ComView

versatility . adaptability . longevity

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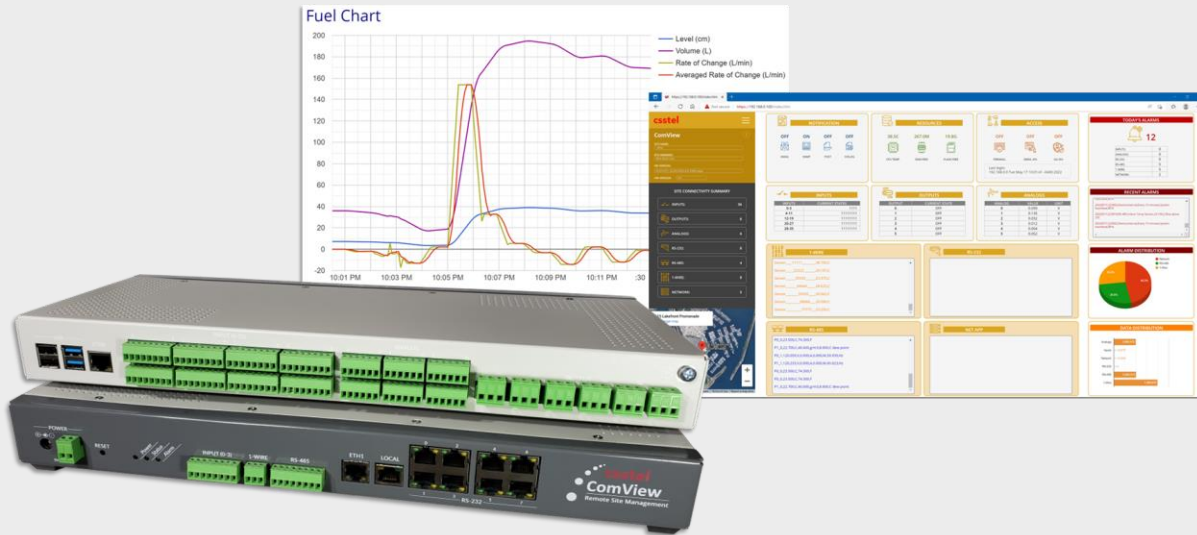
ComView

ComView solutions are based on site management IoT gateways, customizable to monitor and manage virtually the entire spectrum of remote site infrastructure and site conditions.

ComView solutions help users streamline the processes used in remote site monitoring and management to improve their operational efficiency, particularly in a heterogeneous infrastructure site that consists of a wide spectrum of managed and unmanaged assets and environmental conditions.

*ComView solutions bring **simplicity** with a **modern** approach to addressing remote site management needs to improve operational efficiency and cost effectiveness*

Typical Applications

➢ Telecom facility management
➢ Radio communication station management
➢ Utilities substation management
➢ Building management
➢ IT/data center management
➢ General site management

Sample Applications

A short list of sample user applications includes:

- ✓ Remote telemetry unit
- ✓ SCADA remote terminal unit (RTU)
- ✓ Secure remote site access
- ✓ Onsite device mediation and alarm monitoring
- ✓ Automated centralized data acquisition
- ✓ Interactive and automatic control of onsite devices
- ✓ Sensor contacts and equipment alarm relays monitoring
- ✓ Environmental conditions monitoring
- ✓ Serial data collection and monitoring
- ✓ TCP/UDP socket-based ASCII data collection and monitoring
- ✓ SNMP trap collection and monitoring
- ✓ Syslog message collection and monitoring
- ✓ AC and DC power systems monitoring
- ✓ Energy consumption monitoring
- ✓ Fuel monitoring

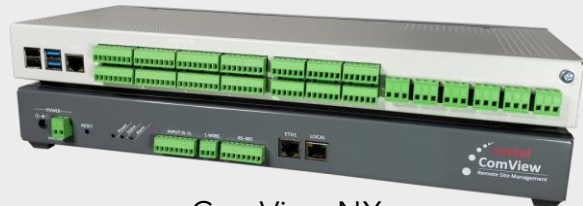ComView can be customized to meet user-specific applications

ComView NX**s**

ComView NX**m**

ComView NX**l**

ComView NX**x**

Hardware Platform

- ➢ **CPU**: quad-core Cortex-A72 64-bit @ 1.5GHz
- ➢ **Memory**: 2 GB RAM + 32 GB (min.) microSD card
- ➢ **Networking**: 1Gb Ethernet + 10/100 Ethernet
- ➢ **Inputs**: 4x non-isolated + 32x isolated
- ➢ **Outputs**: 6x output relays, SPDT (1 FORM C), 10A/250VAC
- ➢ **Analogs**: 6x isolated analog inputs, 12-bit A/D converter, pre-scaled for 72V, 36V, 18V, Vin, 4-20mA
- ➢ **1-Wire**: dedicated 1-Wire bus controller, support for up to 64x DS18B20 digital thermometers
- ➢ **Serial**: 8x RS-232
- ➢ **RS-485**: 2x isolated ports, support for up to 64 Modbus devices
- ➢ **USB**: 2x USB 3.0 + 2x USB 2.0
- ➢ **Real-time clock** with lithium battery backup
- ➢ **Supervisory & reset** controller
- ➢ **Multi-functioned reset** pushbutton
- ➢ **LED indicators**: Power, Status, Alarm
- ➢ **Power supplies**: dual 9Vdc/25W, 5W typical
- ➢ **Physical properties**:
    - Dual tone grey painted aluminum
    - 1U 19" rack mountable, wall mountable, and desktop
    - Dimensions: 16.3"x 6.3"x1.72" (WxDxH)
    - Weight: approx. 1.2kg

Note: Hardware features are product model dependent

Software Platform

Developed with versatility, adaptability, and longevity in mind, ComView software platform is based on Ubuntu Server 64-bit 22.04 LTS (Long Term Support), a distribution variant of widely used Linux operating system, Python programming language, micro web framework Flask, NGINX web server, and other Debian packages. These popular and widely used components help ComView solutions remain relevant for years to come.

ComView

FEATURE HIGHLIGHTS

01 MODULAR SOFTWARE ARCHITECTURE

02 ONE MEDIATING PLATFORM

03 VERSATILITY

04 DISTRIBUTED

05 DO-IT-YOURSELF

06 SECURE ACCESS

07 ADVANCED ALARM MONITOR

08 FLEXIBLE ALARM DELIVERY

09 NMS INTEGRATION SIMPLIFIED

10 HIGH UPTIME, HIGH AVAILABILITY

MODULAR SOFTWARE ARCHITECTURE

Modular software architecture enables the delivery of ComView solutions as a collection of user apps that can be individually enhanced and customized while new apps can be readily added as required.

Software modularity together with ComView software platform makes "Do-It-Yourself' possible. With their skill sets and development resources widely accessible, users can readily enhance ComView solutions to their specific requirements, if they so desire.

In contrast with disparate solutions, ComView integrates various physical interfaces on one platform to help users consolidate the connectivity of different types of onsite equipment, devices, and sensors. User apps are then used to mediate with these onsite devices to perform user-specific site management tasks.

With ComView, users can now manage their remote sites with consistency and uniformity to improve their operational efficiency and cost effectiveness.

ONE MEDIATING PLATFORM

ComView platform offers a suite of user apps, each developed with flexibility and adaptability in mind. Users can easily define the app operating parameters, data conversion and mappings, data record formats, and other parameters as required

Furthermore, the user apps are modular and use Python, a popular and widely used high-level programming language. Users can readily customize or improve the user apps or create new ones to suit their specific operational needs - now and in the future.

VERSATILITY

DISTRIBUTED

ComView platform includes unique capabilities that can perform site management tasks onsite and in real-time, enabling users to implement distributed site management to help reduce decision-making time and operational overhead.

With ComView, onsite tasks such as taking automatic corrective action on alarm, executing user scripts in response to event, application-specific data processing, report generation, and data visualizations for trend analysis are now possible.

Instant visibility into a site being managed is also possible with ComView web-based dashboard that displays site status, activities at physical interfaces, current alarms, alarm logs, system resources, and other crucial information.

ComView unique software architecture makes "Do-It-Yourself" possible. If so desired, users can easily get into software development that can range from simple software enhancements and customizations to new user app programming.

DIY is made possible with user apps written in Python programming language, accessible data streams via named pipes, and CSV-formatted application data files. Users can customize existing app functionality by modifying its Python source, develop new app based on data streams by listening to named pipes, create new reports by using CSV-formatted application data, and more.

DIY gives users that peace of mind, knowing that they are in control of ComView solutions.

DO-IT-YOURSELF

SECURE ACCESS

ComView secures its access with a restrictive IP packet filtering firewall to accept network traffic only from user-predefined IP addresses. Once accepted, login attempts will be authenticated with user-defined email 2FA and/or Google Authenticator.

Upon successful login, access privileges are granted according to the role-based authorization. In the meanwhile, all data transfers are SSL-encrypted to protect data confidentiality.

ComView lets users define alarm conditions and action to take on alarm. Alarm condition can be a simple timed Low/High state to monitor contact input, fall-below/rise-above/equal threshold with bandgap to monitor any measured variable, or regular expression to monitor any ASCII data stream from serial ports, TCP/UDP network sockets, SNMP traps, or syslog messages.

Action to take automatically includes activating output relays to control onsite devices and/or executing user script to perform specific tasks.

ADVANCED
ALARM MONITOR

ComView can deliver alarm to various locations using multiple notification methods. Delivering alarm via email, SNMP trap/inform, http POST, and syslog ensures it reaches the intended recipients at various locations such as global network center, regional network center, and field personnel for attention and corrective action.

ComView also notifies users when the alarm condition previously reported has been cleared to help reduce unnecessary operational workload.

FLEXIBLE ALARM DELIVERY

NMS INTEGRATION SIMPLIFIED

Integrating ComView into users existing NMS is simplified. SNMP-based NMS can readily receive SNMP traps/informs for alarms while it can poll ComView SNMP agent for data. Web-based NMS can receive alarms in common JSON format while it can get data using HTTP requests. Syslog-based NMS can receive syslog messages for alarms.

For centralized data acquisition, ComView can automatically push its data files to a remote file server for further upstream data processing. For real-time site details, users simply log on ComView to view its web-based dashboard, data streams, reports, and data visualizations.

Designed to operate in a 24/7 unattended environment, ComView platform implements a system supervisor for self-monitoring and self-control with user-definable operating parameters to help achieve system high uptime and high availability.

Network links, system soft restart, system reboot can be scheduled to auto restart, while system services and user applications are continually monitored and auto restarted if necessary to ensure the overall operational integrity of ComView.

HIGH UPTIME,
HIGH AVAILABILITY

About CSSTEL

Incorporated in 2023, CSSTEL continues the tradition that dates back to 1997 to develop, manufacture, market, sell, and support ComView, the leading-edge remote site monitoring and control solutions with installations in over 30 countries around the world.

We help telecom service providers, carriers, financial institutions, healthcare providers, government agencies, utilities, and other public and private sector organizations maintain constant visibility and control over their remote site infrastructure.

explore the
possibilities

Whether you are a prospective ComView user, a potential business partner, a technology solution acquirer, or an investor, we cordially invite you to explore the possibilities with us!

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