

DATASHEET

AVEVA™ Edge

SCADA and HMI from edge to enterprise

Choosing the right version of AVEVA Edge

- **AVEVA Edge Studio** – Design once, deploy anywhere.
- **AVEVA Edge SCADA** – The full Microsoft Windows-based runtime offers all the tools you need for advanced SCADA applications.
- **AVEVA Edge HMI** – AVEVA Edge for embedded systems such as Microsoft's Windows Embedded operating systems. The small footprint makes AVEVA Edge HMI ideal for embedded and edge machines.
- **AVEVA Edge Compact HMI** – Compact HMI is designed especially for Microsoft Windows CE operating systems.
- **AVEVA™ Edge IoT View** – AVEVA Edge IoT View is designed for Linux devices and enables edge computing on even small devices such as a Raspberry Pi.

AVEVA Edge offers an integrated development environment (IDE) that can be deployed to any runtime edition of AVEVA Edge.



Enhancements in AVEVA Edge 2020 R2 SP2

AVEVA Edge 2020 R2 SP2 builds on previous enhancements and adds further capabilities and flexibility.

Driver enhancements:

- MQTT supports Azure IoT Hub and Amazon Web Services (AWS) IoT Core MQTT brokers
- DNP improved reconnection and reduced timeouts
- MITSU supports TCP/IP and serial communication for the Linux runtime
- OMDIR support for Windows and Linux runtimes

Enhancements to the AVEVA Edge mobile access thin client:

- Support for SetDisplayUnit() function
- Mobile access app for iOS and Android – now supports TLS 1.2 and higher

General enhancements:

AVEVA continues to improve its product security posture. Recent improvements include:

- A studio database gateway that supports TCP/IP secure channel and mutual transport layer security (mTLS) for encryption and authentication
- Improved distributed component object model (DCOM) security to support the DCOM hardening in the Windows operating system¹
- Enhanced email client to support simple mail transport protocol (SMTP) TLS 1.2 and later
- Added capability to trust shared projects when they are opened for the first time
- Email support for TLS 1.2 and later

AVEVA Edge features

(in alphabetical order)

Alarms: Send online alarms or reports using multi-media formats like PDF. Alarms are real-time and historical. Log data in text file format or to any database. Use remote notifications to send alarms right to your inbox, printer or smartphone. Custom alarm fields allow you to customize up to ten additional fields to the alarm history.

Animation: Take command over graphics in a user-friendly interface. Paste images and even rotate dynamically using custom rotation points. Fill bar graphs with color or adjust the scale of objects with easy-to-use configuration. Other animations include command (for touch, keyboard and mouse interaction), hyperlink, text data link, color, resize, transparency/visibility and position.

Business intelligence: Log data directly to AVEVA™ Insight.²

Cloud: Natively connect with the AVEVA cloud to take advantage of tools like AVEVA Insight or AVEVA™ Edge Management to get a holistic view of your business.² Pair edge devices running AVEVA Edge to the cloud and remotely monitor health and status or update applications.

Database: Connect to any SQL database (Microsoft SQL, MySQL, Sybase, Oracle), Microsoft Access, Excel, or ERP/MES systems (including SAP) – even from Microsoft Windows Embedded Compact Edition. The flexible built-in interface doesn't require knowledge of SQL. A patented solution allows for communication with SQL and relational databases running on any supported platform.

Drivers: Use over 100 native communication drivers for PLCs, temperature controllers, motion controllers, bar code/2D/RFID readers, and many other devices. Use native drivers, connect to an OPC server, or use AVEVA driver toolkits to build your own drivers. Save time with comprehensive tag integration for PLCs. Drivers are included for Modbus, MQTT Sparkplug B, Allen Bradley, Siemens, Mitsubishi, Omron, Schneider-Electric and many others.

Email: Send emails (with attachments) or text messages that can be accessed from mobile devices. Get real-time information on alarms, process values and other events. Full runtime supports SSL encryption.

Events: Ensure traceability for operator-initiated actions or internal system activities. Log events such as security system changes (user logon or logoff), screen open/close, recipe/report operations, system warnings and any tag-value changes, including custom messages.

FDA traceability: Take advantage of built-in functionality to create 21 CFR part 11 compliant

projects with traceability and e-signatures. These features are often used for pharmaceutical and food applications but can be used for any application where traceability is a requirement.

FTP: Automatically upload or download files during runtime to or from remote storage locations using the FTP protocol and flexible scripting functions. Configure FTP via scripting or the included interface.

Graphics and design tools: Create screens to meet any application requirement using the tools in the graphic interface. Combine over 1,000 animated objects to create any functionality required. Store graphics in the library for future use and easily give projects across an entire product line a consistent look and feel.

Historian: Load millions of values from SQL relational databases with optimized trend history, featuring data decimation. Easy-to-use tools provide quick access to statistical process control (SPC) values without any need for programming. AVEVA Edge offers add-on integration with AVEVA™ Historian (formerly Wonderware) and support for AVEVA Insight.²

Import wizards: Convert whole applications from FactoryTalk ME/SE, PanelMate or PanelBuilder 32. Save time when converting from a previously designed application to an AVEVA Edge application.

IoT View: AVEVA™ Edge IoT View is a platform-agnostic runtime for Linux and other embedded platforms. Make intelligent embedded systems and add your machines to the internet of things, industrial internet of things (IIoT), and Industry 4.0.

Industrial graphics: An additional graphics editor provides new tools and additional graphics and libraries. It includes extensive animations, situational awareness, style management and symbol import/export.

Intellectual property protection: Protect your intellectual property with just a few clicks of your mouse. Passwords protect individual screens, documents, scripts and worksheets. This prevents unauthorized viewing or editing of your project or application.

JavaScript custom widgets: Custom widgets expand and enhance the graphical interface by integrating third-party, reusable JavaScript, HTML5 and CSS interfaces, properties and events. Use included custom widgets such as pie chart, tree view, calendar, image list and web browser – or create your own.

Mobile access: This thin client allows you to access your graphical interface from any device, with a browser that supports HTML5 devices, such as iPads, iPhones, Android devices, Windows devices and others. AVEVA Edge now includes support for all native objects and allows you to integrate third-party web-based controls.

Multi-language: Develop your application in one of many development languages, including English, Portuguese, German, French, Polish, Russian, Chinese (traditional and simplified), Japanese and Spanish. Or use external translation tools to switch the runtime to any language. AVEVA Edge offers automatic font replacement based on the language selected.



Multi-touch interface: Develop applications for touchscreen devices. AVEVA InTouch Edge HMI's multi-touch interface allows development for any touchscreen-enabled device. Use familiar, modern interface gestures, like pinch zooming and panning. Use swiping gestures to scroll through alarms, change screens or execute other commands. Inertia in the multi-touch interface offers a comfortable user experience. Rotate graphics, dock screens and take advantage of features like dual-touch command.

.NET and ActiveX: Use third-party controls to enhance your project. AVEVA Edge is a container for .NET and ActiveX controls, allowing you to add functionality such as browsers, media players, charting, live streaming from cameras, and other ActiveX or .NET controls.

OEM: AVEVA Edge can be customized for OEMs who want to offer pre-installed HMI or SCADA software on their hardware, or for OEMs who want to add value to their machines by offering remote monitoring, maintenance or customizable applications.

OPC: AVEVA Edge provides native OPC interfaces, such as OPC UA (client/server), OPC DA (client/server), OPC XML (client), and OPC HDA (server). OPC UA and OPC DA also offer native redundancy configuration and tag integration for OPC DA and OPC UA servers.

PDF export: Send alarms, reports, text files or Microsoft Word documents in portable document format (PDF) to a production supervisor, quality manager or maintenance worker using the included PDF writer.

Recipes: Save time and maintain consistency by automating part parameters or production quantities with flexible recipe management tools. Options include loading directly to PLC or editing before committing to PLC.

Redundancy: For critical applications where data is vital, AVEVA Edge supports web server, database and overall system redundancy to protect your information.

Reports: Create clear, concise reports in plain text, RTF, XML, PDF, HTML, and CSV – or integrate with Microsoft Office programs such as Excel. Get the data you need, in the format you need it, to make informed decisions. AVEVA™ Reports for Operations also offers advanced operational reporting for AVEVA Edge.²

Scalable: Use the same development environment to design and deploy projects to a wide range of platforms, such as Linux, Windows Embedded, Windows CE, Windows 8.1, Windows 10, Windows 11, Server 2012 R2, Server 2016, Server 2019, and Server 2020 editions.

Scheduler: Schedule application behavior triggered by tag changes, date/time, frequency, or any other trigger. Trigger reports at a particular time of day – or even trigger driver worksheets to read/write at a scan rate you choose, or use the scheduler for simulation.

Scripting: AVEVA Edge supports several powerful scripting languages, built-in AVEVA Edge functions and standard VBScript. Take advantage of widely available resources for VBScript. Both the native AVEVA scripting language and VBScript can be used simultaneously to give you the functionality you need, even from thin clients. Script debugging tools for the native VBScript editor include breakpoints and a variable watch list to improve scripting productivity. Included with industrial graphics is the flexible and powerful Quick-Script language.

Security: AVEVA Edge includes support for group and user accounts, e-signatures and traceability. You can integrate your project to the Active Directory (users and groups).

Symbols: The included native graphics library features push buttons, pilot lights, tanks, sliders, meters, motors, pipes, valves and other common objects. Use the 1,000+ included symbols in your project, modify existing symbols to suit your needs, or create your own from scratch. AVEVA Edge supports third-party symbol libraries and graphic tools. Industrial graphics add additional symbol libraries, including situational awareness graphics that make it easy to understand what is happening.

Standards: Use common standards to develop applications that are compatible with TCP/IP, .NET, ActiveX, OPC (client and server), ADO/ODBC, COM/DCOM, OLE, DDE, XML, SOAP, REST and HTML5.

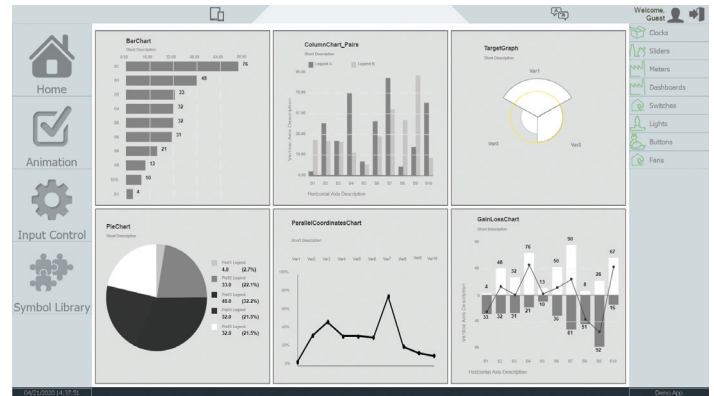
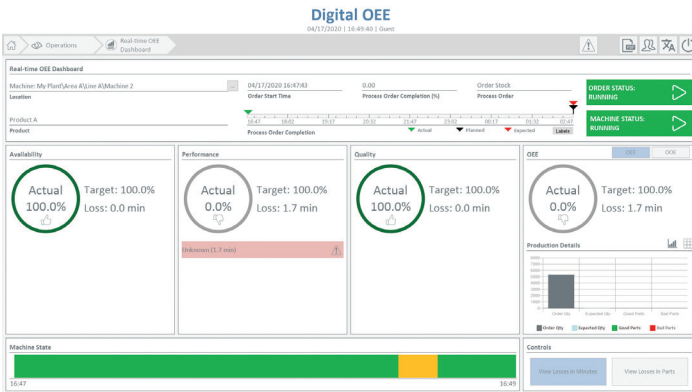
Tag database: AVEVA Edge features an object-oriented database with boolean, integer, real, strings, arrays, classes (UDT/structures), indirect tags and included system tags. Built-in functions allow you to create, delete or modify the tags database settings during the runtime. With this feature, you can design generic templates that can be easily customized to each project, even during the runtime. AVEVA Edge also offers tag integration from a wide range of PLCs, including Schneider Electric.

Templates: AVEVA Edge has many templates and sample applications available including: andon, digital OEE, PackML and business intelligence.

Trends: AVEVA Edge supports real-time and historical trends, as well as SPC functionality. Log data in binary format to any local or remote SQL database, or to AVEVA Historian (formerly Wonderware) or AVEVA Insight. Color or fill trends with graphic elements to enhance clarity of data. Date/time-based or numeric (X/Y plot) trends give you the flexibility to display information that best suits your application. AVEVA Edge supports vertical and horizontal trending.

Troubleshooting: Quickly debug and verify a project using local and remote tools for troubleshooting, including status fields, HTML5-based DatabaseSpy for AVEVA Edge IoT View, Watch Window, and LogWin. Capture screen-open and close times, see communications in real time, messages related to OPC, recipes/reports, security, database errors and even custom messages. Finish your project quickly using these powerful tools.

XML screen toolkit: Modify or create screens during the runtime or import screens that you've created.²



Overview

AVEVA Edge is a comprehensive platform that includes all the tools you need to make SCADA and HMI applications that have real power behind them. The environment allows you to develop once and deploy anywhere. AVEVA Edge supports all Windows runtime platforms (including 32 and 64 bit), such as Windows Embedded Compact, Windows Embedded Standard, Windows 8.1/10/11, and Windows Server Editions (Server 2012R2/2016/2019/2022), along with built-in support for local or remote web-based visualization.

AVEVA Edge also offers a runtime edition (AVEVA Edge IoT View) available for Linux.

Build powerful graphical displays and take advantage of the 100+ available communication drivers for all major PLC products. AVEVA Edge includes OPC UA and OPC Classic (HDA and DA), trends, alarms, reports, recipes, and built-in SQL database support as standard features. Not all features are supported on all platforms.

¹See [Microsoft KB5004442 – Manage changes for Windows DCOM server security feature bypass \(CVE-2021-26414\)](https://support.microsoft.com/en-us/topic/known-issues-for-windows-dcom-server-security-feature-bypass-cve-2021-26414)

²Additional purchase required

For more information about AVEVA Edge, visit:
aveva.com/en/products/edge

