

Choosing the ideal AVEVA™ Edge runtime edition solution for your project



AVEVA Edge STUDIO is an integrated development environment (IDE), which allows you to design, develop, troubleshoot, and maintain SCADA/HMI/IIoT applications running on premise edge and deploy them into different platforms (operating systems). You can use the same development environment (AVEVA Edge STUDIO), on Windows, to create all projects and run each project with the runtime edition most suitable for the technical and commercial constraints of each platform: AVEVA Edge SCADA for SCADA projects running on Windows-based stations; AVEVA Edge Embedded HMI for full featured HMIs running on Industrial Panels with Windows IoT Enterprise LTSC/LTSB; AVEVA Edge Compact HMI for embedded industrial panels running Windows CE; and AVEVA Edge IoT View for IIoT edge devices or local HMI solutions using Linux. This document is valid for AVEVA Edge 2020 R2 SP1.

Platforms		AVEVA Edge Runtime Editions			
		SCADA	Embedded HMI	Compact HMI	IoT View
Operating system	Windows Server 2019	Supported	Not supported	Not supported	Not supported
	Windows Server 2016 ⁽¹⁾	Supported	Not supported	Not supported	Not supported
	Windows 10 ⁽²⁾	Supported	Not supported	Not supported	Not supported
	Windows 10 IoT Enterprise (LTSC/LTSB) ⁽²⁾	Supported	Supported	Not supported	Not supported
	Windows Embedded 8.1 Industry Pro	Supported	Supported	Not supported	Not supported
	Windows Embedded Compact 7 ⁽³⁾	Not supported	Not supported	Supported	Not supported
	Linux (x86/arm) ⁽⁴⁾	Not supported	Not supported	Not supported	Supported
System requirements	Minimum free storage memory needed	4GB	128MB	64MB	75MB
	Minimum free RAM memory needed	1GB	64MB	32MB	32MB

1. Windows Server 2016 version 1709 or newer
2. Windows 10 version 1909 or newer (including LTSC/LTSB versions)
3. Windows Embedded Compact 7, formerly known as Windows CE
4. Linux on x86 processors with libc: 2.12.2, libstdc++: 6.0.14 (or newer) or Linux on arm processors with libc: 2.13, libstdc++: 6.0.17 (or newer)

Feature comparison

When installing AVEVA Edge in your computer, it installs the development environment (AVEVA Edge STUDIO), along with the AVEVA Edge runtime editions compiled to support specific platforms. You can consult the technical reference manual (help) from AVEVA Edge STUDIO on how to deploy runtime editions in remote stations. The following table describes the features supported by each AVEVA Edge runtime edition. You can use the same development environment (AVEVA Edge STUDIO) to create projects for any AVEVA Edge runtime edition. In other words, the projects are the same for any platform. Each runtime edition of AVEVA Edge has been compiled to support specific platforms, with the capabilities and limitations described below. This document focuses only on the main capabilities of each feature. Consult the technical reference manual (help) for additional details on capabilities and limitations of each runtime edition.

Feature		AVEVA Edge Runtime Editions			
		SCADA	Embedded HMI	Compact HMI	IoT View
General	Run applications designed with the same IDE	Supported	Supported	Supported	Supported (8.0)
	Run as a service	Supported	Not supported	Not supported	Not supported
	Email (SMTP Client)	Supported	Supported	Supported with limitations ⁽¹⁾	Supported ⁽²⁷⁾
	Create tags programmatically during the runtime	Supported	Not supported	Not supported	Not supported
	Create screens programmatically during the runtime	Supported	Not supported	Not supported	Not supported
	Create reports in PDF format	Supported	Not supported	Not supported	Not supported
	Built-in functions	Supported	Supported with limitations ⁽²⁾	Supported with limitations ⁽²⁾	Supported with limitations (8.0) ⁽²⁾
	Tag integration (Shared Tags)	Supported	Supported	Supported	Not supported
Global	Project Tags, System Tags, Classes and Arrays	Supported	Supported	Supported	Supported (8.0)
	Security system	Supported	Supported	Supported	Supported with limitations (8.0) ⁽¹⁶⁾
	Procedures	Supported	Supported	Supported	Not supported
	Event logger	Supported	Supported	Supported	Supported with limitations (2020R2) ⁽²⁸⁾
	Translation	Supported	Supported	Supported	Supported
Tasks	Alarms	Supported	Supported	Supported	Supported with limitations (2020R2) ⁽¹⁷⁾
	Trend Logger	Supported	Supported	Supported	Supported with limitations (2020R2) ⁽¹⁸⁾
	Native Integration with AVEVA System Platform	Supported	Supported	Not supported	Supported with limitations (2020R2) ⁽²⁹⁾
	Native Integration with AVEVA Historian (on premise)	Supported	Supported	Not supported	Supported (2020R2 SP1)
	Native Integration with AVEVA Insight (on the cloud)	Supported	Supported	Not supported	Supported
	Recipes	Supported	Supported	Supported	Not supported
	Reports	Supported	Supported	Supported	Not supported
	ODBC	Supported	Supported with limitations ⁽³⁾	Supported with limitations ⁽³⁾	Not supported
	Math	Supported	Supported	Supported	Supported with limitations (8.0+SP1)
	Script	Supported	Supported	Supported	Not supported
Scheduler	Supported	Supported	Supported	Supported (2020R2)	
Database/ERP	Supported	Supported	Supported	Supported with limitations (8.0+SP1) ⁽²⁵⁾	
Communication	Drivers	Supported	Supported with limitations ⁽⁵⁾	Supported with limitations ⁽⁵⁾	Supported with limitations (8.0) ⁽⁵⁾
	OPC DA 2.5 client	Supported	Supported	Supported with limitations ⁽⁴⁾	Not supported
	OPC DA 2.5 server	Supported	Supported	Supported with limitations ⁽⁴⁾	Not supported
	OPC XML/DA client	Supported	Not supported	Not supported	Not supported
	OPC UA client	Supported	Supported	Supported with limitations ⁽¹⁾	Supported
	OPC UA server	Supported	Supported	Not supported	Supported
	TCP/IP client	Supported	Supported	Supported	Not supported
	TCP/IP server	Supported	Supported	Supported	Not supported
	Mobile access runtime	Supported	Supported	Supported	Supported (8.0)
OPC HDA server	Supported	Not supported	Not supported	Not supported	
Graphical Interface	Screens	Supported	Supported	Supported	Supported (8.0)
	Screen group	Supported	Supported	Supported	Supported (8.0)
	Graphic script	Supported	Supported	Supported	Not supported
	Local viewer	Supported	Supported	Supported	Not supported
	Server for SMA thin clients (HTML5)	Supported	Supported	Supported with limitations (8.0) ⁽⁶⁾	Supported (8.0)
	Server for secure viewer thin clients	Supported	Supported	Supported	Not supported
	Server for web thin clients	Supported	Supported	Supported	Not supported
	Support for CGI web servers	Supported (8.0)	Supported (8.0)	Supported (8.0)	Supported (8.0)
	Screen scripts	Supported	Supported	Supported	Supported with limitations (8.0) ⁽²⁰⁾
	Shapes	Supported	Supported	Supported	Supported (8.0)
	Active objects	Supported	Supported	Supported	Supported with limitations (8.0)
	Data objects (alarm/event, trend, grid)	Supported	Supported	Supported	Supported with limitations (8.0+SP1)
	Libraries - project symbols	Supported	Supported	Supported with limitations ⁽¹⁹⁾	Supported with limitations (8.0) ⁽¹⁹⁾
	Libraries - linked pictures	Supported	Supported	Supported with limitations ⁽⁹⁾	Supported (8.0)
	Libraries - .NET controls	Supported	Not supported	Not supported	Not supported
	Libraries - ActiveX controls	Supported	Supported	Supported with limitations ⁽²¹⁾	Not supported
	Libraries - custom widgets	Supported (8.0+SP1)	Supported (8.0+SP1)	Not supported	Supported (8.0+SP1)
	Auto screen scaling	Supported	Supported with limitations ⁽⁷⁾	Supported with limitations ⁽⁷⁾	Supported (8.0)
	Fill effects	Supported	Supported with limitations ⁽⁸⁾	Supported with limitations ⁽⁸⁾	Supported with limitations
	Background picture	Supported	Supported with limitations ⁽⁹⁾	Supported with limitations ⁽⁹⁾	Supported (8.0)
	Ellipse style types	Supported	Supported with limitations ⁽¹⁰⁾	Supported with limitations ⁽¹⁰⁾	Supported with limitations (8.0) ⁽¹⁰⁾
	Hint (Tooltip)	Supported	Supported with limitations ⁽¹¹⁾	Supported with limitations ⁽¹¹⁾	Supported with limitations (8.0) ⁽¹¹⁾
	Command events	Supported	Supported with limitations ⁽¹²⁾	Supported with limitations ⁽¹²⁾	Supported with limitations (8.0) ⁽²³⁾
	Rotation animation	Supported	Supported with limitations ⁽¹³⁾	Supported with limitations ⁽¹³⁾	Not supported
	Trend control > Export to file	Supported	Not supported	Not supported	Not supported
	Trend control > Points > Pen Style > Fill	Supported	Not supported	Not supported	Not supported
	Enhanced graphics (anti-aliasing, gradual transparency)	Supported	Not supported	Not supported	Supported (8.0)
Multi-touch gestures	Supported	Supported with limitations ⁽¹⁴⁾	Supported with limitations ⁽¹⁴⁾	Not supported	
Industrial Graphics	Supported with limitations	Not supported	Not supported	Not supported	
Licensing	Number of tags	150, 300, 1.5K, 4K, 16K, 32K, 64K, 512K, or Unlimited	150, 300, 1.5K, or 4K	150, 300, 1.5K, or 4K	150, 300, 1.5K, 4K, or Unlimited ⁽³¹⁾
	Number of thin clients	Unlimited ⁽²⁶⁾	Unlimited ⁽²⁶⁾	Unlimited ⁽²⁶⁾	Unlimited ⁽²⁶⁾
	License server	Supported	Not supported	Not supported	Not supported
	USB hardkey	Supported	Supported with limitations ⁽¹⁵⁾	Not supported	Not supported

- Encryption supported by SCADA and Embedded HMI, but not supported by Compact HMI
- The vast majority of the built-in functions are supported by all Runtime Editions. However, specific functions are Not supported on specific platforms. The complete reference is available in the Technical reference manual at "Appendix: Built-in Scripting Language > List of available functions"
- Even though the ODBC worksheets (legacy) are not supported, the Database/ERP worksheets are supported
- The image of the operating system must support Remote DCOM
- The vast majority of the native communication drivers are supported by many runtime editions. However, specific native drivers are not supported on specific platforms. The complete reference is available through the actual product (Project Explorer > Comm > Drivers > Add/Remove Drivers). Moreover, IoT View supports main driver sheets only
- Studio Mobile Access Tabular supported for both Embedded HMI and Compact HMI. Studio Mobile Access (HTML5) supported by Embedded HMI, but not by Compact HMI
- The screens can be converted to a different resolution by using the command "Home > Convert resolution"
- Fill effects are supported for rectangle objects
- The following formats are supported: BMP, JPG, and PNG, as long as the image of the device supports these formats as well
- The style type Ellipse is supported, but the style types Arc, Chord, and Ring are not supported
- The Hint field will update the Hint System Tag. The graphical tooltip will not be automatically displayed on Compact HMI runtime nor on SMA Thin Clients
- The Command events "On Down", "While Down", and "On Up" are supported. The remaining command events are not supported
- The rotation animation is supported for closed polygons, but not for pictures
- Compact HMI does not support "Zoom and Pan gestures on project screens" and "Gestures with Rotation animation"
- The Hardware from the WiBu manufacturer is supported by all Runtime Editions (excluding IoT View)
- LDAP and Local Plus are supported; Distributed mode is not
- Alarm Online and Alarm History supported. Alarm history can be saved to Proprietary and Database formats
- Trend Logger history can be saved to Proprietary, Database, and Historian (AVEVA Insight CSV/JSON) and AVEVA Historian on-premises (2020R2 SP1)
- Project Symbols are supported, as long as their shapes, active objects, and/or animations are supported by the target platform
- Built-in language only
- Push button, List box and Smart message are supported now
- The ActiveX control must be compiled to the target platform
- Built-in language, Open/Close Screen, and Set/Reset/Toggle Tag supported. VB Script not supported.
- Trend Control Object supported on SMA with Tagname Data Source only. Grid Control supported with Database Data source only
- Sub-set of DB/ERP functions supported. DB/ERP worksheet not supported
- Limited by license and external and physical constraints (hardware and operating system)
- Email (SMTP Client) is supported by IoT View via exec() built in function calling a CURL script
- Event history can be saved to Proprietary and Database formats
- Native integration through the ITMEViewApp object for AVEVA System Platform is available for AVEVA Edge SCADA and AVEVA Edge Embedded HMI only. Integration via MQTT SparkplugB (requiring a third-party MQTT Broker) is available for AVEVA Edge SCADA, AVEVA Edge Embedded HMI, and AVEVA Edge IoT View
- The Trend Logger task from AVEVA Edge SCADA, AVEVA Edge Embedded HMI and AVEVA Edge IoT View can save data natively into an external AVEVA Historian. AVEVA Edge (AVEVA Edge SCADA, AVEVA Edge Embedded HMI and AVEVA Edge IoT View) has a native OPC UA Server, which can expose tag values to any third-party system that provides an OPC UA Client, including the AVEVA Historian (on premise)
- The UNLIMITED option is available only when AVEVA Edge IoT View is purchased in a subscription model (AVEVA Flex)