

Applications

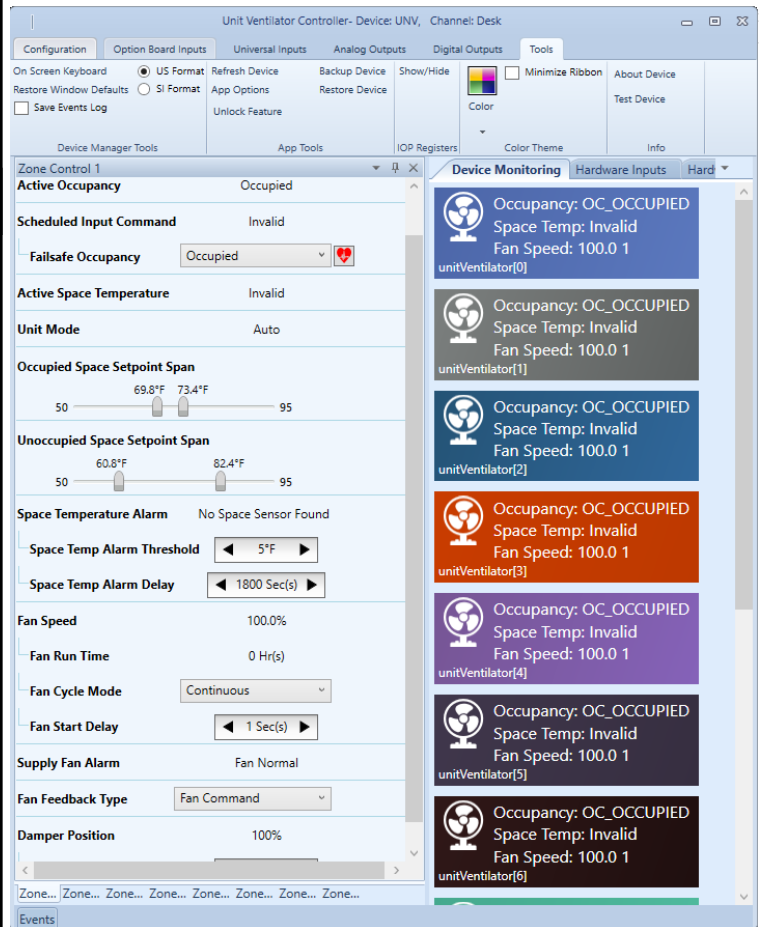
Application is compatible with Q1 Hardware. Compatible with any supply/exhaust fans or space heating/cooling equipment. Will control up to 8 individual spaces on a single controller. A cost effective way of controlling multiple simple equipment while still having effective and easy monitoring and full featured alarming capabilities.

Software

Software features include:

- Up to 8 individual single zone 's controlled in 1 controller
- Individual space occupancy control
- Fail-safe settings for communications loss handling
- Monitoring of damper position for proper enabling of fans
- Multiple fan cycle modes
- Multiple fan feedback options
- Backdraft damper control
- Space temperature or occupancy only control
- Configurable fan start delay
- Adjustable Occupied and Unoccupied space setpoints
- Emergency shutdown
- Built in Alarming
 - Temperature Control Alarms
 - Fan Failure and Belt Loss Alarms
 - Sensor Alarms
- 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.





UNV Profile	Network Profile
<p>All variables with SNVT_xxx have Changeable Types feature.</p>	<p>The diagram illustrates the network profile structure, organized into several sections:</p> <ul style="list-style-type: none"> Mandatory Network Variables: <ul style="list-style-type: none"> nviSpaceTemp SNVT_temp_p nvoSpaceTemp SNVT_temp_p nvoUnitStatus SNVT_hvac_status Optional Network Variables: <ul style="list-style-type: none"> nviEmergCmd SNVT_hvac_emerg nviFanSpeedCmd SNVT_switch nviOccCmd SNVT_occupancy nvoFanSpeed SNVT_switch nvoOccCmd SNVT_occupancy Configuration Properties: <ul style="list-style-type: none"> Send Heartbeat Maximum Receive Time Occupancy Temperature Setpoints Minimum Send Time Manufacture Network Variables: <ul style="list-style-type: none"> nviClearRunTimer SNVT_switch nviBypassTm SNVT_count nvoUnitAlarms SNVT_state_64 nvoFanRunTime SNVT_time_hour nvoOADamper SNVT_lev_percent Manufacture Configuration Properties: <ul style="list-style-type: none"> Default Occupancy State Default Heating Setpoint Default Cooling Setpoint Space Temperature Alarm Configuration Fan Alarm Configuration Fan Command Type Damper Position Setpoint





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 structure of the Open Loop Sensor functional block information for physical inputs. It is 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: 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> <div style="text-align: center; border: 1px solid black; padding: 10px; margin: 20px auto; width: 80%;"> </div>



Open Loop Sensor Profile	Network Profile
<p>Digital Output profile is used by all digital 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>Digital Outputs functional block information.</p> <p>The diagram illustrates the structure of the Network Profile. It is organized into several sections:</p> <ul style="list-style-type: none"> Mandatory Network Variables: The top section of the profile. Optional Network Variables: A section below the mandatory variables. Configuration Properties: A section below the optional variables. Manufacture Network Variables: A section below the configuration properties, with two associated variables: <code>nviHwDoCmd_x SNVT_count</code> and <code>nvoHwDoValue_x SNVT_switch</code>. Manufacture Configuration Properties: A section below the manufacture network variables, containing a list of properties: <ul style="list-style-type: none"> Default Value Invert Value Override Value Maximum Receive Time Output Assignment Maximum/Minimum Send Time Minimum Send Delta Floating Point Configuration



Node Object Profile	Network Profile
<p>Node Object profile includes hardware specific network variables. The variables are for internal and use by the plugin 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>