Technical Note

Genius Global Data and the AN-X-GENI

This technical note describes how to configure various GE processors to receive global data generated by the AN-X-GENI and how to receive global data produced by other nodes on the AN-X-GENI.

The details for configuring the GE bus controllers depend on the programming software you are using.

Requirements

AN-X-GENI firmware version 1.2.3 or above

Global Data Produced by AN-X-GENI

Configuring the AN-X-GENI to Send Global Data

To configure the AN-X-GENI to send global data on the Genius network, add a line of the form

GlobSend=length

to the I/O configuration file. The length can be from 1 to 64. NOTE: The length of global data is in 16-bit words, not bytes.

Example:

To set the length to 4 16-bit words

GlobSend=4

If a Series Six controller will be receiving the global data from the AN-X, add a line to the beginning of the ControlLogix configuration file as follows:

Ge6Addr, nnnnn

nnnn is a number from 0 to 16383 that is the register where the data is to go in the Series Six PLC(s). All Series Six PLCs on the Genius network configured to receive global data will put it in the same place.

To write the global data from a ControlLogix, you must map the global data sent by AN-X to the output data of a ControlLogix connection. Add the following line to the DataOutput section of the connection

GlobSend

AN-X obtains the length of the global data to map from the Genius I/O configuration file.

90-70

To configure the 90-70 to receive global data from the AN-X:

1. Add a Genius device to the bus controller as a Generic I/O device
2. Set the Config mode to manual
3. Assign a data address and set the length to match the length configured in the AN-X

90-30

To configure the 90-30 to receive global data from the AN-X:

1. Add a device to the bus controller at the AN-X serial bus address
2. Set the device type to Generic
3. Set the %AI address and set the input length to match the data length configured in the AN-X

Series Six

Make sure that you have assigned the Ge6Addr in the AN-X-GENI ControlLogix configuration file.

Set the Series Six to receive global data as you would from any other node. It will appear at the address you assigned.

Receiving Global Data on the AN-X-GENI

When you perform an autoconfiguration, if the other node is producing global data when you autoconfigure the AN-X-GENI, the autoconfiguration will include the global data.

If you are configuring the Genius network manually, add a line of the form

Block=nn,Inp=inlength,Out=0,,Part="partnumber",Desc="description",EndBlock

where

Block is the Genius serial bus address of the node producing the global data

inlength is the length of the data in 16-bit words

partnumber is a maximum of 15 characters, enclosed in double quotes

description is a maximum of 95 characters, enclosed in double quotes

partnumber and description are used for comments only. You can put whatever you want in them.

To receive the global data in the ControlLogix, you must map the received global data to the input data for a ControlLogix connection.

In the ControlLogix configuration, add a line to the DataInput section of the connection of the form:

CLX_offset (optional), Genius_Location, tagname

The CLX_offset is the offset into the data for the connection. You can select the offset where the data is located or you can leave it blank and AN-X will automatically assign the offset.

The Genius_location consists of an address in the form bSBA where SBA is the 2-digit serial bus address (SBA) of the module on the Genius bus, from 1 to 31.

Accessing Global Data from HMIs

The AN-X-GENI maps global data from Genius nodes 0 to 31 to integer files N100 to N131. Each file is 64 words long.

To read the global data for any node, create the connection to the AN-X as you would for a PLC-5, and read the data from the appropriate integer file.

You can also use an HMI to write to the global data that the AN-X-GENI is transmitting, that is, the file that corresponds to the AN-X-GENI serial bus address. Of course, if the AN-X-GENI global data is mapped to a ControlLogix connection, the global data you write using the HMI will be overwritten by the data from the scheduled data.