Q1-NetStat-2.x.x.x

InetSupervisor open-system LonWorks controllers

Up to 12 inputs - 12 outputs

Made in USA RoHS GSA Advantage!

Application

Network Statistics device is designed to provide network statistics. A typical use would be to i.e. calculate min, max, average of terminal load or valve positions of up to 250 terminal unit controllers. Up to 250 network variables can be bound to the NetStat from other LonWorks controllers.

Network

Q1 is built to operate on LonWorks FT-10 channels connected with twisted-pair wire. Network update throttling is incorporated and can be adjusted via configuration properties. Very large networks of devices can be built using IP backbones and routers available from many vendors.
Neuron 5000, no cost LNS commissioning, no credits required.

Software

- Changeable network variable types
- 5 PID loops
- Input , output properties and network update throttling
- Slave mode for any unused I/O, which can be bound to another controller

Hardware

- 12 inputs include: 2 resistive-sensor-only inputs and up to 10 universal inputs. Universal inputs can accept 0-10V, 0-20mA, resistive and dry-contact signals. UI type is adjustable by plug-in, no jumpers.
- 8 Digital outputs are triac digital on/off or tri-state.
-4 Universal analog outputs are capable of 0-10 volts and adjustable within that range, or digital (0-12V DC)
-16V DC on-board power supply provides power for loop-powered 4-20mA sensors.
-Analog outputs are fused.
-RJ11 jack provides quick access to network and 16V DC power for handled.
DIN rail mounting is integrated into enclosure for rapid installation.

Q1 is based on the Neuron FT-5000 microprocessor and designed to control variety of HVAC applications. It features rich network interface with up to 250 variables. Q1 devices can operate stand-alone or as a networked solution. In a networked environment Q1 can share information with other controllers peer to peer on a flat line of communication. Networks of thousands of devices can easily be created. When monitored by InetSupervisor software, web-based control and monitoring is enabled, large trend schedule and alarm storage is available. Q1 hardware can optionally be expanded with a variety of feature add-on boards that enhances the Q1 with features like differential pressure sensing, etc.
LonWorks guidelines are strictly observed and Q1 is interoperable with other like controllers for best network integration experience and promotes the use of industries best products in a network.

The Q1 hardware is build to high quality standards and is backed by two-year warranty.
All hardware is build in the USA using eco-friendly, lead-free technology and is RoHS compliant.

Features:

- nviInput network variables provide changeable types support. Each of 5 nviInput can have up to 50 fan-in connections from other terminal equipment controllers.
- ready-to-go calculated statistics such as min, max, average, count on , count off are provided on the network variable outputs.
-All hardware inputs and outputs can be used as slave I/O. PID can be applied to any input and output.

Quark Communications, Inc. 2033 San Elijo Ave #290 Cardiff, CA 92007 Phone. +1 (760) 634-6845

Q1-NetStat-2.x.x.x

Made in USA RoHS GSA Advantage!

Hardware Specifications

Environmental

Operating temperature:	0°-70°C (32°-158°F)
Operating humidity:	0-90% non-condensing
Storage temperature:	-20°- 70°C (-4° - 158°F)

Power

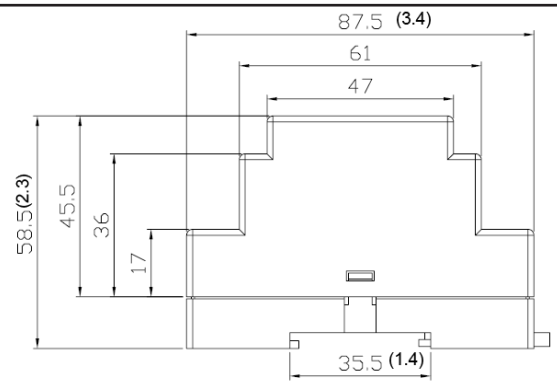
Typical power consumption:	5-6VA plus peripherals.
Max power consumption:	30VA including peripherals.
Supply voltage:	20-30V AC Class II or 22-50V DC
Fuse:	Fuse: 1.8A resetable fuse

Enclosure

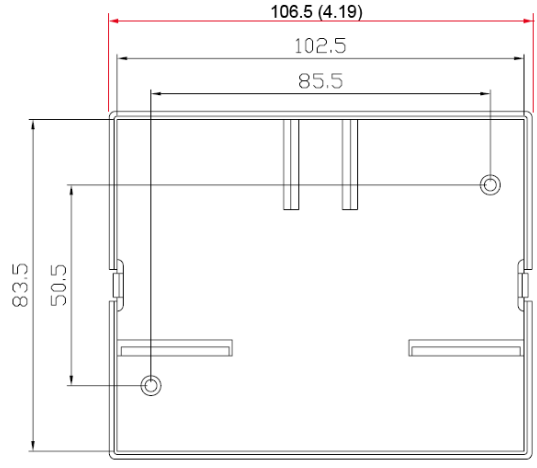
Installation:	Din-Rail mount.
Color:	Off-white
Material:	ABS
Connectors:	Connectors: Green, pluggable, 10 position.

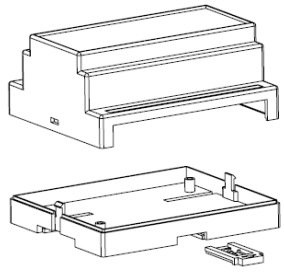
Hardware

Processor:	FT-5000, 8bits, 80MHz
Memory:	48k application memory
Transceiver:	FTT-10; 78kbps free topology, polarity free
Indicator light:	Multicolor LED, power, status, service
Comm jack:	RJ11; power, LON, hand-held comm.



Dimensions in: mm (inch)





Weight: 6oz.
Shipping Weight: 10oz.
Packaging outside dimentions: 5.7x5.7x3.2inch

Inputs:
Q1 hardware platform always has 2 resistive sensor inputs. In addition there are up to 10 Universal Inputs. Number of UIs depends on the part number. Input resolution is 12 bits. UIs are software configurable.

- Voltage 0-10VDC
- Current 0-20mA
- Digital Dry contact
- Resistive sensors
  - Thermistor 10kΩ Type 2 (recommended), Type 3
  - Thermistor custom translation table on each UI
  - Potentiometer with custom translation table on each UI

Outputs:
Q1 hardware has up to 8 triac digital outputs and 4 analog outputs. Number of outputs depends on the part number. Triac outputs can source 24AC or route external AC power depending on power jumper (P6) setting.

- Digital Triac
  - Triacs rated for 1A at 24VAC for a total of 2A all outputs.
  - External power supply or
  - Sourcing of 24VAC. See jumper setting.
- Analog Universal
  - 0-10VDC adjustable, linear
  - 0 or 12VDC digital
  - 35mA max at 30°C.
  - Resolution 8 bit
  - Auto reset fuse at 125mA

LED color codes:
Red = Powered on and application less
Green = Powered on and configured
OFF, no color = No power

Quark Communications, Inc. 2033 San Elijo Ave #290 Cardiff, CA 92007 Phone. +1 (760) 634-6845

Q1-NetStat-2.x.x.x

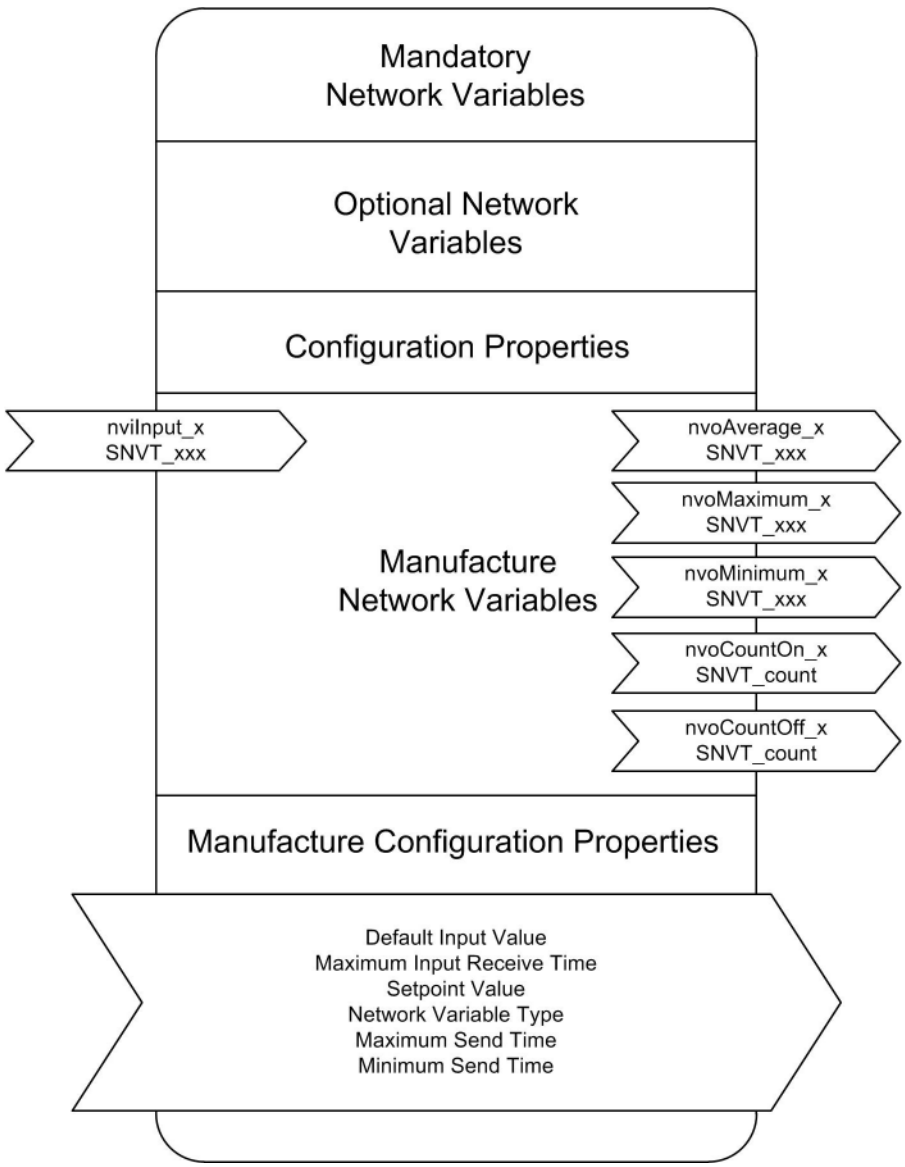
Made in USA RoHS GSA Advantage!

NetStat profile

NetStat application manages network variables shown in the Profile Information on the right. Typical NetStat application is to bind up to 50 valve outputs or terminal-Load variables into each of 5 nviInput in a fan-in configuration. The NetStat will output average, min, max, total counts of ON and OFF. Total counts of ON and OFF are calculated based on comparison to the SetpointValue config property.
User may want to set Default Input Value in config properties that takes affect if one of the bound variables is timed out.

All variables with SNVT_xxx have Change-able Types feature.

NetStat functional block information.



Quark Communications, Inc. 2033 San Elijo Ave #290 Cardiff, CA 92007 Phone. +1 (760) 634-6845

Q1-NetStat-2.x.x.x

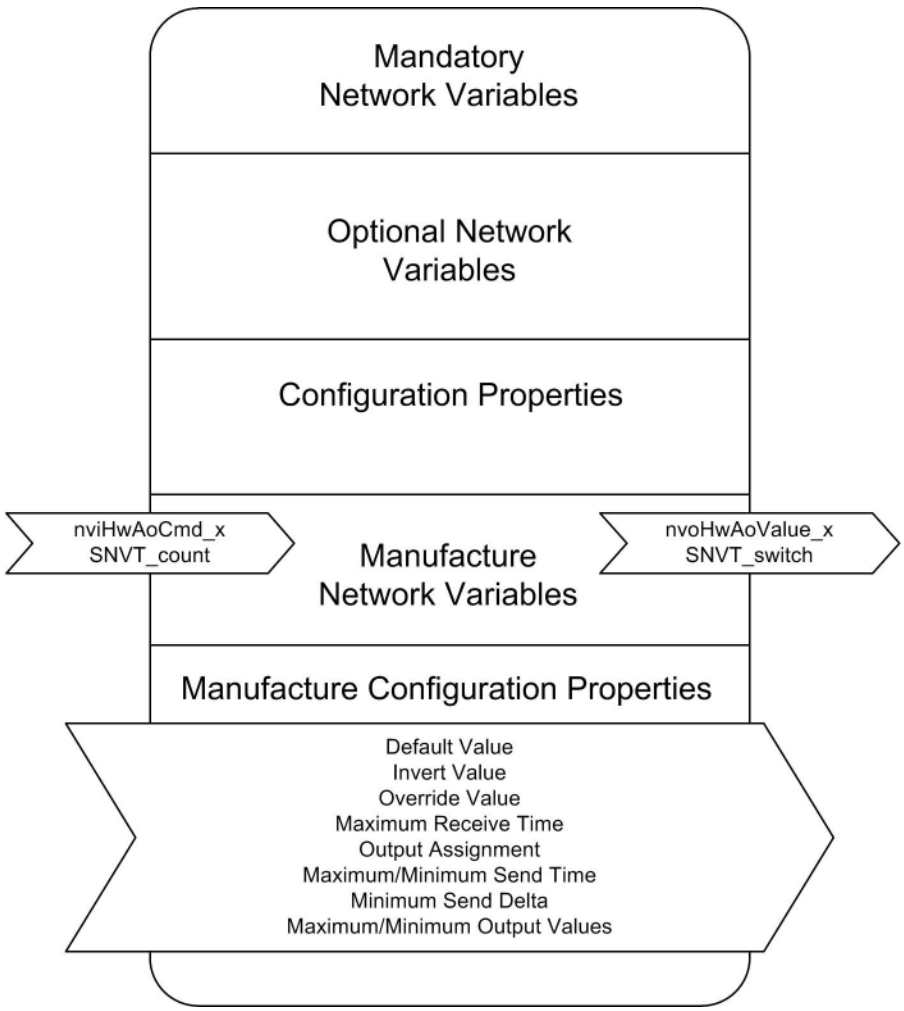
Made in USA RoHS GSA Advantage!

Node Object profile

Analog Output profile is used by all physical analog outputs. This allows the outputs to be used as slave I/O or as part of the main application.

All variables with SNVT_xxx have Change-able Types feature.

Analog Output functional block information.



Q1-NetStat-2.x.x.x

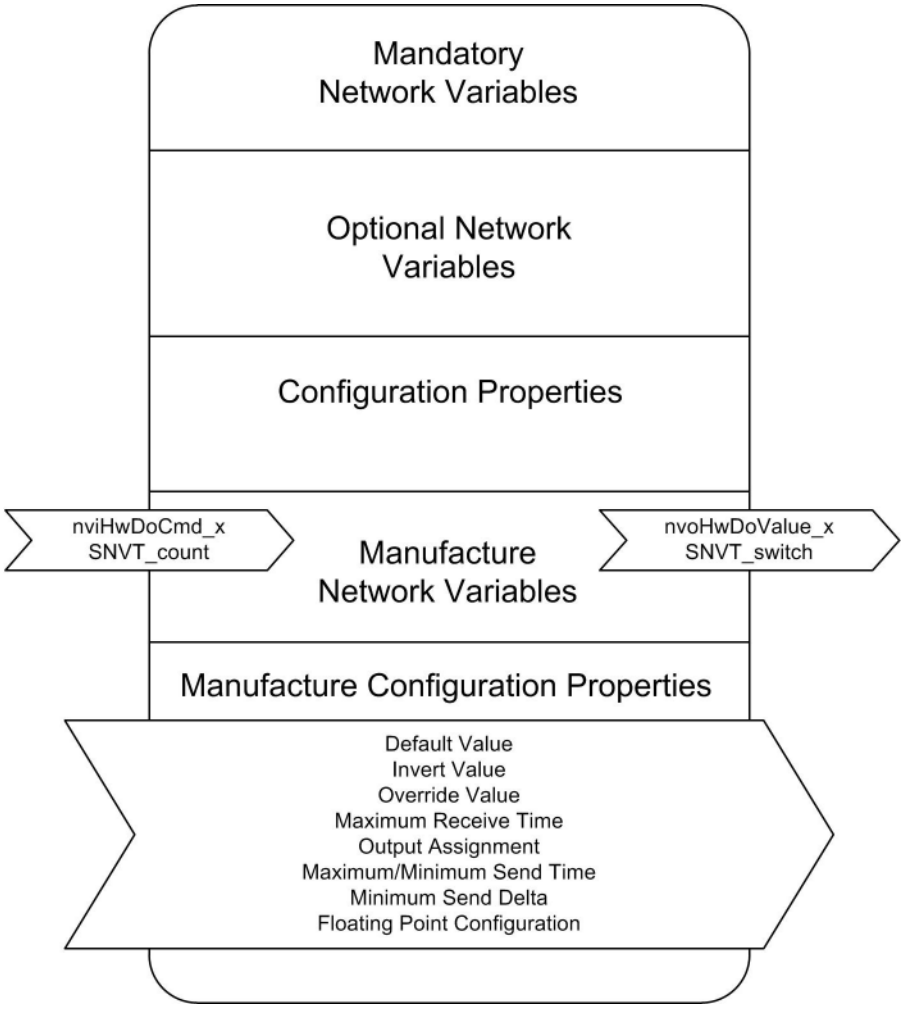
Made in USA RoHS GSA Advantage!

Open Loop Actuator profile

Digital Output profile is used by all physical digital outputs. This allows the outputs to be used as slave I/O or as part of the main application.

All variables with SNVT_xxx have Changeable Types feature.

Digital Output functional block information.



Q1-NetStat-2.x.x.x

Made in USA RoHS GSA Advantage!

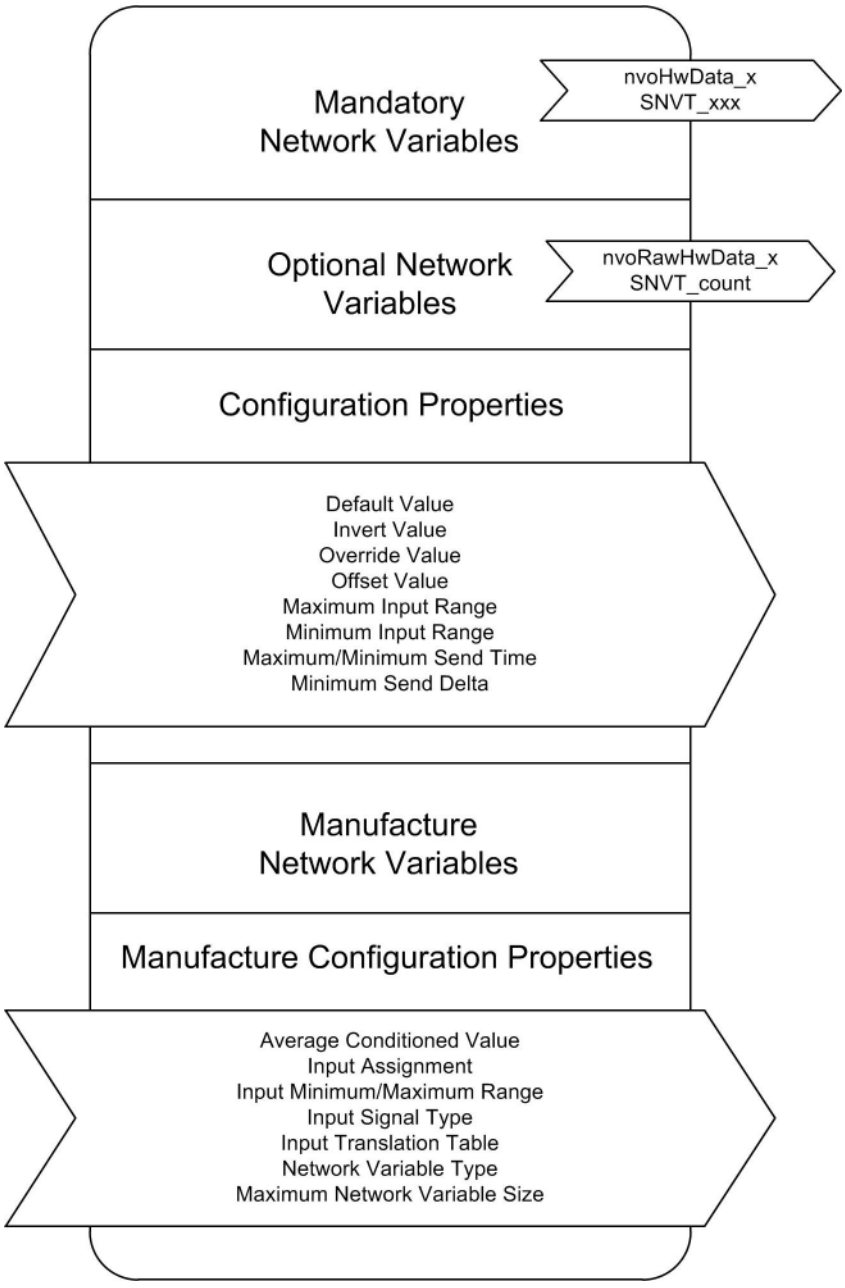
Open Loop Sensor profile

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

All variables with SNVT_xxx have Changeable Types feature.

Open Loop Sensor functional block information.

(Physical inputs)



Quark Communications, Inc. 2033 San Elijo Ave #290 Cardiff, CA 92007 Phone. +1 (760) 634-6845

Q1-NetStat-2.x.x.x

Made in USA RoHS GSA Advantage!

Node Object profile

Node Object profile includes hardware specific network variables. The variables are for internal and use by the plug-in only.

Part Numbers

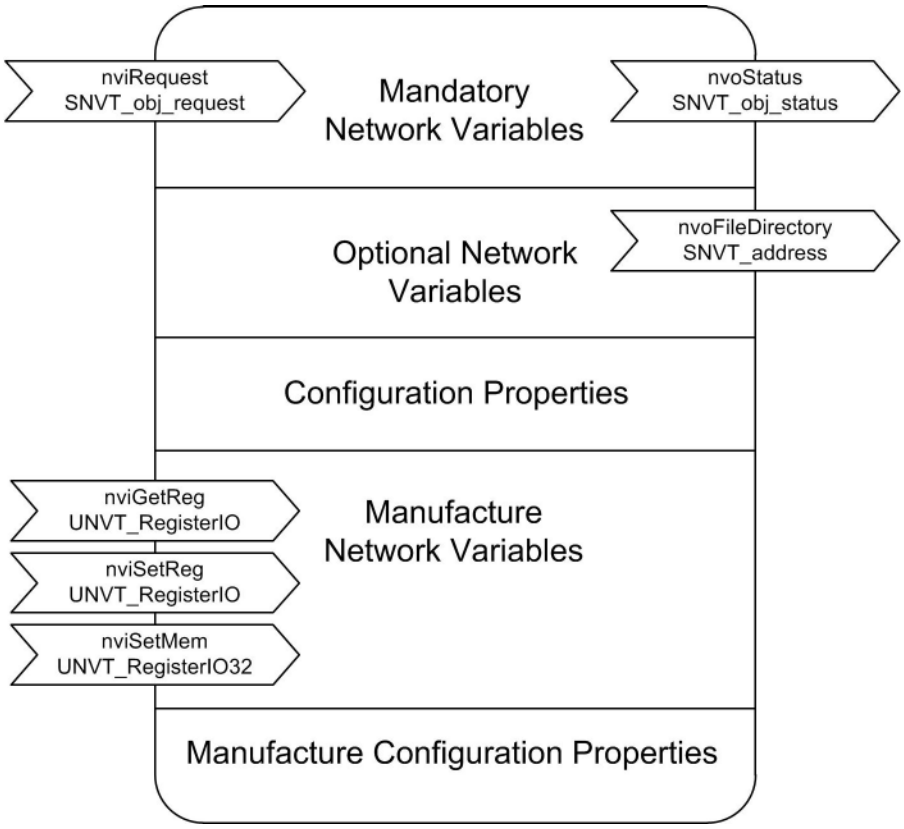
Q1-AAA-2.x.x.x

Q1 indicates hardware platform and is always present.

AAA- Application name
- EXP
- FCU
- HPU
- NetStat
- PID
- RTU

2.x.x.x - I/O configuration
- -2.0.2.0 = 2-IN, 0-UI, 2-Triac, 0-AO
- -2.2.4.0 = 2-IN, 2-UI, 4-Triac, 0-AO
- -2.4.5.2 = 2-IN, 4-UI, 5-Triac, 2-AO
- -2.8.6.4 = 2-IN, 8-UI, 6-Triac, 4-AO
- -2.10.8.4 = 2-IN, 10-UI, 8-Triac, 4-AO

Node Object functional block information.



Quark Communications, Inc. 2033 San Elijo Ave #290 Cardiff, CA 92007 Phone. +1 (760) 634-6845