6) 0:9.2 01, T1K, DEVNETS (6)	3210
0.9.3 02, D0-DEVNETS 0.9.4 02, D0-DEVNETS 0.9.5	
0:9.6 0:9.7 0:9.8	
OK Cancel Apply	Help

Download the scanlist to the scanner.

- 1. Select the **Scanlist** tab in the properties window.
- 2. Select <u>D</u>ownload to Scanner.

In the pop-up window:

- 3. Check All Records, then
- 4. Click **Download**.

DeviceNet - BSNetWork for DeviceNet	7   X	
General Module Scanfist Input   Dutput   ADR	Summary	
Avaldade Devices Scandar Download Scandar Records Sedend Scandar Records Se		
Message Code Description		
x[		
		Online - Not Browsing

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Note: Verify that the processor is in program mode before downloading the scanlist.

This is an error message that may appear.

Scanner Configuration Applet	×
The processor is in Run Mode!	
OK	

When the download indication ends, download is complete.

Do	wnloading	g Scanlist	Node 2	2		
					1	

Set Class Instance Use the Service Class Instance Attribute Editor to set the I/O to read and write to the Attribute DL05/06.

- 1. Select the D0-DEVNETS node.
- 2. Select Device

or.

- 3. Right click on the node symbol in the RSNetWorx window.
- 4. Select Class Instance Editor in the pop-up window.



Close

Help

5. Setup input attributes in this window.

Object Address must be set to: Class = 5, Instance = 2, Attribute = 7 Size = Word (2 bytes).

6. Click Execute

Read the data here.<sup>-</sup>



