

ProcessView64

Operations Environment Software Suite



State of the Art Technology for
Plant Operations

ProcessView64

A powerful suite of 64-bit operations software solutions which allow operators, executives and IT professionals to integrate information in real time in a secure and unified viewing environment, fully Web enabled and ready for Industry 4.0

Up to date Technology

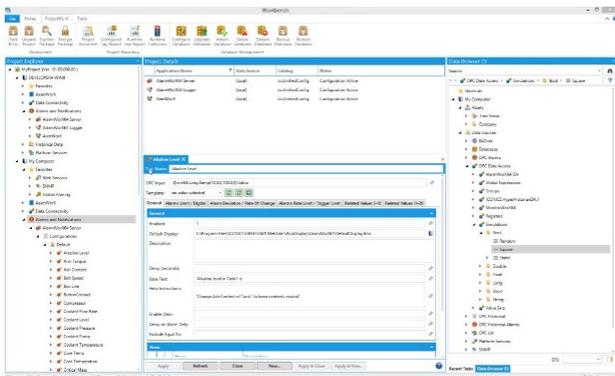
Advanced 64-bit multi-core, multi-processor computing on 64-bit Microsoft operating systems has arrived. SMAR ProcessView64 suite is a native .NET application that delivers unparalleled HMI/SCADA performance with OPC open-standard connectivity.

ProcessView64 suite includes solutions that allow for connectivity from plant floor to corporate business systems.

Designed from the ground up to leverage 64-bit, OPC UA, .NET managed code and SharePoint® technology, ProcessView64 allows operators, executives and IT professionals to integrate real-time process, manufacturing, energy and business information into a secure and unified Web-enabled visualization dashboard.

Powerful Centralized Configuration

Workbench is the multi-functional, centralized desktop or web-based environment for all ProcessView64 product configurations and is the core of the ProcessView64 suite, making development faster and cutting design costs of any application. Offered in Windows Presentation Foundation (WPF), users can configure and manage their entire ProcessView64 application from anywhere on any device.



Workbench Multi-application Layout

ProjectWorX provides complete project management capabilities for any application within the secure Workbench environment. Comprehensive project management features include:

- Versioning and change management
- Global search, organize, find and replace
- Pack-and-Go deployment
- Project statistics and audit trails

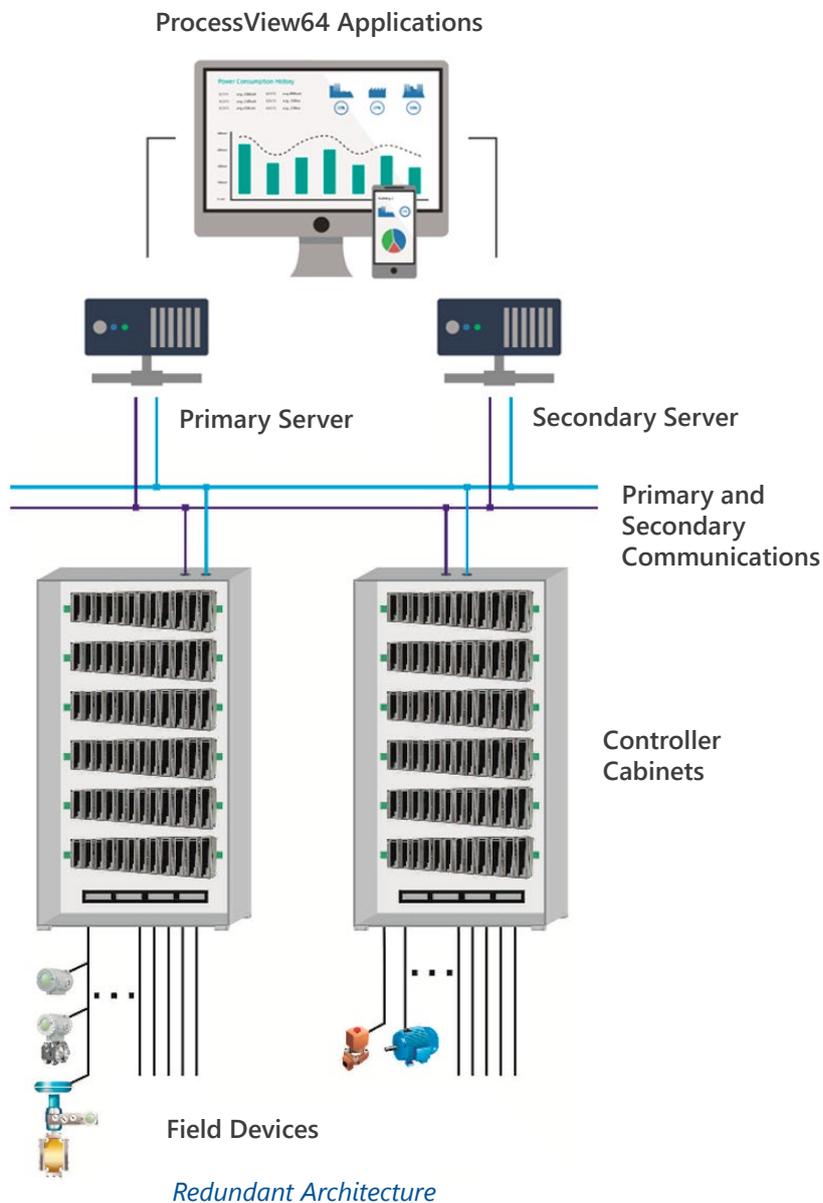
Mission-critical Redundancy

ProcessView64 ensures the safety of any critical data by offering high availability redundancy for the best communication reliability. Redundant collectors and loggers serve as a backup in case of a system failure. With automatic fault detection and store-and-forward technology, ProcessView64 users can be assured that mission-critical real-time data, historical data and alarm information are always available. SMAR redundancy solutions are simple to configure, install and deploy. Tested on Hyper-V and

certified for VMware, ProcessView64 software redundancy covers all major aspects of data redundancy such as data access, historical data, alarms and security.

Universal Connectivity with OPC UA

ProcessView64 supports industry standard communications such as OPC, OPC UA, Modbus, BACnet, web services and databases. The first 64-bit Advanced Workstation (B-AWS, BACnet Advanced Operator Workstation), ProcessView64 is certified by the BACnet Testing Laboratories, ensuring maximum integration with BACnet protocols such as BACnet objects, trends and alarms. ProcessView64 is certified for OPC UA compliance by the OPC Foundation. Simple device discovery on the network makes integration seamless and efficient.





ISA-95 Compliant Asset Management

AssetWorX is an architectural layer that greatly reduces engineering time while improving operator consistency and providing intuitive navigation. It enables the system to be engineered and operated based on an intelligent asset model configured to represent your organization. Users can easily embed Fault Detection and Diagnostics (FDD) or energy metrics within these distributed assets, which can be defined according to the ISA-95 standard.

Visualization on Any Device, Any Time, Anywhere

GraphWorX64 delivers stunning 2D and 3D HMI and SCADA visualization that empowers customers to view their entire systems operations from their desktop or mobile device. Users can build scalable, XAML vector-based graphics or use preconfigured symbols with dynamic properties, referenced colors and flexible animations. Smart Tiles™ are seamlessly integrated to display key performance metrics within operational dashboards. ProcessView64 also supports the ability to create 3D graphics or import 3D models from Autodesk or other third-party design software.



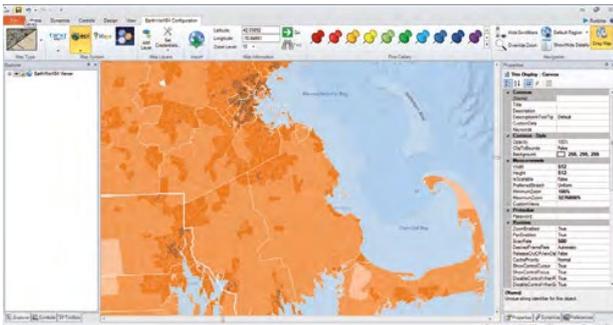
IoT and Cloud Integration

The SMAR IoT Gateway Suite communicates with Microsoft Azure or third-party applications by publishing on-premises data to the cloud via secure transport protocols. SMAR visualization, analytics and mobile solutions then subscribe to and consume the data, which gives operators access from any device. Customers can create hybrid solutions that maintain data integrity and security while delivering KPI dashboards on the cloud. This advanced technology creates the most efficient and cost-effective means of connecting the simplest devices to a global network in order to maximize system productivity.

ProcessView64 also offers expansive advanced visualization for any system, empowering users to view equipment and assets through dazzling graphics. **WebHMI** capabilities brings the resources of your ProcessView64 application to an HTML5 or WPF compliant web browser. **MobileHMI** is a powerful app that provides a consistent user experience on any mobile device. Generate executive self-service dashboards utilizing preconfigured symbols from any mobile device with **KPIView**. ProcessView64's responsive UI flawlessly transitions between clients to provide consistent cross-platform viewing capabilities.

Quickly View Assets with Geo-SCADA

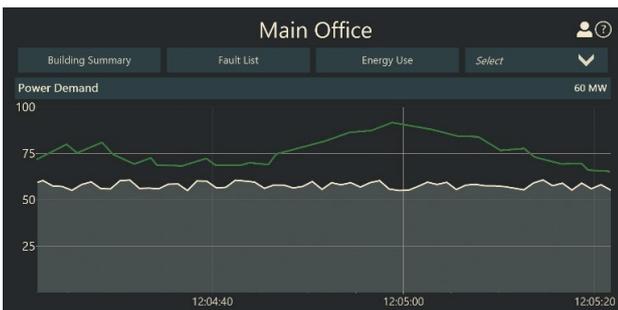
EarthWorX, ProcessView64's geographical information SCADA module, provides real-time visualization of widely dispersed assets. Smart Pin™ technology allows for an intuitive drill-down capability to instantly view alarm conditions and status for any location around the world. ProcessView64 is integrated with Bing, Google, Esri maps and any maps conforming to the open Web Map Service (WMS) format.



Esri Population Map with Smart Pin Technology

Real-time and Historical Charts and Analysis

SMAR offers scalable solutions for historical data logging and analysis, encompassing everything from a simple data logger to a distributed, cloud-ready enterprise historian. The powerful **TrendWorX64** Viewer is an interactive OPC HDA-compliant control that provides open connectivity to OPC DA, OPC UA, SQL Server, Oracle, MySQL, or data logged using **HistoryView**, SMAR' high-speed, robust plant historian.



TrendWorX64 Real-time and Historical Trending

HMI Integrated Database Access and Control

GridWorX enables spreadsheet-style visualization of data with fully integrated read and write support to any database. Use GridWorX to access Web services and to sort, filter and group results from databases such as Microsoft SQL Server, Oracle, MySQL and more.

Distributed Alarm Management

AlarmWorX64 is a distributed, enterprise-wide alarm and events management system capable of handling the most demanding applications. The alarm system offers extensive tools to deliver and view real-time and historical alarm information. AlarmWorX64 includes an OPC Server, Logger and Alarm Viewer that is compliant with OPC A&E and OPC UA industry standards.

Fault Detection and Diagnostics

O **FDDWorX** offers real-time FDD technology that triggers recommendations for improvement and facilitates commissioning processes. It proactively predicts equipment failures to continuously improve system efficiency. The moment failures occur, automated fault diagnostics analyze sensor readings and provide guidance to the service technician.

Equipment	Area	Fault	Active Symptoms	Estimated Cost
RTU-2-1	Zone2	Leaking Cooling Coil	Dirty Filter; Low Pressure;	3,759.35

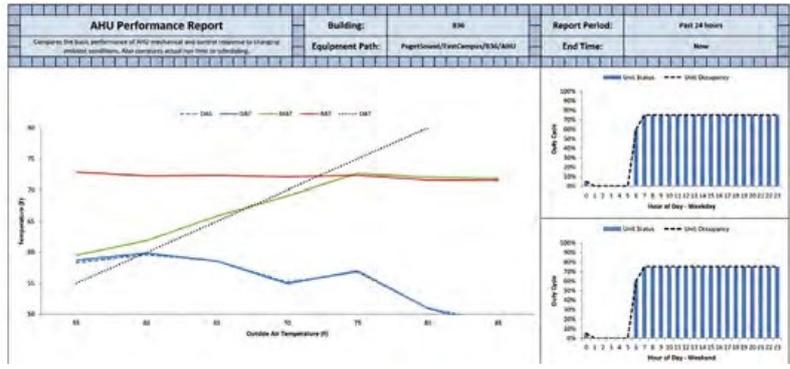
General	Fault Description	Comments	Diagnostic	Activation Variables	Description Variables
INACTIVE	UNACKNOWLEDGED	UNRESOLVED	Acknowledge	Resolve	

Active Time: 3:14:00 PM
Deactivation Time: 4:50:00 PM
Active State Duration: 000d 01h 36m 48s

FDDWorX Details View

On-demand Microsoft Excel Reporting

ReportWorX Express is an Excel add-in that enables users to pull in data from a variety of sources. Integrating with ProcessView64 security, coupled with support for SMAR data sources, ReportWorX Express satisfies many reporting needs. **ReportWorX 365** provides users with a reporting tool that does not require any previous installation of SMAR products. Supported data sources include OPC, OPC UA, TrendWorX Logger Databases, HistoryView, AlarmWorX Logger Databases, and Analytics.



ReportWorX Excel Add-in

Improve Enterprise Productivity!

The largest cost of any automation project is in engineering the application. For an average project, this can be well over 60 percent of the total expenditure. Taking advantage of 64-bit computing greatly reduces this effort and shortens the design time, resulting in enormous cost savings and drastic improvements to your bottom line.

SMAR is able to consistently deliver software solutions based on the latest 64-bit Microsoft operating systems, including Windows 10, Windows 8, Windows Server 2016 and Windows Server 2012R2.

Key features of Windows come to life within ProcessView64 and provide users with the greatest application performance, reliability and flexibility.





SMAR
can provide
360° views

Key Features

- **Universal connectivity** – OPC UA, BACnet, SNMP and databases
- Intuitive 2D and 3D WPF and HTML5 **visualization**
- Object-oriented distributed **alarm management**
- Support for **asset and tag-based** organization
- Cross-browser, cross-platform access on **any device**
- **Web-based** development and configuration
- **Customizable** frame or canvas-based visualization
- **Hardware-accelerated 3D** user experience
- Native user interaction with **voice and multi-touch**
- International **language support** and extensible API

Ideal for Any Industry

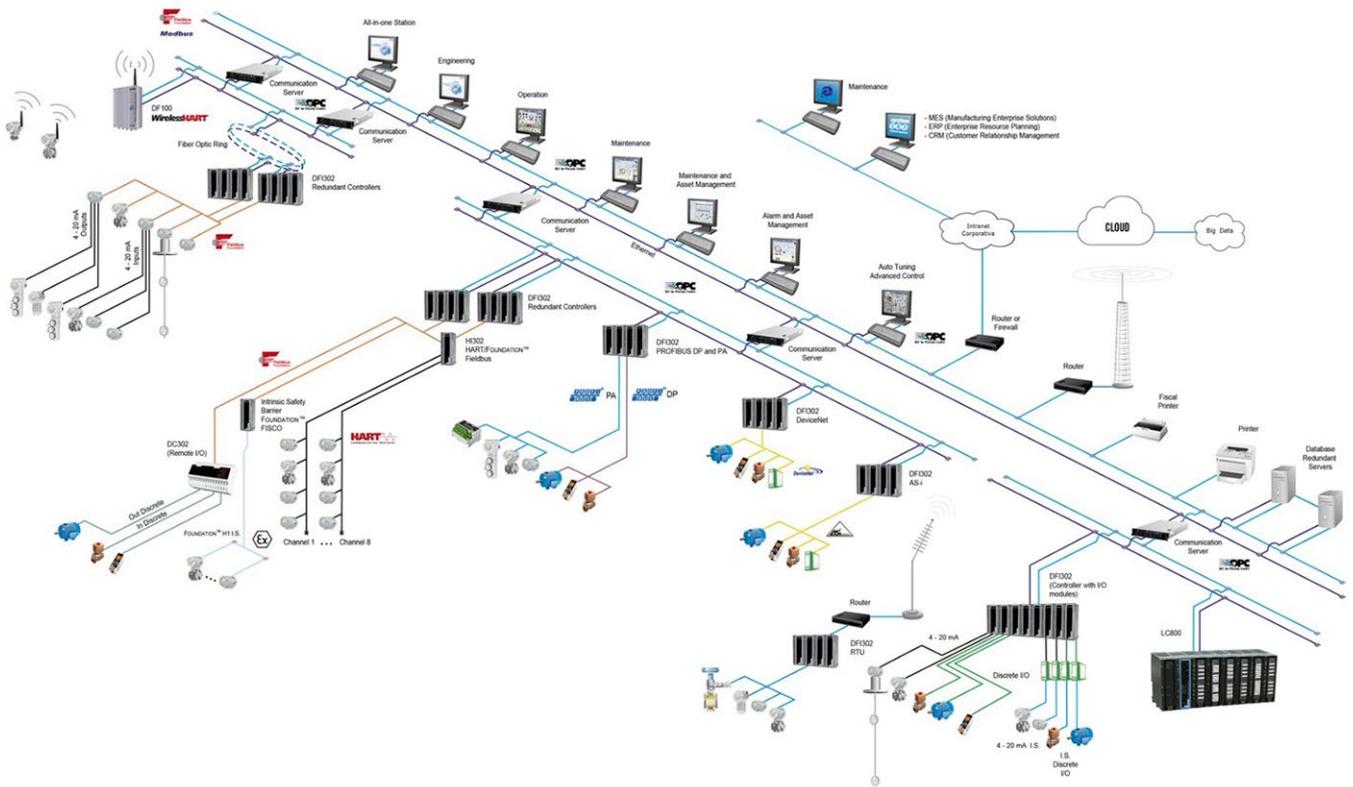
For over four decades, SMAR industrial automation software solutions have met and exceeded real customer needs in multiple industries, including:

- Oil & Gas
- Sugar & Alcohol
- Petrochemical
- Pharmaceutical
- Chemical and Biotechnology
- Pulp & Paper
- Food and Beverage
- Water and Wastewater
- Mining
- Metals



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Open Digital Ecosystem

Rua Dr. Antônio Furlan Junior, 1028 - Sertãozinho, SP - CEP: 14170-480 - Brazil
insales@smar.com.br | +55 (16) 3946-3599 | www.smar.com