



Applications

Application is compatible with Q1 Hardware. An event based energy shedding manager built with multiple levels and stages of shedding and customizable ranges for each stage. Each stage has 2 levels of shedding for prioritized shedding area's. Custom binding tool for ease of connection to equipment controller. 10 reoccurring or 1 time events available.

Software

Software features include:

- Multiple shedding strategies included
- Configurable end of shedding command, allows equipment to auto control hardware based resets or force into no reset mode.
- Full PID control of the shedding load control
- Up to 6 stages of shedding "zones"
- Full control over stage timing and type
- Multiple staging operations available
- 10 reoccurring or 1 time events
- Individual stage output capping per level
- Changeable network variable types
- Slave mode for any unused I/O, which can be bound to another controller

LNS Plug-in provides graphical user interface for configuration and monitoring. Plug-in simplifies hardware I/O customization, communication parameters, and control sequences. Plug-in can be executed from within network management tool such as LonMaker for Windows or similar.



NRG Profile	Network Profile
<p>All variables with SNVT_xxx have Changeable Types feature.</p>	<p>The diagram illustrates the Network Profile structure. It is organized into several sections:</p> <ul style="list-style-type: none"> Mandatory Network Variables: A top-level box containing three sub-sections: <ul style="list-style-type: none"> Optional Network Variables Configuration Properties Manufacture Network Variables: A central section with two columns of variables: <ul style="list-style-type: none"> Left Column: <ul style="list-style-type: none"> nviPwrInWatt SNVT_power_f nviPwrInWattH SNVT_power_f nviTimeSched SNVT_time_stamp nviEnergyEvent_x UNVT_energy_event Right Column: <ul style="list-style-type: none"> nvoTotalPwrWh SNVT_power_f nvoPwrDemand SNVT_power_f nvoSheddingDem_1 SNVT_lev_percent nvoSheddingDem_2 SNVT_lev_percent nvoShedding_L1 SNVT_switch nvoShedding_L2 SNVT_switch nvoShedding_L3 SNVT_switch nvoShedding_L4 SNVT_switch nvoShedding_L5 SNVT_switch nvoShedding_L6 SNVT_switch Manufacture Configuration Properties: A bottom section containing a large arrow-shaped box with the following properties: <ul style="list-style-type: none"> Send Heartbeat Maximum Receive Time Minimum Send Time Shedding PID Configuration Shedding Stage Configuration





Open Loop Sensor Profile	Network Profile
<p>Open Loop Sensor profile is used by all physical inputs. Inputs can be used as slave I/O or as part of the main application.</p> <p>All variables with SNVT_xxx have Changeable Types feature.</p>	<p>Open Loop Sensor functional block information.</p> <p>(Physical inputs)</p> <p>The diagram illustrates the functional block information for physical inputs, organized into several sections:</p> <ul style="list-style-type: none"> Mandatory Network Variables: Includes variables <code>nvoHwData_x</code> and <code>SNVT_xxx</code>. Optional Network Variables: Includes variables <code>nvoRawHwData_x</code> and <code>SNVT_count</code>. Configuration Properties: A large arrow-shaped block containing: <ul style="list-style-type: none"> Default Value Invert Value Override Value Offset Value Maximum Input Range Minimum Input Range Maximum/Minimum Send Time Minimum Send Delta Manufacture Network Variables: A block for manufacturer-specific variables. Manufacture Configuration Properties: A large arrow-shaped block containing: <ul style="list-style-type: none"> Average Conditioned Value Input Assignment Input Minimum/Maximum Range Input Signal Type Network Variable Type Maximum Network Variable Size



Open Loop Actuator Profile	Network Profile
<p>Analog Output profile is used by all analog outputs. Outputs can be used as slave I/O or as part of the main application.</p> <p>All variables with SNVT_xxx have Changeable Types feature</p>	<p>Analog Outputs functional block information.</p>



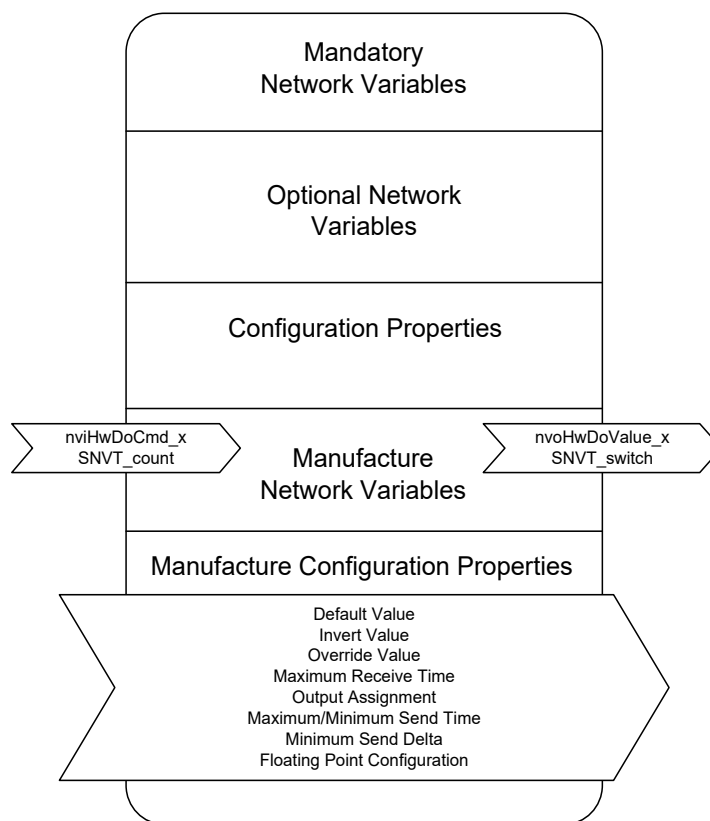
Open Loop Sensor Profile

Digital Output profile is used by all digital outputs. Outputs can be used as slave I/O or as part of the main application.

All variables with SNVT_xxx have Changeable Types feature.

Network Profile

Digital Outputs functional block information.





Node Object Profile	Network Profile
<p>Node Object profile includes hardware specific network variables. The variables are for internal and use by the plug-in only.</p>	<p>Node Object functional block information.</p> <pre> graph TD subgraph Mandatory_Network_Variables [Mandatory Network Variables] direction LR M1[nviRequest SNVT_obj_request] --> M2[nvoStatus SNVT_obj_status] end subgraph Optional_Network_Variables [Optional Network Variables] direction LR O1[nvoFileDirectory SNVT_address] end subgraph Configuration_Properties [Configuration Properties] end subgraph Manufacture_Network_Variables [Manufacture Network Variables] direction LR M3[nviGetReg UNVT_RegisterIO] M4[nviSetReg UNVT_RegisterIO] M5[nviSetMem UNVT_RegisterIO32] end subgraph Manufacture_Configuration_Properties [Manufacture Configuration Properties] end subgraph Input_Translation_Table [Input Translation Table] end M2 --- O1 O1 --- Configuration_Properties Configuration_Properties --- Manufacture_Network_Variables Manufacture_Network_Variables --- Manufacture_Configuration_Properties Manufacture_Configuration_Properties --- Input_Translation_Table </pre>