

AgileOps™

- Operations Management software for the industrial enterprise
- Eliminate alarm floods and improve situational awareness of the operator
- Monitor operational performance including alarm metrics and operator actions against industry standard KPIs
- Track the integrity of safety systems and operating windows at your facility
- Compatible with multiple control system platforms



Introduction

Emerson’s AgileOps™ software provides consistency and reliability to the control system by keeping it optimally configured for the process state. AgileOps monitors the performance, loading and health of your system while providing a consistent reporting toolset across the enterprise. The software is scalable and modular to meet functionality and size requirements at any given site. Several applications make up the AgileOps solution:

- **Master Control System Database** – A central repository for viewing, configuring, and managing all collected control system data, process boundaries, and alarm rationalization or design.
- **Dynamic Management** – Allows the alarm configuration to change based on the operating state and process conditions of your facility which eliminates alarm floods and reduces the risk of missed alarms.
- **List Management** – Advanced alarm shelving capabilities to reduce stale and nuisance alarms, auto re-enable alarms as necessary, and minimize the number of alarms on the operator’s alarm interface.

- **EventKPI** – Monitor alarm and event metrics and track key performance indicators across the unit, site or enterprise with powerful dashboard capabilities and reports.
- **SIF Tracker** – Monitor bypasses and interlocks to determine if your safety system is operating normally, operating in a degraded state, or if a safety function is active.
- **Input Tracker** – Monitor key operational parameters to determine violations from normal condition and time in violation.

Benefits

- **One solution across the enterprise** – Using the same approach and tools for tracking, KPI reporting, alarm rationalization, and state-based alarming, regardless of the control system, allows for a standardized solution to be implemented across multiple sites in your organization. This also reduces maintenance for upgrades and migrations.
- **Compatible with multiple control systems platforms** – AgileOps is compatible with many control systems including Emerson DeltaV® and Ovation™, Honeywell Experion®, and TDC®, Siemens PCS7® and APACS, ABB 800xA,



ABB Advant, DOW's MOD 5, and Schneider Foxboro®, TIS/OMM, ClearSCADA, and Yokogawa Centum VP, thus delivering a complete solution for an entire site with one or multiple control system manufacturers. In addition, AgileOps also offers a generic connector for other systems not listed.

- **Compliant with industry standards** – AgileOps is compliant with ISA 18.2, EEMUA 191, IEC 62682, API RP1167, 49CFR192.631 and 49CFR195.446 standards and is designed to help you meet these standards when coupled with Emerson's alarm rationalization services.
- **Eliminate alarm floods and improve situational awareness of the operator** – Built-in transition management allows for easy and safe state transitions without generating alarm floods or missing critical alarms. AgileOps provides engineered shelving capabilities using advanced auto-shelving for dynamic management of those alarms that are not easily manageable with classic state-based alarm management methods.
- **Built-in rationalization work processes** – The embedded work process provides a consistent and logical approach to both static and dynamic alarm rationalization by aggregating devices into systems. This allows devices to be logically grouped with unit operations with the ability to define operating states in order to simultaneously execute static and dynamic alarm management during rationalization. Auto synchronization between the control system and the AgileOps Master Control System Database prevents stale data or conflicts when viewing the rationalization. Rationalized data can easily be audited or enforced against the data in the control system runtime.
- **Built-in contention management** – with AgileOps Dynamic Management, List Management and Enforcement Reports allows users to choose which application has write priority over others when a common control system parameter is written to.
- **User friendly interface** – With AgileOps, there is no need for custom displays or programming for dynamic logic on the control system. Maintenance is drastically reduced with easy-to-use, standardized integration into the operator interface.

- **Track the integrity of safety systems at your facility** – Easily identify any safety system in a degraded state and resolve issues before the operation becomes unsafe with AgileOps SIF Tracker.
- **Track digital inputs at your facility** – Easily track any digital inputs and aggregate trip and activation duration metrics based on logical groupings relevant for the site or input function. AgileOps Input Tracker can be used to track the following kinds of inputs: safety shower activation, BPCS interlocks, bypass activations, gas monitor activation, abnormal controller modes, high or low tank levels, motor starts or stops, etc.
- **Out-of-the-box or customizable reports, as well as multiple data egress options** – In addition to standard reports included in AgileOps EventKPI, SIF Tracker and Input Tracker, users have the ability to create custom dashboards or reports. Data can be processed within AgileOps or consumed externally with a number of standard connectors and secure protocols.

Product Description

The AgileOps suite provides modular and scalable platform-agnostic applications to provide a unified view of all control system settings and performance. With a direct connection to the control system, AgileOps collects live data and contextualizes it for consistent use in the applications that interact with the control system runtime. Event data that is collected from the control system is interpreted, contextualized, and the computed KPI metric results are transformed into consistent reports and dashboards (regardless of the control system) to better understand how your site is performing individually or compared to other sites within your organization.

AgileOps Master Control System Database

AgileOps provides the real-time capability to view the control system configuration, recommend and collaborate on design changes, implement changes in the control system, and audit the configuration versus the design. The AgileOps Master Control System Database is an online database that monitors the control system for changes, detects new and deleted devices and alarms, and drives the work process for rationalizing alarms and control system settings. The system allows users to audit changes to alarms and keep detailed

operator and engineer data about the alarm configuration. Based on the information provided, AgileOps will recommend the alarm priority based on the alarm priority matrix from your site’s alarm philosophy. AgileOps can connect to multiple control systems to allow the user to view and manage alarm configuration in the same way across the site. With a consistent toolset and interface, the same processes can be used for alarm rationalization design and implementation for all control systems across a corporation.

Manage Devices

System: Main BLR

Select	Edit	System	Device	Description	Keyword	Entity	Status	P&ID	Equipment
		Main BLR	17A101	O2 CEMS Analyzer					
		Main BLR	17AC102	O2 Trim					
		Main BLR	17F100	850# Steam Flow					
		Main BLR	17F802	DA East Htr Steam Flow					
		Main BLR	17FAL300	ID Fan Low Speed					
		Main BLR	17FC103	Midrange Controller					
		Main BLR	17FC300	Total Air Flow					
		Main BLR	17FC300A	Undergrate Air Flow					
		Main BLR	17FC301	Burner Air Flow					
		Main BLR	17FC401	Natural Gas Flow					

17A101=>17FC401 Properties Copy Devices

Parameter Data

DM

Boundaries

Alarms

View: By Alarm

Alarms for Selected Point

Select	Promote	Name	Alarm Type	Boundary	Status
		PID1.DV_HI_ALM	DEVHI	[None]	NE
		PID1.DV_LO_ALM	DEVHI	[None]	NE
		PID1.HI_ALM	PVHI	[None]	NE
		PID1.HI_HI_ALM	PVHIHI	[None]	NE
		PID1.LO_ALM	PVLO	O-LL	NE
		PID1.LO_LO_ALM	PVLOLO	[None]	NE
		PID1.PVBAD_ALM	DISIOERR	[None]	NE

1) PID1.DV_HI_ALM=>PID1.PVBAD_ALM

Property Values for Alarm

Edit	Enforceable	Promote	Name	Last Read	Last Proposed	Last Approved	Details
			Design Status	Not Evaluated			
			Suggested Priority	(NotApplicable)		WARNING	Details
			Priority Rationale				
			Eclipsing				
			Banner Text				
			SIS Activation	No			
			Trip Point	90	95	235	Details
			Time Delay Units	Secs			
			Source	0			
			Priority	WARNING	CRITICAL	WARNING	Details

1) Design Status=>Priority

AgileOps Alarm Settings View

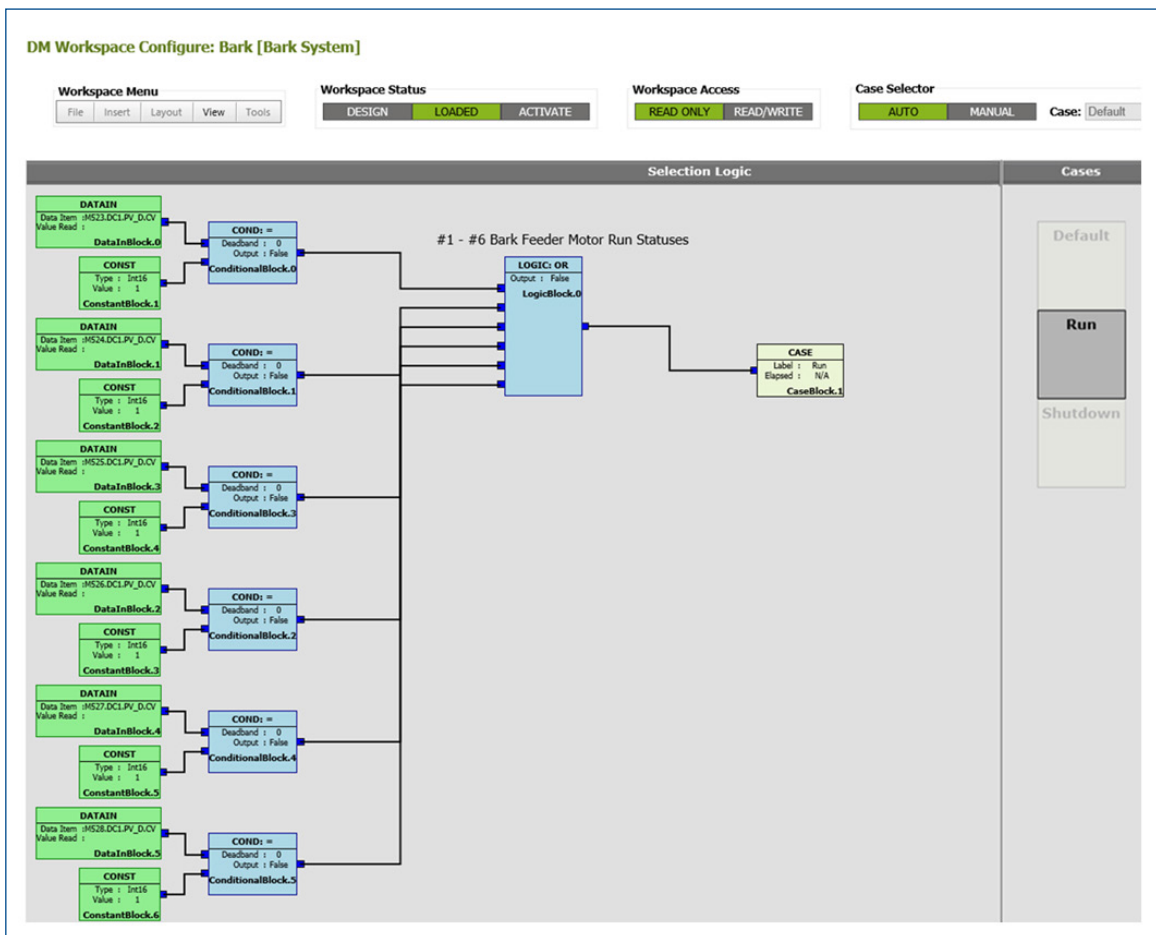
AgileOps Dynamic Management

AgileOps Dynamic Management allows the alarm configuration to change based on the operating state and process conditions of your facility. Built-in transition management ensures smooth and safe alarm transitions from one operating state to another, which effectively eliminates alarm floods during upset conditions and state changes. AgileOps automatically adjusts alarm settings, such as enabled, suppressed, or shelved, and can change alarm priority or trip point, based on operational state of the unit. This allows operators to focus on optimizing the facility operations rather than responding to unnecessary alarms. The integrated, user-friendly operator interface provides a simple drag and drop system, as well as a canvas, to allow rapid development of the state logic and easy updating when changes are needed. The logic can be built directly in the web interface or imported from Visio. Existing workspace logic

can also be directly printed to PDF or exported to Visio. The AgileOps Dynamic Management application is presented in the operator interface, eliminating the need to build custom interfaces for the operator to interact or view the logic or state of the dynamics.

AgileOps List Management

Manage malfunctioning alarms, stale alarms or broken instrumentation with AgileOps List Management. With advanced alarm shelving capabilities, AgileOps can reduce nuisance alarms, auto re-enable alarms, and minimize the number of alarms on the summary at your facility. Engineered shelving techniques, such as auto-shelving, allow for management of alarms that are not easily incorporated into dynamic alarm suppression techniques. The List Management application works hand in hand with the Dynamic Management application to help your site comply with applicable standards.

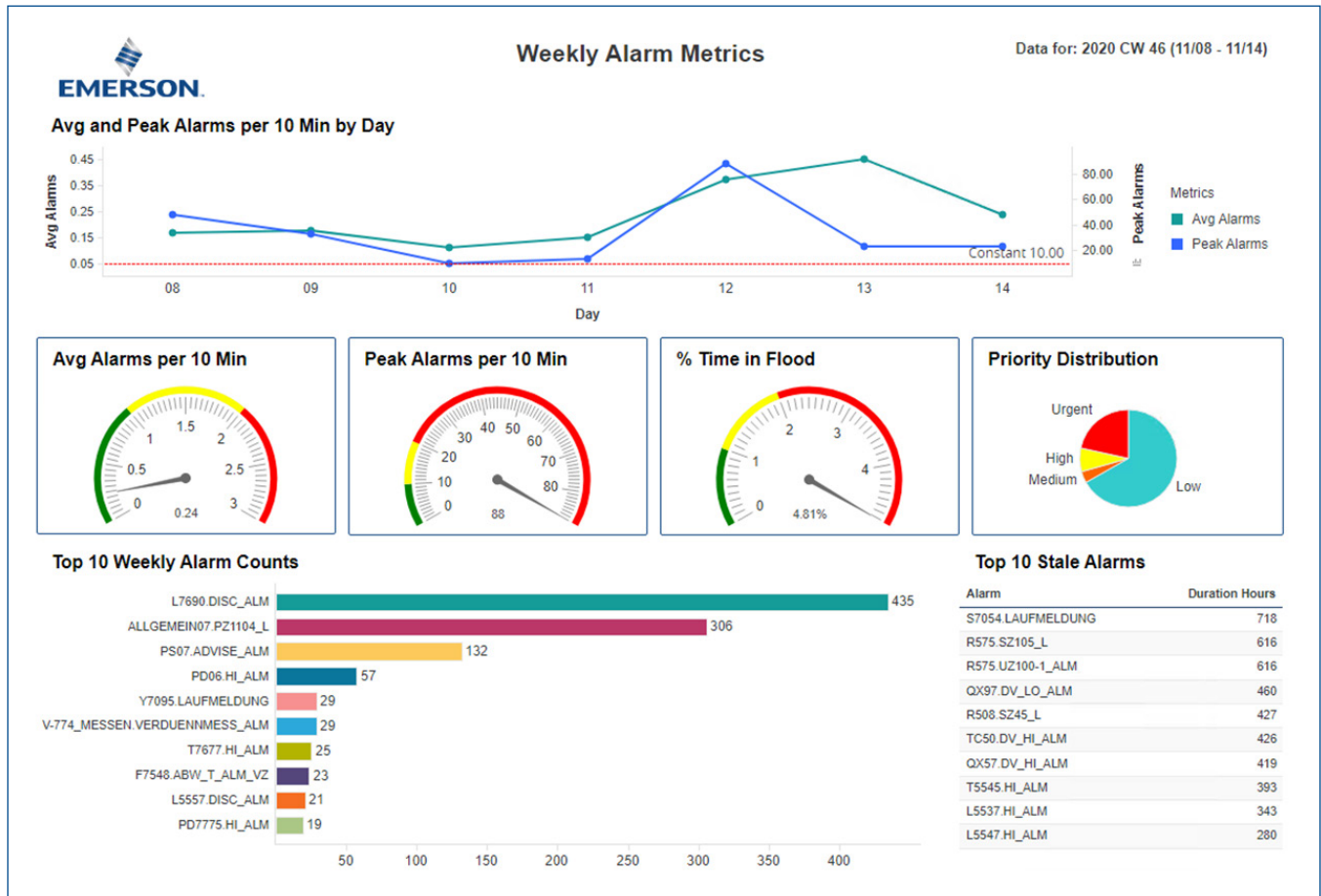


AgileOps Dynamic Logic Workspace for Detecting Changes in State

AgileOps EventKPI

AgileOps EventKPI allows the measurement, tracking and reporting of key performance indicators for events occurring in your facility. EventKPI reports alarm metrics as a result of data analysis which it automatically collects from one or more

control systems. Metrics can be analyzed by the minute, hourly, daily, weekly, monthly or on a yearly basis. EventKPI is designed as an enterprise application that provides the necessary detailed information from local unit personnel up through complex-wide and cross-facility views for the enterprise.

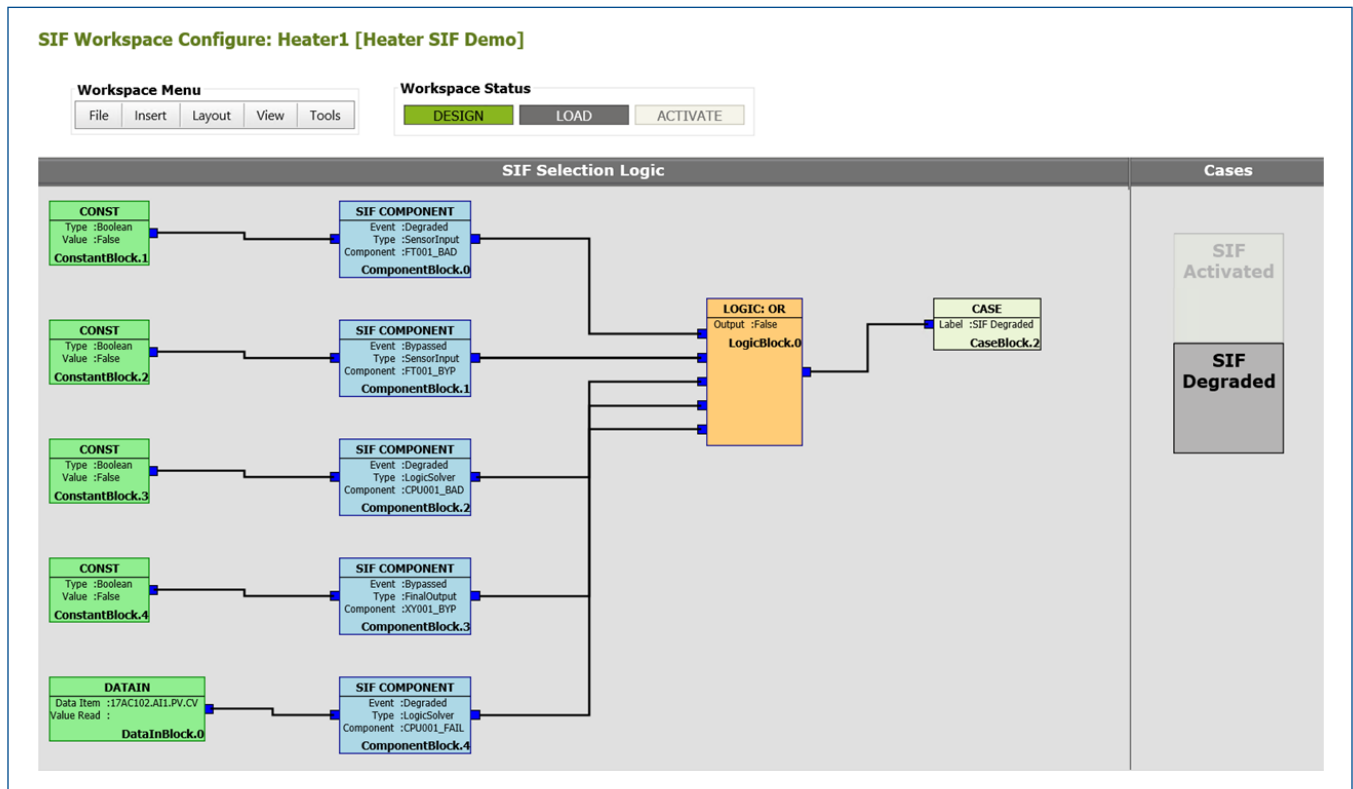


AgileOps EventKPI Dashboard

AgileOps SIF Tracker

The AgileOps Safety Instrumented Function (SIF) Tracker monitors the performance of a safety system to determine if that system is operating normally, operating in a degraded state, or if a safety function is active. The detection of whether a safety system is in a degraded state or if a safety function is active are defined as SIF KPI cases. Each case contains selection

logic built by the user to define what constitutes an activation trigger of the safety system or a degraded operating mode as well as individual contributors to an overall degraded mode of operation (such as active bypasses or bad inputs from field instruments). The results of this monitoring can then be viewed by users in reports presented in AgileOps EventKPI.

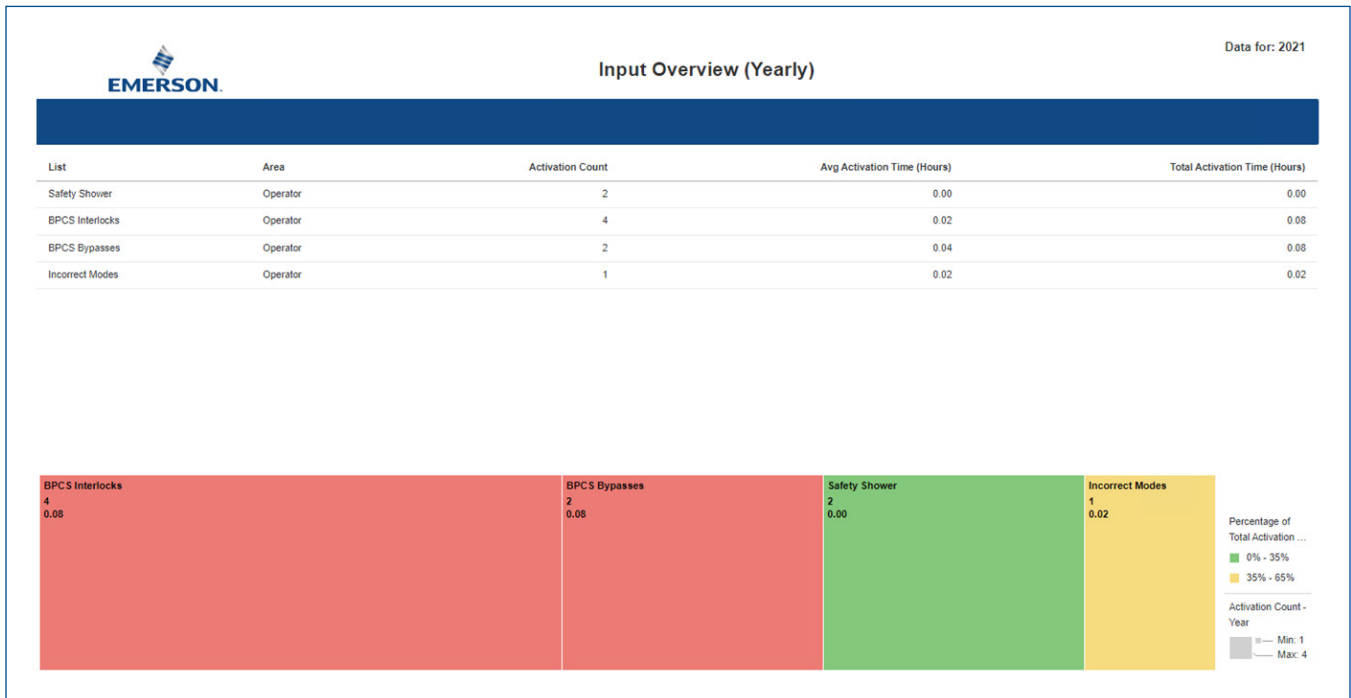


AgileOps SIF Workspace

AgileOps Input Tracker

Monitor and track digital inputs in your control system with the AgileOps Input Tracker. The Input Tracker application allows users to track digital inputs (by user defined names), automatically aggregate them (by user defined named lists) and generate metrics when those inputs enter a specific state. The Input Tracker monitors inputs, using real-time data, to determine if it is active, and then tracks the counts and duration of activation. The Input Tracker will then automatically

aggregate that metric based on the list the input is in. The results can be viewed via AgileOps EventKPI. These reports include data on individual raw events, metrics on individual inputs of lists, and metrics of the overall status of the aggregated lists.



AgileOps Input Tracker Report

Requirements

- Hardware Requirements
 - 2.20 GHz 8 core processors
 - 64 GB Ram
 - 512 GB hard drive
- Software Requirements
 - Windows Server 2016 with Microsoft SQL Server 2016 Standard or Windows Server 2019 with Microsoft SQL Server 2019 Standard
- Web browser (Microsoft Edge or Chrome)

Licensing and Ordering Information

The AgileOps suite includes 6 software applications, each licensed separately. Below are a few example Product ID and descriptions. Contact your local Emerson sales office or representative for pricing specific to your system.

Part no.	Description
COP-AO-MCSD-XX	AgileOps Master Control System Database
COP-AO-DM-XX	AgileOps Dynamic Management
COP-AO-LM-XX	AgileOps List Management
COP-AO-EKPIBASE-SRV	AgileOps EventKPI Server Base License
COP-AO-EKPICOLL-XX	AgileOps EventKPI Connector
COP-AO-EKPIUSER-ANL	AgileOps EventKPI User - Analyst
COP-AO-SIF-XX	AgileOps SIF Tracker
COP-AO-IPT-XX	AgileOps Input Tracker

Guardian Support

Guardian™ Support for AgileOps is a service designed to optimize the reliability and performance of your AgileOps System. Guardian provides unlimited expert technical support through service calls and delivers online resources and tools through the website and mobile app.

AgileOps software updates are available via the Guardian portal and can be installed with a valid Guardian support contract.

Global Service Center Phone Numbers:

- +1 800 833 8314 (US Toll Free)
- +1 512 832 3774 (US Toll)
- +63 2 8702 1111 (International)

Related Products

- AgileOps Dynamic Management
- AgileOps EventKPI
- AgileOps Input Tracker
- AgileOps List Management
- AgileOps Master Control System Database
- AgileOps SIF Tracker
- DeltaV
- Ovation

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