DNP3 Integration Kit for PAC Control, Version 8.1q

October 2, 2014

DnP3 is a large and processor-intensive protocol. It was tested using the SNAP-PAC-S1 controller. Using the SNAP-PAC-S1 or SNAP-PAC-S2 gives the best performance and leaves plenty of room for the customer's strategy.

User data is entered in the DnP3_Outstation_Protocol chart Block 167. Line 8 (poPAC_DNP_Controller_SNAP_PAC_S1_or_S2 = &SNAP_PAC_S1;) loads the controller running the DNP3 charts to a pointer variable. This variable (poPAC_DNP_Controller_SNAP_PAC_S1_or_S2) will accept the SNAP-PAC-S1 or SNAP-PAC-S2 controller.

If you want to use the SNAP-PAC-R1 or SNAP-PAC-R2 to run the DnP3 charts it may not give the same performance depending on how busy the controller is with other customer tasks.

To use the SNAP-PAC-R1 or SNAP-PAC-R2:

In line 8 of block 167 use

    (poPAC_DNP_Controller_SNAP_PAC_R1) for the SNAP-PAC-R1 in place of (poPAC_DNP_Controller_SNAP_PAC_S1_or_S2)

    (poPAC_DNP_Controller_SNAP_PAC_R2) for the SNAP-PAC-R2 in place of (poPAC_DNP_Controller_SNAP_PAC_S1_or_S2)

Use only one of the pointers.
Replace "SNAP_PAC_S1" on line 8 with your controllers name.
Make sure to keep the preceding "&" symbol

There is an example chart "DNP3_Manual_Event_Example_Chart" that shows how to use the event subroutines in a chart to add events manually to the event buffers

DNP3 Integration Kit Version History

8.1q – October 2, 2014
Fixed problem with half open session block 543 L8.

8.1p – September 18, 2014
Added single event buffer mode.

8.1o – April 3, 2014
Fixed length problem B50 L38 and B69 L109.

8.1n – December 4, 2012
(Formerly 8.1ab – October 3, 2012. The version number was changed to conform to Opto 22's standard.)
* Fixed error in reset error log block 179.
* Outstation using wrong index for Keep-Alive block 543.
* Clear Unsolicited timing bit if Outstation Com down and AL state is reset block 543 & 98.

8.1aa – June 13, 2012
Added DNP3 Master charts.

8.1l
* Added Serial or Ethernet per master connection.
* Added Auto Event configuration function.
* Corrected Add Gp32 Event subroutine - v2 and v4 to handle negative numbers.

8.1k - September 27, 2011
* Added virtual table indexes for binary and analog points.
* Added float support. g30v5, g32v5, g32v7, g40v3, g41v3.

8.1j – August 25, 2011
Fixed problem writing negative numbers to analog outputs. l

8.1i – December 14, 2010
* Fixed bug in CROB when sending command to wrong model type.
* Changed Conplementary two-output model setup from 2 & 2 to 2 & 3 pairs
* Changed DNP time synchronization to also set system clock.

8.1h – March 30, 2010
Fixed a bug with group 20, variation 2.

8.1g – November 3, 2009
Fixed All-Stations Message Received.

8.1f – June 19, 2009
* Added Level 3 support for Qualifier 0x00 and 0x01
* Fixed bug subroutine for group 2.
* Added group 23 event support.
* Added virtual counter support.

8.1e - January 2009
* Added function 24.

8.1d January 2009
* Fixed read bugs, serial bugs, and 2009 timestamp.

8.1c November 2008
* Corrected error in block 124.
* Corrected error in block 625.
* Added pointer for the R1 and R2 controller.
* Added serial support.

8.1b
* Added logic to get correct date if event is added at midnight.

8.1a 6/1/2008
* Build DNP3 Protocol Chart to (DNP3 Specification Volume 2.02 15 Dec 2007)