

Applications

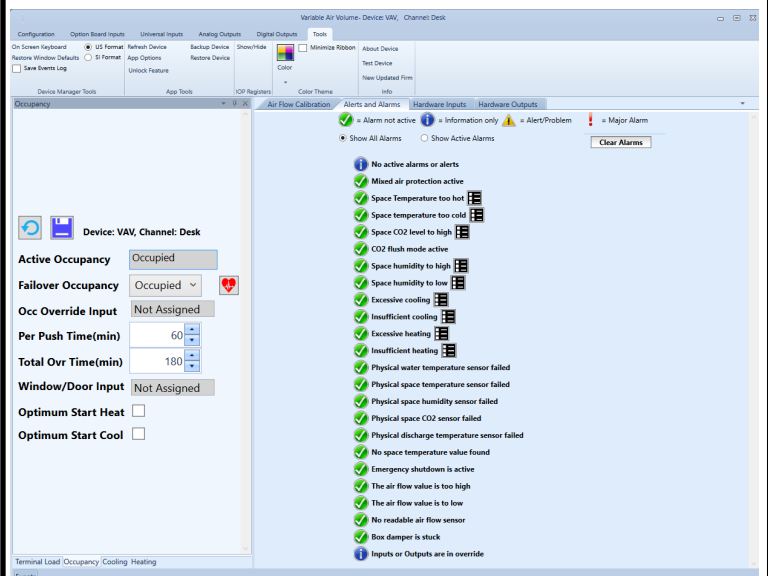
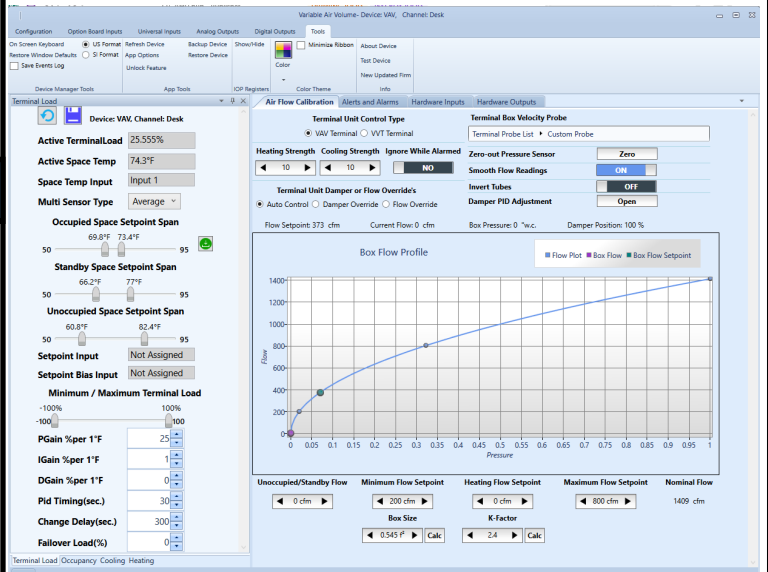
Application is compatible with Q1 Hardware. Compatible with Variable Air Volume ("VAV"), Constant Air Volume ("CAV") and Variable Volume Temperature ("VVT") equipment. Applications including fan powered boxes and boxes with local reheat, cooling or humidity control. When paired with Q1-AHU controllers, units have expanded capabilities for enhanced setpoint resets, occupancy commands, CO2 and humidity controls.

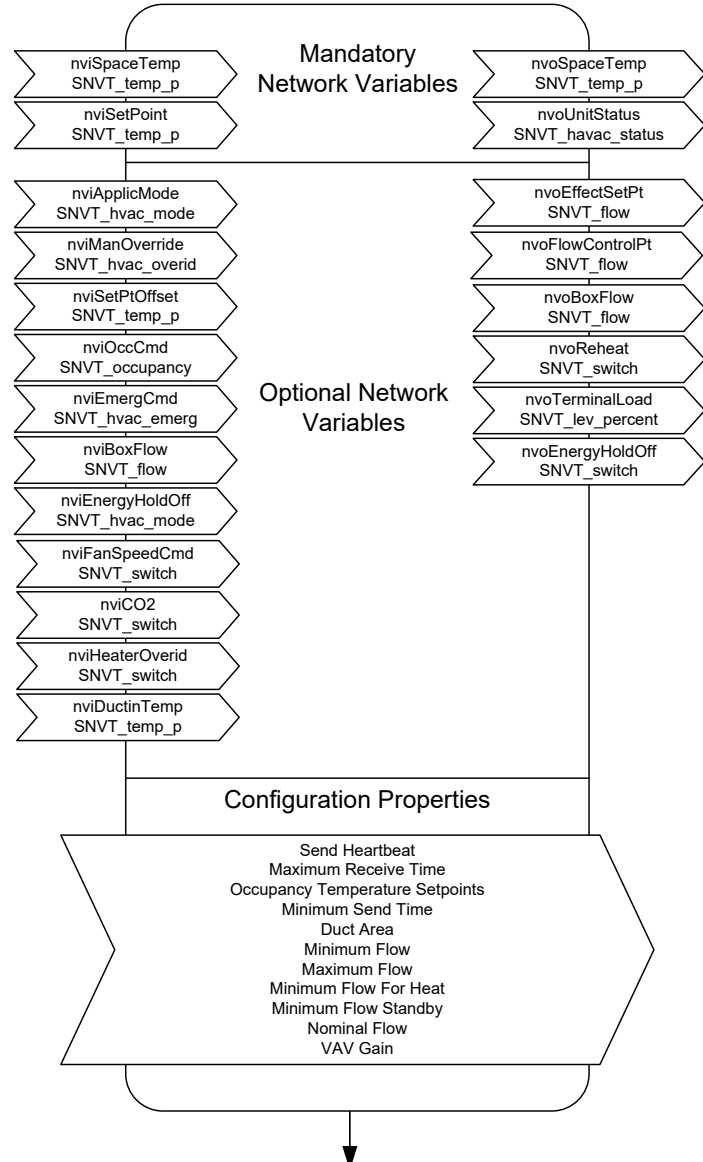
Software

Software features include:

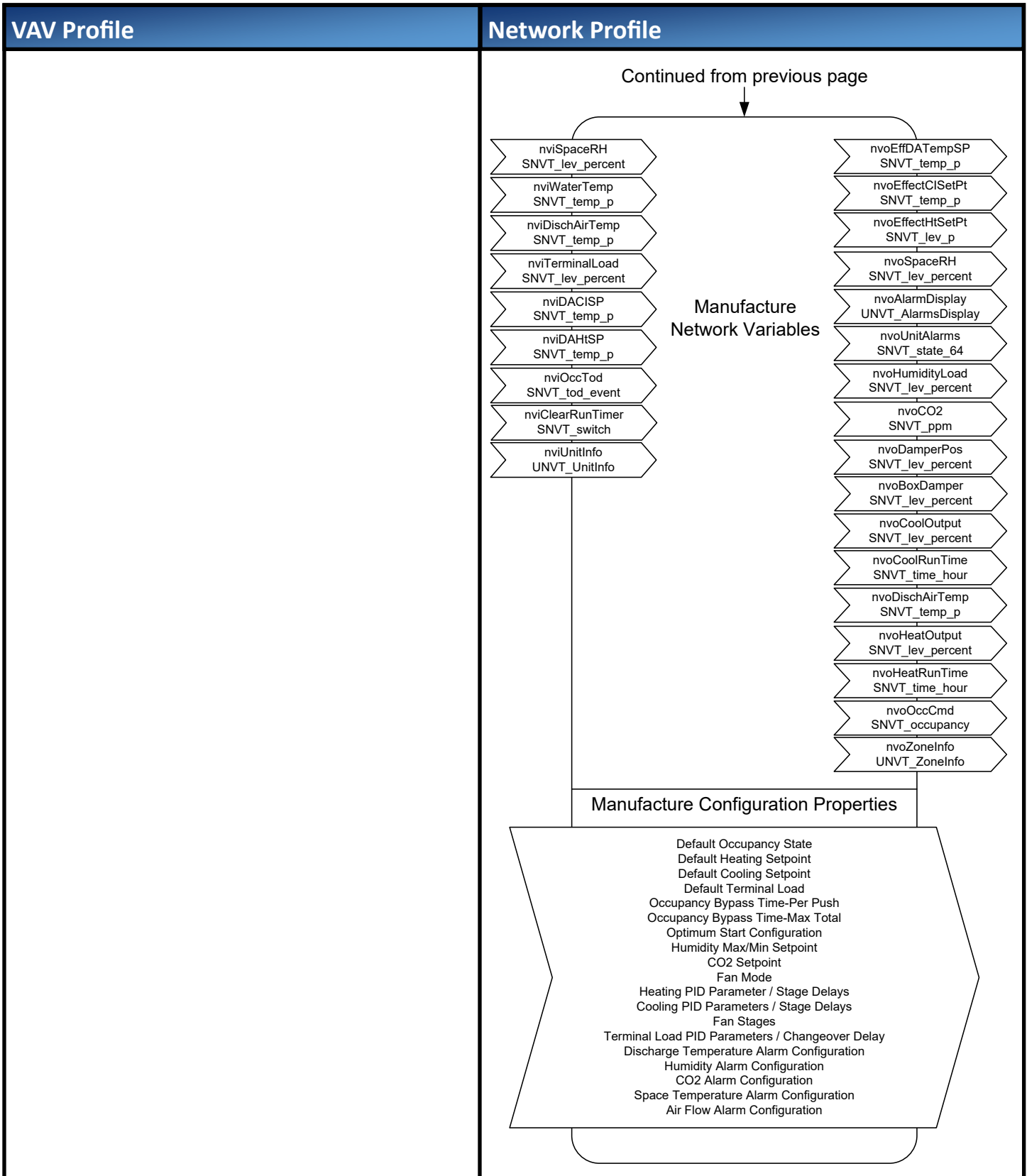
- Single or Multiple Zone temperature sensors, with the capacity to act upon maximum, minimum, or average temperature.
- Full PID control of up to 4 Independent stages of cooling and Heating, both digital and analog or a mixture of both
- Full PID control of air flow damper actuator. Both analog(0/2-10 vdc) or floating point actuators supported
- Bi-directional pressure sensor with software based inverting.
- "Smart" volume damper resets for pressure control, eliminating the need for "bypass" or "dump" dampers in VVT applications.
- Built in Heating and Cooling priority levels
- Built in Optimum Start Capability
- Built in CO2 Control
- Built in Space Humidity Control
- Built in Energy Shedding Control
- Built in Alarming
 - Actuator Position Alarms
 - Air Flow Alarms
 - Sensor Alarms
 - Temperature Control Alarms
 - Humidity Control Alarms
 - CO2 Alarms
 - Many more
- 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, control sequences. Plug-in can be executed from within network management tool such as LonMaker for Windows or similar.



VAV Profile	Network Profile
<p>All variables with SNVT_xxx have Changeable Types feature.</p>	<p>FCU 8010 functional block information.</p>  <p>The diagram illustrates the network profile for the FCU 8010 functional block. It is organized into three main sections:</p> <ul style="list-style-type: none"> Mandatory Network Variables: A central column of variables that are required for the device to function. These include: <ul style="list-style-type: none"> nviSpaceTemp (SNVT_temp_p) nviSetPoint (SNVT_temp_p) nviApplicMode (SNVT_hvac_mode) nviManOverride (SNVT_hvac_overid) nviSetPtOffset (SNVT_temp_p) nviOccCmd (SNVT_occupancy) nviEmergCmd (SNVT_hvac_emerg) nviBoxFlow (SNVT_flow) nviEnergyHoldOff (SNVT_hvac_mode) nviFanSpeedCmd (SNVT_switch) nviCO2 (SNVT_switch) nviHeaterOverid (SNVT_switch) nviDuctinTemp (SNVT_temp_p) Optional Network Variables: A column of variables that are not required but can be used for enhanced functionality. These include: <ul style="list-style-type: none"> nvoSpaceTemp (SNVT_temp_p) nvoUnitStatus (SNVT_hvac_status) nvoEffectSetPt (SNVT_flow) nvoFlowControlPt (SNVT_flow) nvoBoxFlow (SNVT_flow) nvoReheat (SNVT_switch) nvoTerminalLoad (SNVT_lev_percent) nvoEnergyHoldOff (SNVT_switch) Configuration Properties: A large arrow-shaped box containing various system parameters: <ul style="list-style-type: none"> Send Heartbeat Maximum Receive Time Occupancy Temperature Setpoints Minimum Send Time Duct Area Minimum Flow Maximum Flow Minimum Flow For Heat Minimum Flow Standby Nominal Flow VAV Gain <p>Arrows indicate that the Mandatory and Optional Network Variables feed into the Configuration Properties section. A large arrow at the bottom of the diagram points to the text "Continue on next page".</p>





Open Loop Sensor Profile

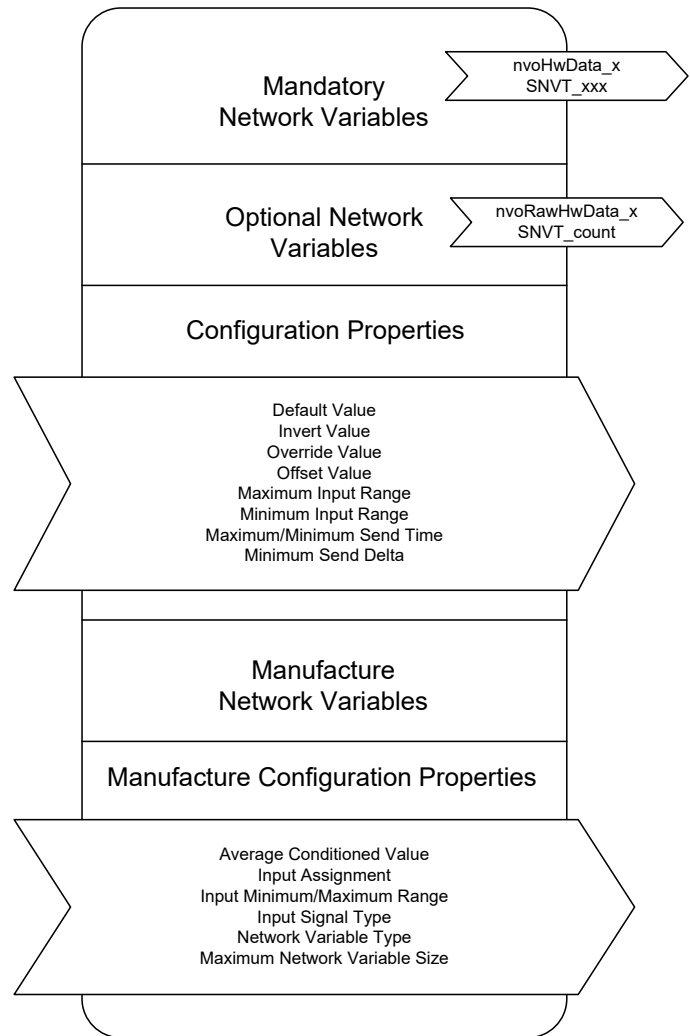
Open Loop Sensor profile is used by all physical inputs. Inputs can be used as slave I/O or as part of the main application.

All variables with SNVT_xxx have Changeable Types feature.

Network Profile

Open Loop Sensor functional block information.

(Physical inputs)



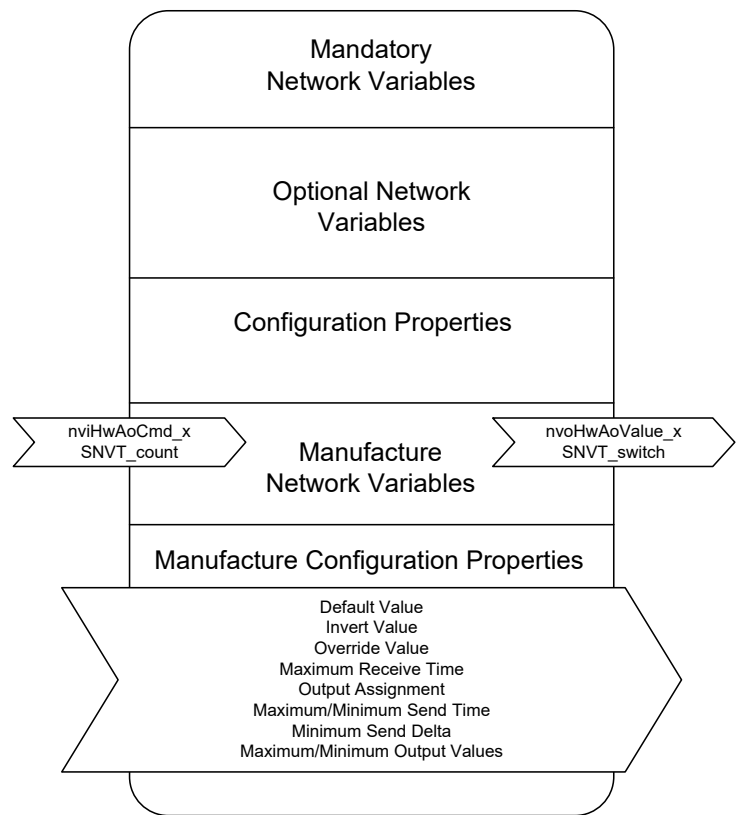
Open Loop Actuator Profile

Analog Output profile is used by all analog 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

Analog Outputs functional block information.



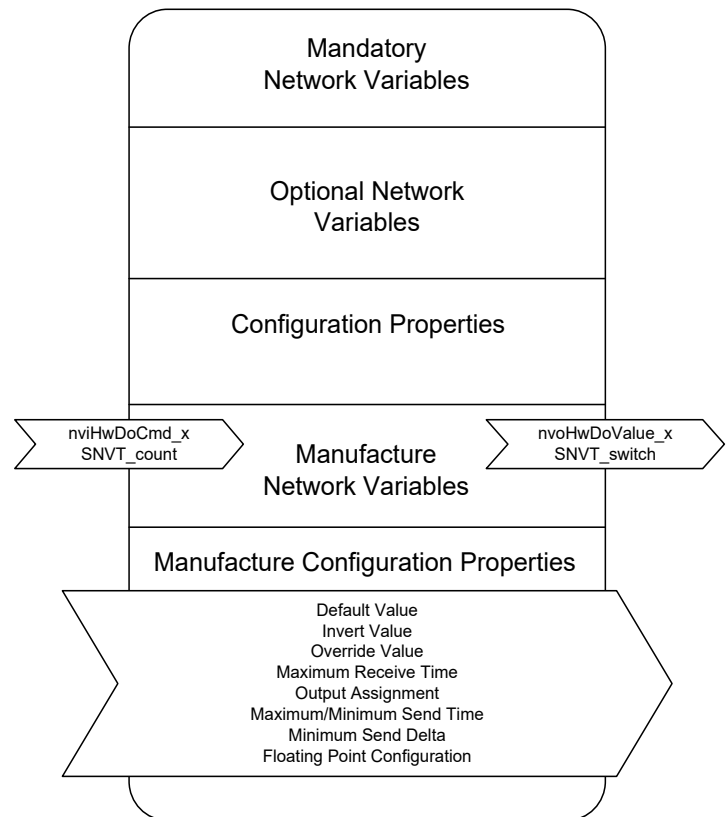
Open Loop Sensor Profile

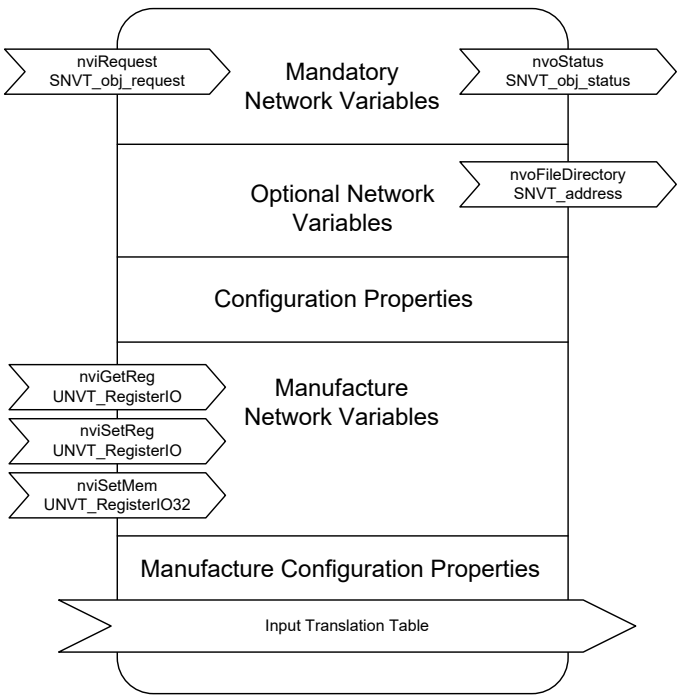
Digital Output profile is used by all digital outputs. Outputs can be used as slave I/O or as part of the main application.

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] direction TB C1[] 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] direction TB C2[] end subgraph Input_Translation_Table [Input Translation Table] direction LR I1[] end Mandatory_Network_Variables --- Optional_Network_Variables Optional_Network_Variables --- Configuration_Properties Configuration_Properties --- Manufacture_Network_Variables Manufacture_Network_Variables --- Manufacture_Configuration_Properties Manufacture_Configuration_Properties --- Input_Translation_Table </pre>