Data Sheet

IQVISION Supervisor

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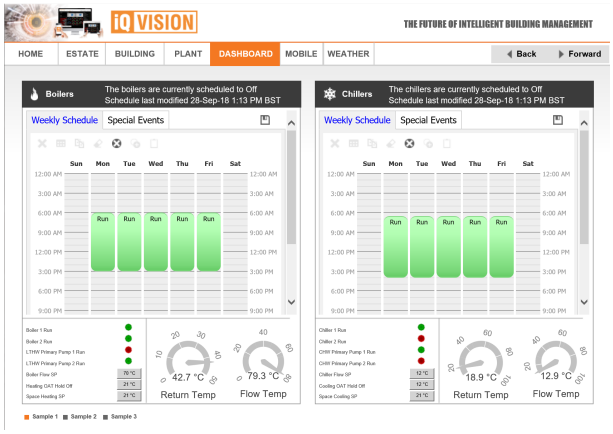


Description

IQ™VISION is a building monitoring and management solution built upon the powerful Niagara 4 Framework®. It can integrate Trend controllers, third party devices and internet protocols into a centralised software platform that is designed to manage buildings at an enterprise level.

IQVISION serves real-time graphical information to standard web-browser clients and provides server-level functions such as: centralized data logging, archiving, alarming, trending, master scheduling, system-wide database management, and integration with enterprise software applications – all of which can be used for highlighting and investigating energy use within buildings.

In addition, IQVISION provides a comprehensive, graphical engineering toolset for application development. HMTL5 support enables the customisation of user interfaces that are viewable on diverse web-enabled computers, tablets and phones.

The embedded System Migration Tool greatly reduces set up time by allowing existing system data to be imported from the IQSET engineering tool and 963 supervisor. The tool also allows 963 schematics to be imported and converted into IQVISION's HTML5 format.

Third party device integration using open standard protocols such as BACnet, Modbus, MBUS and KNX is also supported.

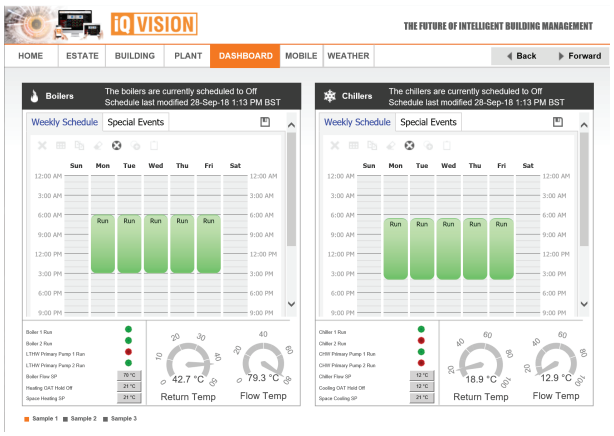
Features

- Enhanced Trend IP Network Driver with full multi-site capability and Trend system model compatible with IQ1, IQ2, IQ3, IQ4 and IQLs - see Compatibility for details.
- Trend driver facility for connection to multiple vCNCs provides additional connection reliability and bandwidth.
- Trend driver supports connection to vCNCs in secure mode.
- Uses Niagara 4.7 U1.
- Point List View
- HTML5 compliant web framework for full smart device compatibility.
- System Migration Tool for migrating device data and schematics from existing 963 and IQSET projects.
- Supports an unlimited number of users over the VPN / Intranet with a standard web browser, depending on the host PC resources.
- Optional enterprise-level data archival using SQL.
- Optional facility to import from CSV file.
- Audit Trail of database changes, database storage and backup, global time functions, calendar, central scheduling, control, and energy management routines.
- Sophisticated alarm processing and routing, including e-mail alarm acknowledging.
- Access to alarms, logs, graphics, schedules, and configuration data with a standard web browser.
- Password protection and security using standard authentication and encryption techniques with optional security supported via an external LDAP connection.
- HTML-based help system that includes comprehensive on-line system documentation.
- Provides online/offline use of the Niagara Framework Workbench graphical configuration tool and a comprehensive Java Object Library
- Optional direct Ethernet based driver support for BACnet IP, EIB/KNX IP, Lon IP, Modbus IP master and slave, MBUS IP, SNMP and OPC-UA capability; additional open points may be purchased - see page 3.
- Provides the ability to configure TONN8s.

FUNCTIONALITY

SCHEMATICS

IQVISION provides the facility for colour graphics pages, which can display live information from the system and enable adjustments.



The pages can be engineered to suit the system requirements.

ALARM NOTIFICATION

IQVISION enables alarms from the systems to which it is connected to be displayed in an alarm console which displays alarms in a list and enables the user to acknowledge them. The optional alarm portal provides similar functionality on a remote PC.

Note: The IQVISION station must be running.

SECURITY

IQVISION has a comprehensive security system that enables access to be controlled to prevent unauthorised access.

ANALYTICS

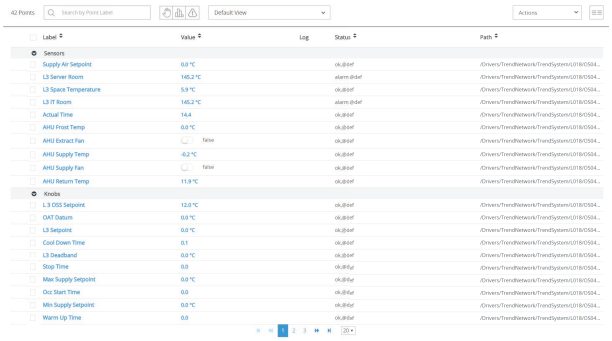
IQVISION Supports Niagara analytics - see the Analytics Data Sheet - TA201430.

E-SIGNATURE

IQVISION Supports Niagara e-signature - see the E-signature Data Sheet - TA201432.

POINT LIST VIEW

The Point List view allows the points to be viewed as a list and for appropriate actions, e.g. change value, to be performed.



TREND DRIVER

IQVISION includes a driver that enables connection to multiple vCNCs over an IP network. The driver can easily learn an entire Trend System with LANs, Devices, Points, Histories and Schedules from the Trend System and make them available in IQVISION. Use of multiple vCNCs provides redundancy in the case of device failure, and enables higher bandwidth.

When used in conjunction with IQ4 v3.70 (or greater) firmware, the driver can connect to secure vCNCs which allow encryption using AES-128 with a 2048-bit RSA public/private key exchange.

Alarm handling: The driver provides AlarmClassModification filters which enable incoming alarms to be sent to an alarm class if the information they contain meets the conditions defined within an AlarmClassModification filter. This makes assignment of alarms to alarms classes much faster and flexible.

OCCUPATION TIMES

IQVISION enables the occupation times of Trend devices to which it is connected to be adjusted form a central location.

DATA MIGRATION

IQVISION includes a Migration Tool that can be used to import system data from 963 and IQSET. Imported data can include device configurations and/or schematics.

COMPATIBILITY

TREND SYSTEM

Trend network: IQVISION provides connectivity to a Trend network via any Ethernet-enabled device with an available virtual CNC (vCNC) including vCNC in secure mode. IQVISION is not compatible with TMN connections to remote sites. Only limited support is available for EMICs.

Controllers: All IQ controllers. IQ4 v3.70 or greater required for secure vCNC connection.

Tools: IQSET v7.30 or greater required for data export for IQVISION. Schematic Export Tool v2.10 or greater required for export of 963 projects.

TONN: Data from TONN8s and TONNs can be added to IQVISION. IQVISION provides the engineering tool for TONN8s.

3RD PARTY SYSTEMS

Direct Ethernet based driver support for BACnet IP, EIB/KNX IP, Lon IP, Modbus IP master and slave, MBUS IP, SNMP, OPC UA Generic Client Profile, OPC UA Data Access Client Profile, OPC UA History Data Access Client Profile, and OPC UA Alarm.

IQVISION is not compatible with serial SMS modems, but can support SMS via TONN8 and GSM modem.

INSTALLATION

IQVISION is available as a download from the Trend Approved Partners site (PNet): http://partners.trendcontrols.com.

A username and password is required to access the site.

Once downloaded to your PC/laptop a step-by-step installation program will guide you through the installation process.

After installation, the software must be licensed, and configured to operate as required, as described in the IQVISION Configuration Manual (TE201382).

ORDER CODES

For details of ordering an upgrade from 963 to IQVISION see 963 to IQVISION Upgrade Information Sheet (TP201427).

For Niagara analytics order codes see the see the Analytics Data Sheet - TA201430. For Niagara e-signature order codes see the E-signature Data Sheet - TA210432.

The IQVISION licence scheme is based around a point count. A point is a single item of information that is stored in the IQVISION database. There are three main categories of points in IQVISION - Trend points, open points and TONN points.

Trend Points

These are points (e.g. sensors, knobs, switches, digital inputs, drivers) from Trend controllers (IQ1, IQ2, IQ3, IQ4, IQL, IQECO). Time Schedule modules and Plot modules are not included in the point count.

The license should be sized according to the number of the points to be monitored. Point discovery is an embedded feature available through the discovery wizard embedded in the Trend driver. Trend devices and networks are not counted for licensing purposes.

IQV-300	IQVISION starter kit including Trend native driver and 300 point database size
IQV-500	IQVISION starter kit including Trend native driver and 500 point database size
IQV-2500	IQVISION starter kit including Trend native driver and 2500 point database size
IQV-5000	IQVISION starter kit including Trend native driver and 5000 point database size
IQV-15000	IQVISION starter kit including Trend native driver and 15000 point database size
IQV-150000	IQVISION starter kit including Trend native driver and 150000 point database size

If additional Trend points are required to meet system requirements the following codes can be combined to reach the desired number of points:

IQV-100-EXT	IQVISION additional 100 Trend database points
IQV-500-EXT	IQVISION additional 500 Trend database points
IQV-2500-EXT	IQVISION additional 2500 Trend database points
IQV-5000-EXT	IQVISION additional 5000 Trend database points
IQV-15000-EXT	IQVISION additional 15000 Trend database points
IQV-25000-EXT	IQVISION additional 25000 Trend database points
IQV-50000-EXT	IQVISION additional 50000 Trend database points
IQV-150000-EXT	IQVISION additional 150000 Trend database points

Open Points

These are points from open protocol equipped devices or subsystems that you wish to integrate into IQVISION. The IQVISION open driver licences include a selection of standard drivers (BACnet IP, EIB/KNX IP, Lon IP, Modbus IP master and slave, MBUS IP, SNMP and OPC UA) that can be selected as necessary to enable head end integration.

IQV-500-OPEN	Extend base licence with additional 500 Open protocols points
IQV-2500-OPEN	Extend base licence with additional 2500 Open protocols points
IQV-5000-OPEN	Extend base licence with additional 5000 Open protocols points
IQV-10000-OPEN	Extend base licence with additional 10000 Open protocols points
IQV-25000-OPEN	Extend base licence with additional 25000 Open protocols points
IQV-50000-OPEN	Extend base licence with additional 50000 Open protocols points

Note: When reach the limit for point count is reached a licence upgrade must be purchased if additional points are required.

TONN Points

These are points from Trend TONNs. The licence scheme is based around the number of devices.

IQV-1-N	Add connectivity for 1 TONN
IQV-10-N	Add connectivity for 10 TONNs
IQV-100-N	Add connectivity for 100 TONNs

Maintenance Upgrade Options

IQVISION starter kits include an 18 month maintenance and free upgrade package. This can be extended by purchasing one of the following maintenance upgrade options:

IQV-MNT1	IQVISION maintenance upgrade - additional 1 year.
IQV-MNT3	IQVISION maintenance upgrade - additional 3 years.
IQV-MNT5	IQVISION maintenance upgrade - additional 5 years.
IQV-MNT1-100	IQVISION maintenance upgrade - IQVISION with 100 TONN connections 1 year maintenance fee.
IQV-MNT3-100	IQVISION maintenance upgrade - IQVISION with 100 TONN connections 3 year maintenance fee.
IQV-MNT5-100	IQVISION maintenance upgrade - IQVISION with 100 TONN connections 5 year maintenance fee.

Extended Support Options

IQV-ALM-PORTAL	Licence for the Alarm Portal on a remote PC.
IQV-DB-CSV	Extend the capability for IQVISION to interact with Microsoft Excel
IQV-DB-MYSQL	Extend the capability for IQVISION to communicate MYSQL database
IQV-DB-ORCL	Extend the capability for IQVISION to communicate with Oracle 11G database
IQV-DB-SQL	Extend the capability for IQVISION to communicate SQL

SYSTEM REQUIREMENTS

IQVISION

IQVISION will run on the following operating systems:

Windows 10 (64-bit)
Windows 8.1 Professional/Enterprise/Ultimate (64-bit)
Windows Server 2012 R2 Standard/Enterprise (64-bit)
Windows Server 2016

Your PC must comply with the minimum specification for the installed operating system as specified by Microsoft.

In addition to meeting the requirements for the operating system IQVISION requires the following:

Processor	Intel® Xeon® CPU E5-2640 x64 (or better), compatible with dual- and quad-core processors.
Memory	8 GB minimum, 16 GB or more recommended for larger systems.
Free Hard Drive Space	4 GB minimum, more recommended depending on archiving requirements.
Display	Video card and monitor capable of displaying 1024 x 768 pixel resolution or greater
Network Support	Ethernet adapter (10/100 Mb with RJ-45 connector)
Connectivity	Full time high speed ISP connection recommended for remote site access (i.e. T1, ADSL, cable modem).

Niagara 4 supervisors may run acceptably on lower-rated platforms, or may even require more powerful platforms, depending on the application, number of data points integrated, data poll rate, number of concurrent users, performance expectations, etc.

The biggest factors for performance will be the amount of memory available to Niagara and the speed of disk drives.

If enterprise-level data archiving is required (optional), one of the following compatible database applications will need to be installed:

MS SQL Server 2012,
MS SQL Server 2016

WEB SERVER

Supported clients:	Any modern browser, including mobile devices (Apple, Android etc).
Web server used:	Jetty Web Server

IBC INTELLIGENT BUILDING CONTROLS

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