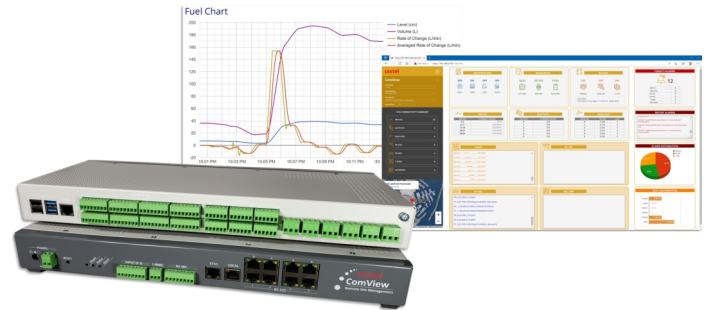# ComView NXx
REMOTE SITE MANAGEMENT

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

Based on modular software architecture together with commonly used Linux OS and popular Python programming language, ComView solutions can be readily customized to meet user-specific requirements; while empowering users with "Do-It-Yourself" approach to put them in control of the solutions so that they remain relevant for years to come.
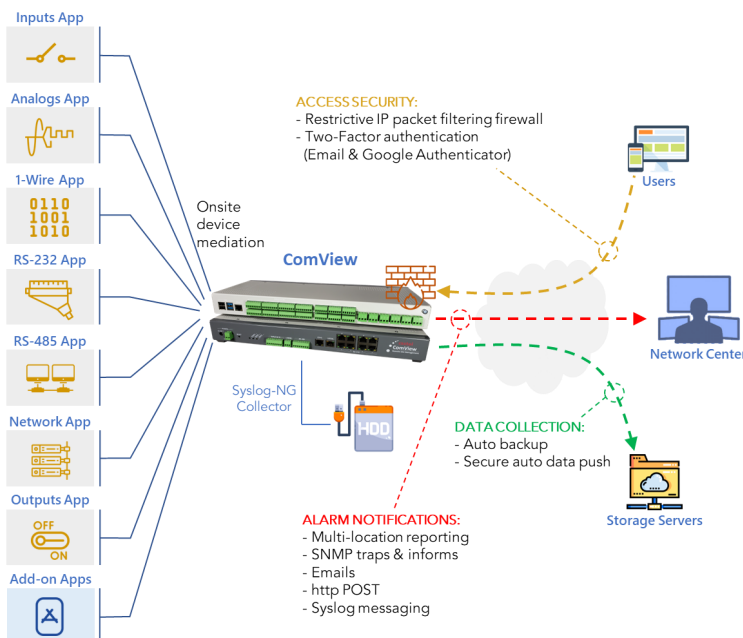
TYPICAL APPLICATIONS:

- ♦ Telecom facility management
- ♦ Radio communication station management
- ♦ Utilities substation management
- ♦ Building management
- ♦ IT/data center management

ComView NX**x** mediates with a wide range of onsite devices and runs user apps modularly implemented to support remote system administration, data acquisition, alarm monitoring, control, automation, application-specific data processing, report generation, and data visualizations.

❝ *versatility*
adaptability
longevity

Inputs App

Analogs App

1-Wire App

RS-232 App

RS-485 App

Network App

Outputs App

Add-on Apps

Onsite device mediation

ComView

ACCESS SECURITY:
- Restrictive IP packet filtering firewall
- Two-Factor authentication
  (Email & Google Authenticator)

Users

Network Center

Syslog-NG Collector

DATA COLLECTION:
- Auto backup
- Secure auto data push

Storage Servers

ALARM NOTIFICATIONS:
- Multi-location reporting
- SNMP traps & informs
- Emails
- http POST
- Syslog messaging

APPLICATION EXAMPLES:

- Remote telemetry unit
- SCADA remote terminal unit (RTU)
- Secure remote site access
- Secure remote system administration
- Onsite device mediation & alarm monitoring
- Environmental conditions monitoring
- Sensor contacts & equipment alarm relays monitoring
- AC and DC power systems monitoring
- Data collection and alarm monitoring of RS-232, RS-485 Modbus, and network-based devices
- SNMP trap receiver with alarm monitoring
- Syslog collection with alarm monitoring
- Interactive and automatic control of onsite devices
- Energy consumption monitoring
- Fuel monitoring
- User-specific add-on applications

HARDWARE FEATURE HIGHLIGHTS

- **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
- **RS-232:** 1x console + 8x serial
- **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:**
  - 9Vdc/25W, approximately 5W in normal operating condition
  - Dual inputs: circular DIN + 2-pin screw terminal block
- **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

SOFTWARE FEATURE HIGHLIGHTS

- **Ubuntu Server** 64-bit 22.04 LTS, Linux OS
- **Modular software architecture** with user apps developed based on Python, Flask, NGINX and together with software APIs make 'Do-It-Yourself' possible for app enhancements, customization, and new add-ons
- **Web interface** provides users with a dashboard for quick site overview, device configuration, real-time data viewing, control, productivity utilities, and data visualizations
- **Secure access** with restrictive IP packet filtering firewall, two-factor authentication (2FA) via email or Google Authenticator, password quality and lifecycle policies
- **Data collection** with user-definable data push schedule helps simplify data acquisition from remote sites
- **Alarm monitor** lets users define alarm conditions, corrective actions to take on alarm via activation of output and user script; and delivers alarm to multi locations via email, SNMPv1/v2c/v3 traps/informs, HTTP POST, Syslog
- **Inputs app** monitors dry contacts with user-definable alarm conditions and takes corrective actions on alarm
- **Outputs app** provides users with interactive and automatic activation of output relays
- **Analogs app** lets users measure voltage and current-loop with 9-point Moving Average digital filtering, map data, monitor alarms, log data in CSV-formatted record with timestamp for app-specific data processing
- **1-Wire app** measures temperature with DS18B20 digital thermometers with user-definable alarm conditions on fall-below, rise-above, or equal threshold, and corrective actions
- **RS-232 app** provides users with secure transparent SSH access to serial ports, data collection, alarm monitoring on user-definable alarm signatures with corrective

actions

- **RS-485 app** supports Modbus devices with user-definable Modbus function code/register pair definitions, data conversion with user-definable mathematical expressions, user-definable alarm conditions on fall-below, rise-above, or equal threshold with automatic corrective actions on alarm
- **Network app** enables TCP/UDP-socket based data collection, alarm monitoring on user-definable alarm signatures with corrective actions
- **SNMP trap receiver app** collects and monitors SNMP traps/informs from network devices for user-definable alarm signatures with corrective actions
- **Syslog monitor app** collects logs from network devices, optionally stores logs in an external drive for syslog management use, and monitors for user-definable alarm signatures with corrective actions
- **Fuel app** supports various types of tanks and orientations, and lets users monitor fuel level and its rate of change for user-definable alarm conditions with automatic corrective actions, and presents data in graphical representations for trend studies
- **Energy app** reads data from RS-485 Modbus energy meters, logs and monitors power and energy parameters (kW, kVA, kVAR, kWh, kVAh, kVARh), calculates hourly, daily, and monthly energy consumption, and presents data in graphical representations for trend studies
- **SNMP agent** lets users poll data from site more readily with SNMP-based NMS
- **Self-supervision** maintains the device high uptime, high accessibility, and operational integrity to support remote site management
- **Software upgrade** via Debian package

ORDERING INFORMATION
♦ ComView NX✕

csstel