

Overview

This application note describes the steps necessary to configure the SST DeviceNet OPC Server for use under Windows NT (Service Pack 3 or higher). This example shows how to set up a configuration for an SST Scanner and one slave, create I/O data tags, status tags, and then use the configuration with the SST DeviceNet OPC server.

Note

You must install the 32-bit software release provided with the SST DeviceNet under Windows NT 4. This software can be downloaded from our Web Site: <u>www.sstech.on.ca</u>

Creating a configuration

Start the DeviceNet Configuration Tool

Launch the DeviceNet Configuration Tool application by clicking on the "SST DeviceNet Configuration Tool" shortcut created by the installation process.

Add and configure a master

From the *Edit* menu, select *Insert New Node*. This will create a new scanner node entry in the main window. You can also right click on "The Network (Network Configuration)" and select "*New*"





To configure the newly added scanner node right click on the scanner node (named Scanner1, above) and select *Properties*, or from the *Edit* menu select *Properties*. In the *Node Properties* dialog, set the required options under the *Identity* tab.

For Example:

Card Name = Driver250

MAC ID = 0 (MAC ID of scanner when communicating on the network)

Baud Rate = 500K (baud rate to be used when communicating on the network)

Scan Interval = 0 (default scan interval of zero scans devices as quickly as possible)

Node Properties	×
Identity 1/0	Tags
Name	Description
Scanner1	SST DeviceNet Interface
Card Name	
	aud Bate Scan Interval
	500 Kb
	UK Lancel <u>Apply</u> Help





Configuring and using the Online Browse

Online browsing allows you to browse an existing DeviceNet Network to determine the devices present on the network. Devices that are detected can be added to your network configuration from the Online Browse view.

To configure the Online Browse network settings from the Tools menu select Online | Define Connection

or click on the "Online Connection Settings" toolbar button . In the *Properties* dialog, select the Access Point, Baud Rate, and MAC ID to be used when browsing the DeviceNet network.

NodeCfg Properties		×
Network		
Access Point Driver250	Baud Rate	MAC ID
	ОК	Cancel Apply

Browsing the Network

From the *Tools* menu select *Online | Connect*, or select the *Refresh Online View* button bar will then appear as the Configuration Tool browses the network for devices.

Searching for	devices	
Initializing Ne	etwork. Please Wait	6
0%	50%	100% Cancel

A list of devices on your DeviceNet network will appear in the Online Browse (bottom) window.





🖉 Example.dnc - SST DeviceNet Configuration	
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp	
88 😰 🖙 🖬 👗 🖻 💼 🗙	
🖃 🕮 The Network (Network Configuration)	
🔤 🌆 [[00] Scanner1 (*SST DeviceNet Interface*)]	
	_
MACID Device Type Baud Rate Product Name Serial Number Vendor Name	
📃 🕱 62 🛛 General Purpose Discrete IO 500K 🛛 Jim 9 SST	
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Adding a device to the scan list

To add a device from the Online Browse view to your scanner configuration, using your mouse, simply drag the desired device onto the scanner configuration entry in the Network Configuration view.





New Example.dnc - SST DeviceNet Configuration	
<u>File E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp	
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The Network [Network Configuration] Image: State of the	
Ă 🕷 🗞 🚳 🛱 🎭 📽 🐂 🖮 🏢	
MACID Device Type Baud Rate Product Name Serial Number Vendor Name	
🕱 62 General Purpose Discrete IO 500K Jim 9 SST	
For Help, press F1 NI	JM //

Edit the device's properties

Click on the newly added device and select the *Edit | Properties* menu item, or click the *Properties* button

In the *Node Properties* dialog, device information can be changed and tags can be added for use with the DeviceNet OPC Server.





Node Properties	×
Identity I/O Tags	
Name [eral_Purpose_Discrete_101	Description Jim
Product Code	MAC ID 62
Vendor ID 8 SST	<u> </u>
Device Type 7 General Purpose Di	iscrete ID
ОК	Cancel <u>Apply</u> Help

Add tags

To add tags, click on the *Tags* tab, and then click *New*. The *Tag Properties* dialog will appear. Here the tag's name and properties can be changed. Click on the *Tags* tab to change the information that describes the tag's data.

Tag Properties	×
Names Tag	
IO Type Polled Input Polled Output Strobed Input Strobed Output	Data Type BYTE Offset O bytes Discrete Array Number of Elements 1
ОК	Cancel Apply Help

After changing the tag's properties, click on *OK*. In the *Node Properties* dialog, repeat the previous steps to add more tags for this device, or click on *OK* to continue.





Add scanner status tags

Tags may also be created for monitoring status information related to a device. To do this, right click on the scanner entry (Scanner1) and select *Properties*.

Example.dnc - SST DeviceNet C <u>File Edit View T</u> ools <u>H</u> elp	Configuration			_ 🗆 ×
🛠 🗗 😂 🖬 👗 🖻 🖻 🗙				
E- (The Network (Network Configurati E- ((00) Scanner1 (*SST DeviceN E- ((62) General_Purpose_Dis	ion) let Interface*) screte_IO1 (*Jim*)			
Ă 😵 🕿 🗠 🕾 🕷	<u>a</u>			
MACID Device Type	Baud Rate	Product Name	Serial Number	Vendor Name
📃 🧝 62 🛛 General Purpose Discrete	10 500K	Jim	9	SST
For Help, press F1				NUM //





The Node Properties dialog will appear. Select the Tags tab, and click New.

Node Propertie	Tags			×
Name	Description	<u>)</u>		<u>N</u> ew Edit Delete
	OK	Cancel	Apply	Help

The *Tag Properties* dialog will appear. Here a tag's name and properties can be changed. Click on the *Tags* tab to change the information that describes the tag's data.

Tag Properties	×
Names Tag IO Type Client Status	Data Type BYTE
CAN Bus Status Device 62 Status	Offset 0 bytes Discrete Bit (0-7) 0 1
ОК	Cancel Apply Help

After selecting a tag type and changing its properties, click on *OK*. In the *Node Properties* dialog, repeat the previous steps to add more tags for this device, or click on *OK* to continue.





Save the configuration

To save the configuration, open the File menu, and choose the Save As option.

9	Save As					?	x
	Save jn:	🔁 cda	•	ŧ	Ť		
	j File name:			_		Cauc	1
	riie <u>n</u> ame.			_		<u>o</u> ave	1
	Save as <u>type</u> :	SST DeviceNet Config Files (*.dnc)		-		Cancel	

Exit the DeviceNet Configuration Tool

Save the configuration, and exit the DeviceNet Configuration Tool.

Creating an OPC server network configuration

Edit the device's properties

Launch the SST OPC Server Configuration application. The installation software will have created this shortcut.

N	Net Configuration List						
	Net Configuration	Net Interface	Card Name	Done			
	New Ed	lit Delete					

Click on the *New* button to add a net configuration. Within the *Edit Net Configuration* dialog, enter the path to, or browse for, the network configuration that was previously saved. Select the desired network interface (Scanner1) and click *OK*.





Edit Net Configuration		×
Net Configuration D:\Project\OPC\Example.dnc		OK Cancel
Net Interface Scanner1	Card Name Driver250	

The network configuration is now selected. In the *Net Configuration List* dialog, click on *Done* to exit the SST OPC Server configuration application.

Net Configuration List					
	Net Configuration D:\Project\OPC\Example.dnc	Net Interface Scanner1	Card Name Driver250	Done	
	New Edit	Delete			

Start the OPC Client

The SST OPC Server is now ready for use by your OPC client. Launch your OPC client and connect to the SST DeviceNet OPC Server (SST.DnCdaOpcSvr.1) as outlined in your OPC client documentation.



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If you need more help

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