

Sensus AutomationControl™ Software Application Suite

Control and Management of Distribution Systems

Description

AutomationControl™ and the industry leading FlexNet™ smart utility communications network bring a powerful and flexible suite of applications and tools for managing distribution and SCADA system assets that are monitored and controlled with Sensus Automation intelligent communications devices. The Sensus AutomationControl smart utility application provides an interoperability foundation that integrates and connects smart devices and assets that are needed to build a modernized smart utility network. The AutomationControl software application suite enables real-time access to automation devices and SCADA equipment using a standard browser, by logging onto a secure account created and maintained for each customer. Sensus offers AutomationControl as a flexible and secure cloud-based Software as a Service (SaaS) solution.



Features

APPLICATIONS

AutomationControl software is an ideal tool for distribution engineers, system planners, and asset managers. Using the AutomationControl application, personnel can quickly identify equipment or system issues from any office or remote PC. This same information is available to field

crews equipped with mobile PCs. AutomationControl software complements distribution supervisory control and data acquisition (SCADA) systems by providing additional features for engineering, planning and operations. For customers without distribution SCADA systems, AutomationControl software is a

powerful application for managing their equipment. AutomationControl provides tools to manage:

- Distribution equipment
- User accounts and access
- Communication system status

« Devices							Device Status	Device History	
Device ID 28782-1 Demo Room Control		Profile IntelliCap+	Product Type RTM II+	Off-Normal 5	Device Status Active	IED Status Online	Signal Strength 61	Encryption Disabled	
Index	Point Label	Value Label	Scaled Value	Unit	Off-Normal	Occurred At	Location		
- Binary Input							Latitude:	45	
0	Cap Bank Close	Closed	1			2013-05-22 10:12:27.007	Longitude:	-100	
1	Cap Bank Open	Inactive	0			2013-05-22 10:12:27.007	General Location Description:	Fishbowl	
2	Auto/Manual Operation Mode	Manual	0		■	2013-05-22 10:12:27.007	Device Information		
3	SCADA Control	Remote	1			2013-05-22 10:12:27.007	Firmware Version:	UnknownRTM	
4	Alarm Summary	Normal	0			2013-05-22 10:12:27.007	Last Report Received:	2013-05-22 10:12:29.840	
6	Over Voltage	Normal	0			2013-05-22 10:12:27.007	Last Configuration Sync:	2013-05-20 10:08:24.920	
7	Under Voltage	Alarm	1		■	2013-05-22 10:12:27.007	Automatic Key Rotation:	Disabled	
+ Counter							FlexNet		
- Analog Input							FlexNet ID:	50401963	
2	Control Strategy	Timeclock	1			2013-05-22 10:12:27.007	Route Information		
3	Temperature		70	°		2013-05-22 10:12:27.007	Rank ▲	Base Station ID	
4	Voltage		117.7	V		2013-05-22 10:12:27.007	1	378	
26	Neutral Current Total (amps)		0	A		2013-05-22 10:12:27.007			
28	Last Switch Operation Reason	Manual Operation	1			2013-05-22 10:12:27.007			
- Analog Output									
3	SCADA Override	15 minutes	143			2013-05-22 10:12:27.007			

Figure I. Typical AutomationControl Device Status

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Features *Continued*

The following features are available to all AutomationControl software users. No local application other than a standard Web browser is required.

Equipment Management

- Device list: View a list of all equipment on your account, such as switches, reclosers, capacitors and many more distribution and transmission system assets
- Device status: Displays digital and analog inputs, analog outputs and control outputs. View the current status of all devices and drill down to see greater detail.

- User notifications: Set up customized rules that will send alarm or status change information via email or text message. For example, receive a text message for low voltage alarms or high load conditions (future feature).
- Assign Off-Normal values for easy detection of system issues.

Account and User Management

- Create new user IDs and passwords
- Update account information
- Manage strong passwords and changes

- Manage SCADA-Xchange servers, channels, and masters
- Commission devices on SCADA-Xchange

Communication System

- Manage all reporting parameters remotely
 - Unsolicited event deadbands, limits, trigger times
 - Time scheduled reporting
- Manage communication routes
- Manage integration with third-party IEDs

« Devices Device Status Device History

Device ID 28782-0
Session 0 [50401963]

Profile
RTM II+ with 1 session

Product Type
RTM II+

Off-Normal
 0

Device Status
■ Active

IED Status
■ Online

Signal Strength
 63

Encryption
■ Disabled

From: Report History Point Data History

To: Now: 2013-05-22 10:46:06.350

* Results are limited to 1000 rows.

Show entries Search:

Origin	HeadEnd Time	Device Time	DNP Function	Response Reason	Error	SSI	Retries
Device	2013-05-22 09:45:40.950	2013-05-22 09:45:40.937	Solicited Response	Normal		62	0
Device	2013-05-22 09:45:25.977	2013-05-22 09:45:25.963	Solicited Response	Normal		62	0
Device	2013-05-22 09:45:01.340	2013-05-22 09:45:01.320	Solicited Response	File Operation		62	0
Device	2013-05-22 09:44:57.467	2013-05-22 09:44:57.447	Solicited Response	File Operation		62	0
Device	2013-05-22 09:44:44.080	2013-05-22 09:44:44.073	Solicited Response	File Operation		61	0
Device	2013-05-22 09:44:35.580	2013-05-22 09:44:35.570	Solicited Response	Normal		61	1
Device	2013-05-22 09:44:22.593		Unsolicited Response	Normal		61	0
Device	2013-05-22 09:29:18.147		Unsolicited Response	Normal		0	0
Device	2013-05-21 14:28:59.273	2013-05-21 14:28:59.263	Solicited Response	Normal		63	0
Device	2013-05-21 14:28:53.617	2013-05-21 14:28:53.603	Solicited Response	Normal		64	0

Previous
1 2 3 4 5
Next

Figure II. AutomationControl Report History

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Communication Management

- View communications performance

AutomationControl Software Security

Each customer's secure account and data is password protected. The account data is backed up daily and is housed on servers with redundant hard drives that mirror the active hard drives. Hardware and software firewalls provide an additional layer of security for the servers. Communications between the centralized Data Center and the customer's Web browser are encrypted via Secure Sockets Layer (SSL).

- Server authentication using 256-bit encryption key
- Bi-directional data transmission using private encryption keys

Data Center Features

When AutomationControl is implemented as a Software as a Service (SaaS) solution, the Sensus Data Center collects and processes data from Sensus Automation intelligent communicating devices. A Sensus Automation field device's integrated radio provides two-way communications between the Sensus radio module and the Data Center via the data networks.

AutomationControl servers provide users with instant access to this data through their secure account.

The Sensus Data Center is housed in a special communications facility designed to promote maximum uptime, reliability, and safety for your data.

Sensus Data Center features:

- Redundant, fault tolerant Synchronous optical networking (SONET) facilities
- Redundant path, dual-entry fiber facilities
- Storage Array Network (SAN) with hot-swappable components provides redundancy and facilitates disaster recovery
- Hardware firewall

« Devices Device Status Device History										
Device ID 28782-0 Session 0 [50401963]		Profile RTM II+ with 1 session		Product Type RTM II+		Off-Normal 0	Device Status Active	IED Status Online	Signal Strength 83	Encryption Disabled
From: 2013-05-01 09:46:00		To: Now		<input type="radio"/> Report History <input checked="" type="radio"/> Point Data History		View Report Now: 2013-05-22 11:00:11.526				
* Results are limited to 1000 rows.										
Show 10 entries								Search:		
Point Type	Point Index	Point Label	Value Label	Scaled Value	Unit	Off-Normal	Flags	Occurred At	Device Time	
BinaryInput	0	Radio Comms Up		1			Online	2013-05-22 09:45:05.793	2013-05-22 09:45:05.793	
BinaryInput	1	Time Synchronized		1			Online	2013-05-22 09:45:05.793	2013-05-22 09:45:05.793	
BinaryInput	100	Session 0 online		1			Online	2013-05-22 09:45:05.793	2013-05-22 09:45:05.793	
BinaryInput	101	Session 1 online		1			Online	2013-05-22 09:45:05.793	2013-05-22 09:45:05.793	
BinaryInput	800	Thread(s) at Critical Stack Usage		0			Online	2013-05-22 09:45:05.793	2013-05-22 09:45:05.793	
BinaryOutput	0	Push Time to IEDs		0			Online	2013-05-22 09:45:05.793	2013-05-22 09:45:05.793	
BinaryOutput	2	RF Ping Request		0			Online	2013-05-22 09:45:05.793	2013-05-22 09:45:05.793	
AnalogInput	0	Unit ID		111130052			Online	2013-05-22 09:45:05.793	2013-05-22 09:45:05.793	

Figure III. AutomationControl Point Data History

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- Automatic server fail-over to hot-standby
- Load balancing server
- Industry-standard software applications monitor key processes and notify staff of problems on a 24/7 basis
- Uninterruptible power supplies, including a generator with 24 hours of fuel supply on site
- Halon fire protection system
- Security card access and 24/7 monitoring
- Earthquake protection

SCADA-Xchange™

In parallel with the AutomationControl software, Sensus Automation field devices can also be monitored and controlled through an existing SCADA system using AutomationControl's built-in secure SCADA-Xchange module via DNP3 or Modbus protocols.

For more information, visit us at www.sensus.com.

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