



**Perform Wireless Site Survey using the
Banner DX80 Gateway Pro and
Allen-Bradley Logix5000 PLC**

March 13, 2009



BANNER GATEWAY PRO



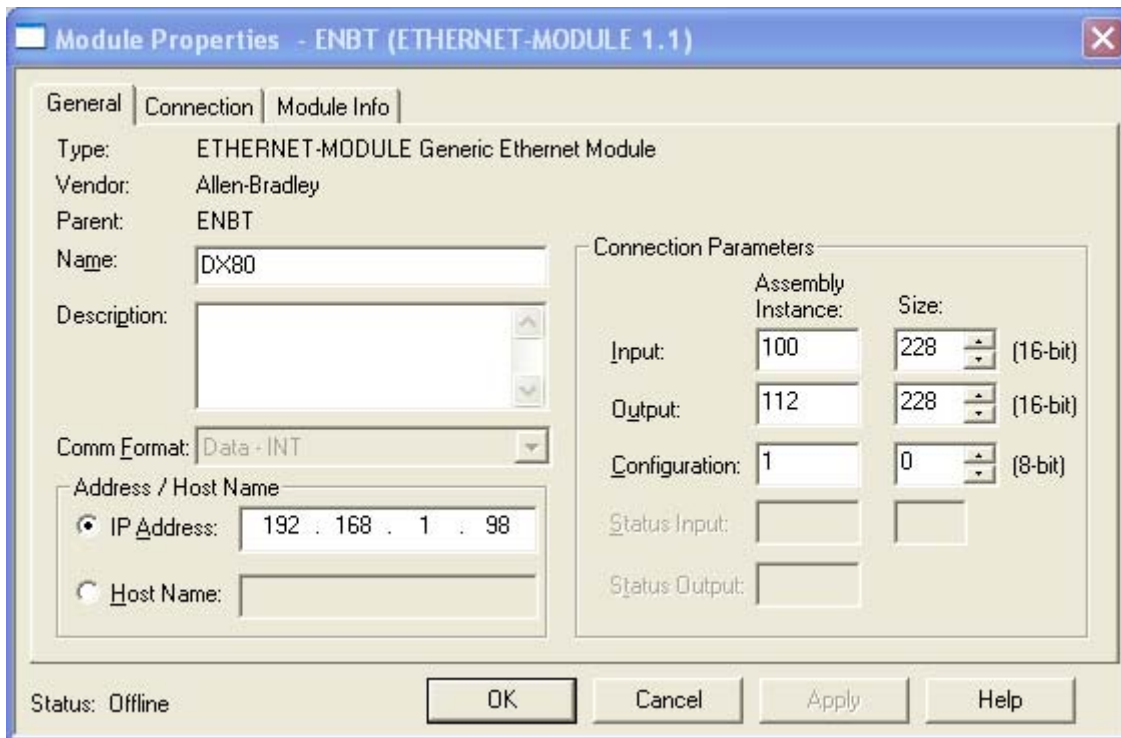
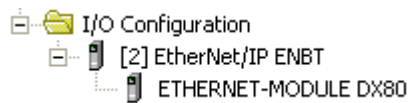
ALLEN-BRADLEY CONTROLLOGIX PLC



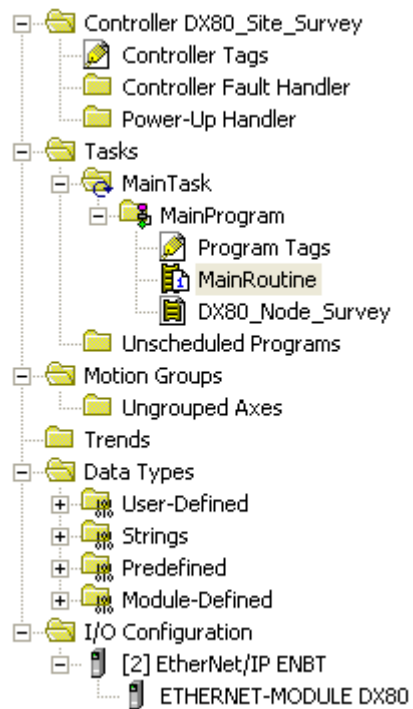
ALLEN-BRADLEY COMPACTLOGIX PLC

This document provides an overview on how to perform a site survey on a Banner DX80 Wireless I/O network. The Banner Gateway Pro is a DX80 master that communicated wirelessly with DX80 nodes. Each node has a fixed number of discrete and/or analog I/O points. The Gateway Pro serves up the data to a ControlLogix or CompactLogix PLC over the EtherNet/IP protocol.

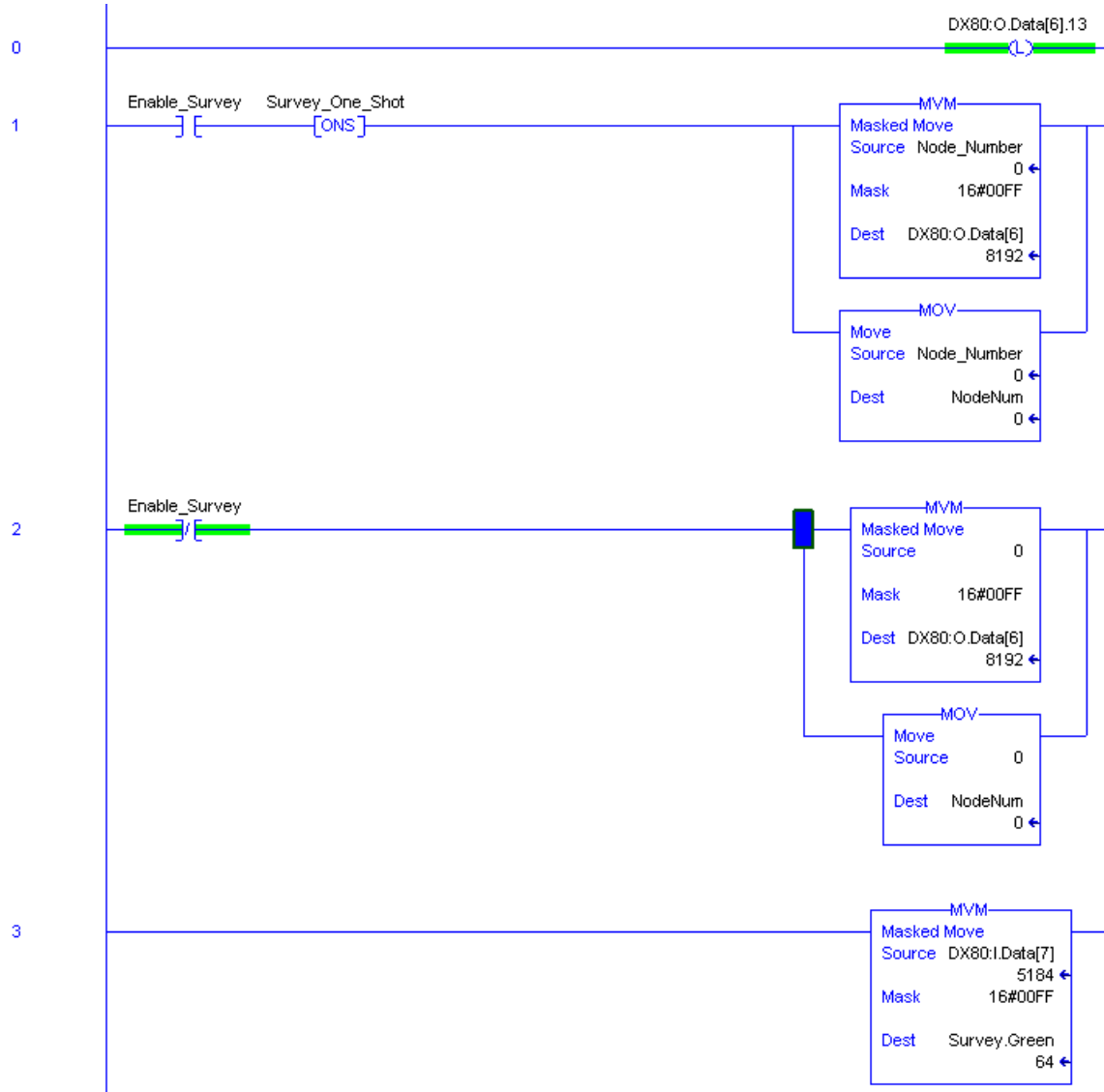
To check the strength of the wireless signal between the Gateway Pro and each node, a Site Survey can be conducted from within the PLC. There is an example project contained the ZIP file that can be used to perform the site survey. The Gateway Pro is setup as a Generic Ethernet Module. DX80 denotes the name of the module. Please note the Comm Format is Data – INT, and the sizes for the Assembly Instances.

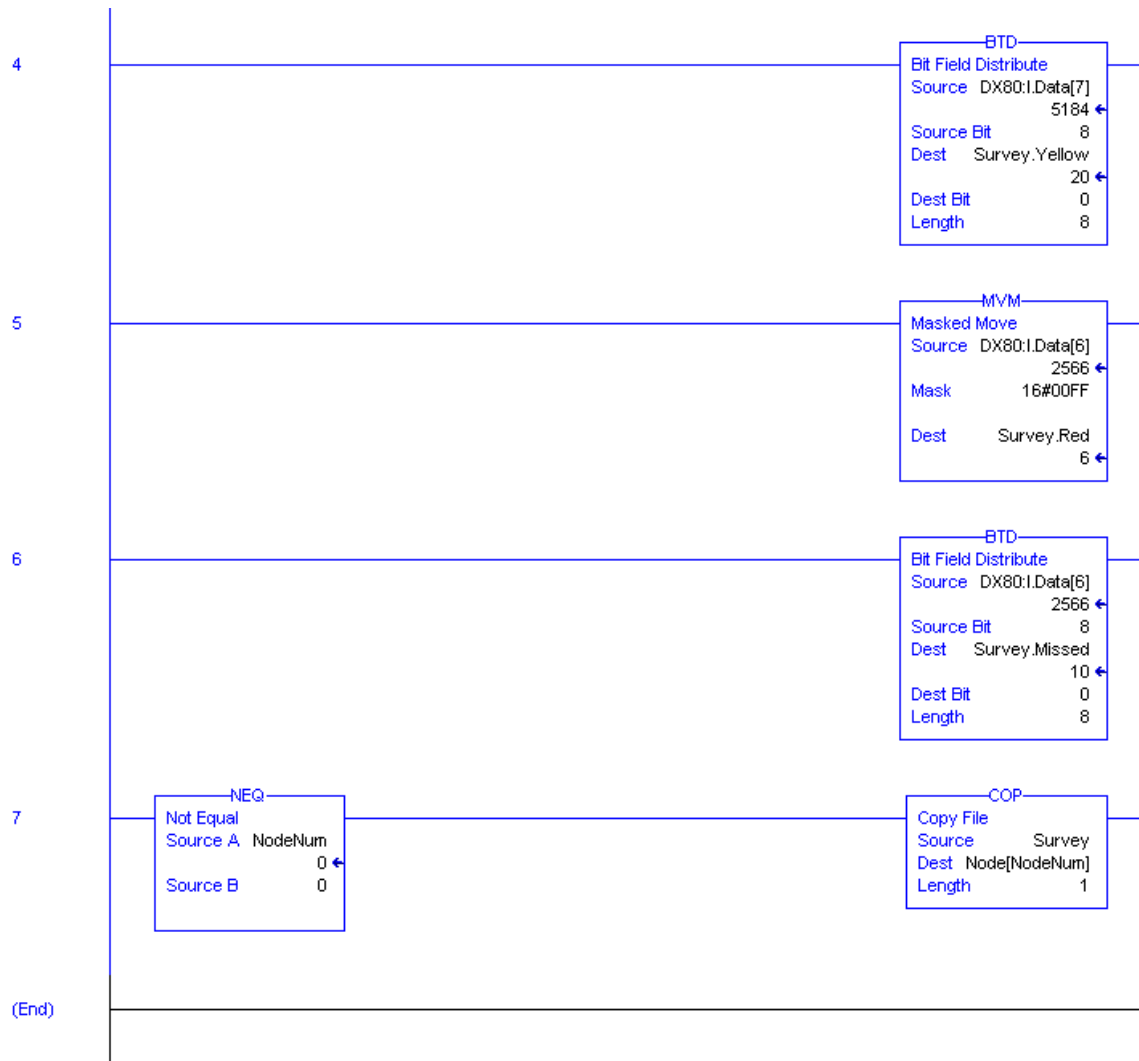


Under the MainProgram is a subroutine called DX80_Node_Survey. This code can be copied into another Logix5000 program (the example program was written in Version 13 and tested with a SoftLogix5800 processor).



Enter the number of the node that you want to monitor the signal strength of into the tag <Node_Number>. Setting the <Enable_Survey> boolean tag to true will place the DX80 Gateway Pro into Site Survey mode. To turn off Site Survey mode, set the <Enable_Survey> tag to false.





While in Site Survey mode, the signal strength data for the active node being monitored is placed into the tag <Survey>. Also, the same data is placed into the tag array <Node[#]> where # is the node number. With Site Survey mode disabled, the last remaining data is retained in the tag array <Node[#]>.

+ DX80:C	{...}	{...}		AB:ETHERNET_MODULE:C:0
+ DX80:I	{...}	{...}		AB:ETHERNET_MODULE_INT...
+ DX80:O	{...}	{...}		AB:ETHERNET_MODULE_INT...
Enable_Survey	0		Decimal	BOOL
+ Node	{...}	{...}		Survey_Results[57]
+ Node_Number	0		Decimal	INT
+ NodeNum	0		Decimal	INT
- Survey	{...}	{...}		Survey_Results
+ Survey.Green	64		Decimal	INT
+ Survey.Yellow	20		Decimal	INT
+ Survey.Red	6		Decimal	INT
+ Survey.Missed	10		Decimal	INT
Survey_One_Shot	0		Decimal	BOOL

- Node	{...}	{...}		Survey_Results[57]
+ Node[0]	{...}	{...}		Survey_Results
- Node[1]	{...}	{...}		Survey_Results
+ Node[1].Green	64		Decimal	INT
+ Node[1].Yellow	20		Decimal	INT
+ Node[1].Red	6		Decimal	INT
+ Node[1].Missed	10		Decimal	INT
+ Node[2]	{...}	{...}		Survey_Results
+ Node[3]	{...}	{...}		Survey_Results
+ Node[4]	{...}	{...}		Survey_Results
+ Node[5]	{...}	{...}		Survey_Results
+ Node[6]	{...}	{...}		Survey_Results
+ Node[7]	{...}	{...}		Survey_Results
+ Node[8]	{...}	{...}		Survey_Results
+ Node[9]	{...}	{...}		Survey_Results
+ Node[10]	{...}	{...}		Survey_Results
+ Node[11]	{...}	{...}		Survey_Results
+ Node[12]	{...}	{...}		Survey_Results