BLUE Open Studio® 2020 SP3 (20.0.3) Release Notes

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AVEVA System Platform Coexistence

BLUE Open Studio and AVEVA System Platform both use Industrial Graphics. Because of this, BLUE Open Studio 2020 SP3 can only coexist with AVEVA System Platform 2020 R2 SP1 and AVEVA System Platform 2020 R2 SP1 Patch 01.

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New Features and Enhancements

This is a summary of important features and enhancements that have been introduced in this version.

Communication Drivers

We added or significantly improved the following communication drivers in this release:

Driver	Description
IE104	Communication with devices using the IEC 60870-5-104 protocol. This driver has been enhanced to allow the user to communicate with multiple Common addresses in the station field for the same driver instance.
	Communication with Allen-Bradley Common Industrial Protocol (CIP) over Ethernet/IP for ControlLogix, FlexLogix, CompactLogix, and MicroLogix controllers.

ABCIP	Driver enhancements: • New Read Status error codes • Better handling of invalid tags in the Main Driver Sheet read groups.
COSYS	TCP/IP and Serial Communication using PLC Handler CodeSys Library. Driver enhancements: • Support for reading and writing numeric values to data types Date, TOD, and DT. • Updated PLC handler • New interface support for controllers that use Authentication
DNP	Communication with devices using the DNP3 protocol. Improved reconnection logic and reduced the occurrence of timeouts.
MITSU	Communication with Mitsubishi FX Series devices. This driver now supports TCP/IP and Serial Communication for the Linux runtime.
MQTT	Communication with devices that support Message Queuing Telemetry Transport (MQTT) protocol. Driver enhancements: • Support for Azure IoT Hub and Amazon Web Services (AWS) IoT Core MQTT brokers. • Support for subscription/publish of UTF-8 payloads (previously ANSI). • New Status Codes for Write Completed and Write Status fields of the Main Driver Sheet when using Sparkplug. • New Status Codes for the Read Status field of the Main Driver Sheet when using traditional MQTT communication.
OMDIR	Communication with OMRON controllers compatible with the Ethernet/IP CIP protocol that supports symbolic addressing. Support for this driver has been added for Windows and Linux runtimes. Note: The OMDIR driver and its associated features are available only if you have purchased the appropriate license option.
TSAA	Communication with Triconex devices using the TSAA protocol over UDP/IP. Driver enhancements: • Support for the Main Driver Sheet, which can automatically sort the I/O addresses and create read groups. • Support for Trident firmware v3.1 controllers.

For more information, see "Issues Resolved for Specific Communication Drivers" below.

Cybersecurity Enhancements

We continue to improve our product security posture. In particular, we have done the following:

- Improved Studio Database Gateway to support 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 System based on Microsoft KB5004442—Manage changes for Windows DCOM Server Security Feature Bypass (CVE-2021-26414).
- Enhanced email client to support Simple Mail Transport Protocol (SMTP) TLS 1.2 and later.
- .NET controls are updated to a newer, more secure version of .NET serialization. Users are prompted to update previously created .NET controls.
- Enhanced on-premises Historian (trend) configuration to use Database Gateway credentials instead of a user name and password.
- Added capability to trust shared projects when they are opened for the first time.

Localization Improvement

Updated Japanese-language messages and menus, improving readability.

Remote Agent Upgrade

Remote Agent for Linux runtimes has been upgraded. Follow these directions to install the update:

1. Install this software.
2. Launch the Studio version on Windows and use the Remote Management tool to connect to the Remote Agent on the Linux target station.
3. Use "Install runtime files" to upgrade the Linux runtime (which will include Remote Agent).
4. Restart Remote Agent on the Linux target station.

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Deprecated or Removed Features

This is a summary of features that have been deprecated or removed from this version.

Enable Enhanced Graphics

The Enable Enhanced Graphics option for Project Screens is now enabled and, in order to improve performance and security, the option to disable it has been removed. This feature provides anti-aliasing for lines, edges, gradient fills on Shapes, Text objects, and Button objects (with the exception of conical gradient fills). It also provides the ability to set opacity (Visibility property) for some screen objects. This feature is not supported in projects configured to run on the Embedded target platform.

File Import and Compatibility

In order to enhance project security, AutoCAD DXF files cannot be imported as linked external images.

NTWebServer

In order to enhance security, NTWebServer has been removed from this release.

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Issues Resolved in This Release

This is a list of important issues that have been resolved in this version.

Issues Reported by Our Users

These are issues that were reported by our users and then logged in our customer relationship management system. If you reported an issue to us, you should have been given a case number at that time. You can look for your case number in the list below.

Please note that documentation changes are not counted as resolved issues, so if you reported an issue and it was resolved by a documentation change (e.g., by clarifying a step in a procedure), then it might not be included in this list.

Case No.	ID	Description
960017480	612603	SMTP email client did not support Transport Layer Security (TLS) 1.3.
960055220	1135583	Only the first 50 or 100 characters of a String tag were saved when selecting the Retentive Value string tag property.
960060077	1101942	Log to File did not log Japanese characters.
960072530	1231313	Viewer.exe module froze after changing a user password through the SetPassword() function.
960074812	1504555	Mobile Access Alarm History object did not consistently update when a filter was applied through the Selection field of the Filters dialog.
960094239	1533421	The Trend Object loaded partial data after pausing from periods of time with more than 32000 points when using Local Time + Default Milliseconds.
960095919	1417914	Rotation animation was not working as expected for horizontal rectangles made out of the Closed Polygon shape.
960098069	1421067	Trend Control objects in Mobile Access were unable to retrieve historical data when using custom properties.
960098089	1497770	Database/ERP connections timed out after 30 seconds.
960102034	1441093	Symbol Flip Horizontal or Flip Vertical would not persist after closing and reopening screen.
960103901	1497309	Retentive tag values in Scheduler Worksheets were triggering a Tag Database popup when connecting to the runtime.
960105404	1486496	ShowMessageBox was not working as expected in Mobile Access.

960107855	1503105	Insert field on DB/ERP worksheets was not working as expected with a large number of rows.
960110646	1505880	Remove blank lines in project database in the Verify Project dialog was not removing blank lines when there were any fields filled in the tags database.
960110653	1506328	Adding rows to a CSV file during runtime using Grid Object Insert Trigger was adding additional carriage return characters.
960112075	1513940	Mobile Access threw an error "Fail to open Database" when connecting to SQL database with Data Protection enabled.
960112601	1543472	Secure Viewer intermittently failed to load the default user after an update.
960112601	1803052	Secure Viewer screen focus was incorrect at runtime startup.
960112904	1704166	Special characters in tags were not supported when using the built-in OPC UA Server.
960112904	1606912	The OPC UA Client connection was generating a BadWaitingForInitialData error after a reconnection.
960114001	1586978	OPC UA Tag Integration lost synchronization when the OPC Server was offline.
960115021	1575466	Grid Objects using an ampersand in the database connection password were not publishing correctly in HTML.
960122634	1593519	Industrial Graphics were not updating correctly after an ungraceful disconnection.
960123268	1594527	OPC UA Client connections were not updating correctly to use the new connection format.
960123981	1596903	Copied grouped objects were shifting position within the group.
960129112	1632475	IDE reliability degraded after adding animation to a linked symbol.
960134779	1655030	Enhanced Text Object and Animation Text Data Link resize feature in Mobile Access was applying the manually resized text to other text objects in the same screen.
960137039	1667655	Mobile Access Smart Message object tag values were not updating on tag value change.
960137678	1673319	Could not connect to on-premises Historian using Database Gateway credentials instead of a user name and password.
960137722	1682474	Mobile Access did not support the Binary Alarm History project setting.
960139223	1678949	Invalid members were able to be added to Class Array tags without reporting an error.
960139258	1682242	In applications running as a service, tags were not updating automatically.
960139258	1678974	Verify Project was taking too long for large projects.
960139548	1680335	Filter Expressions were not reading Time values correctly for Alarm/Event object Filters.
960140147	1682414	OpcUaBrowseToJson() function was not documented.
960141709	1716518	Mobile Access was stopping, even though STADOSVR and Studio manager were still running.
960143272	1696302	PDFCreate() was not executing properly when executed twice within a small time window.

960144651	1755384	Linked Picture objects were affecting Screen editing.
960144975	1706529	Grouped objects were not maintaining their shapes when being rotated and copied.
960144975	1797649	Groups of symbols were not keeping their original forms when close the screen edge.
960146719	1711879	In Mobile Access, Alarm Worksheet numbers were being displayed in place of Alarm Group Names.
960146820	1733012	Trend data objects with a TXT file data source and Sort selected were not displaying data consistently using different Durations.
960146950	1768671	Security System Group Account Advanced Password aging did not require a new password to replace the old password.
960149055	1730154	SetDisplayUnit() was not available for the Linux runtime and Mobile Access.
960149993	1730450	1500 tag licenses were not enabled for Embedded HMI.
960151585	1736280	Translation was not working for a Combo Box screen object using a database as Data Source.
960152076	1738730	Trend worksheet created during runtime did not retain data after application restart.
960152167	1738912	Any missing OPC UA node generated OPC UA Client errors and required application restart.
960153665	1754668	The Verify Project "Remove blank lines in project database" option did not remove blank lines from class tags.
960155356	1765311	Changing a service project's Startup Type caused an error.
960155407	1774936	Tag properties of tags created in AVEVA Historian by Application Server were overwritten when the trend logger saved data in AVEVA Historian.
960156664	1768522	A project configured to run as a service was not able to be started from a Windows System Tray icon.
960158055	1778192	OPC XML/DA Client did not read when ScanScreen was enabled on Mobile Access.
960158965	1780003	Improved Industrial Graphics reliability.
960161920	1801380	The screen scan mode on the Main Driver Sheet was working erratically.
960163181	1803063	Hard-coded timeouts were causing Studio Database Gateway connection timeouts when connected to the Linux runtime.
960163839	1808877	"(Default Rights)" was a visible selection option when enabling the Security System "Display list of users at logon" option.
960164644	1814694	Supported and unsupported tags OPC UA were not documented.
960164788	1809471	OPC UA was throwing COpcUaClientTask::OnDataChange exception.
960153263	1756677	"Task Switch Enabled" feature was not included in the installation.
960156175	1788461	Boolean tags were being overwritten on startup.

960156544	1788047	Scheduled database queries were failing, sometimes halting the application.
960165687	1861269	Saving screens with linked symbols caused IDE failure.
960165931	1819262	Thin Client setup was missing dependencies.
960172977	1859481	Class Array tags were not being validated in certain graphic screen objects.
960177154	1874027	IDE performance degraded after opening the Object Finder in the Event Logger window.
960177154	1874033	Tag Integration was causing the IDE to be unresponsive.
960177204	1873964	There was no watchdog for OPC UA tag groups.
960178652	1890614	GetSecuritySystemStatus() did not support redundant Active Directory servers.
960178652	1906105	SetPassword() was failing.
960180794	1895743	Combo box screen objects behaved inconsistently when the "Require confirmation" option was selected.
960181070	1891886	OPC UA Tag integration was not working on Embedded HMI runtime.
960182645	1896173	Opening a new application by double-clicking its APP file while another application was running opened the running application instead.
960182661	1896190	Large output logs degraded system performance.
960185490	1913183	FileReadFields() was returning error "-3" when returning values to all array indexes.
960186006	1913453	The CreateUser() function did not show the the complete list of available runtime groups in the Create User dialog in an Embedded HMI installation.
960186713	1924802	Alarm/Event objects with Type "Alarm History" were not displaying all seven characters in the Alarm worksheet Selection field.
960188147	1927215	Database functions, such as DBExecute(), were not executing successfully when running the functions from Mobile Access for a Windows Embedded installation.
960190427	1934739	EncryptData() and DecryptData() functions were not working in Embedded HMI when called from Background Tasks.
960195763	1970866	Separate Remote Management connections to the Linux runtime were not maintaining consistent hardware identifiers.
960200534	1997577	Alarm/Event objects with Type "Alarm History" were not refreshing on Mobile Access.
960224137	2126520	Format function "optStrThousandSep" parameter was not documented correctly.
N/A	1708169	Applications were not reliably opening if there was an existing VPN connection across network domains.

Issues Resolved for Specific Communication Drivers

These are the issues that were resolved for specific communication drivers.

Case No.	ID	Description
0002179841	583606	TSAA driver did not support Trident PLCs Firmware v3.1 CIM 3211 Comm Modules, and had slow communication due to smaller read block size.
960035991	1633552	TI500 driver had stability issues and driver logs were incomplete.
960076816	1292850	MQTT driver did not support Azure IOT Hub and Amazon Web services IOT Core MQTT brokers.
960082121	1354047	DNP driver stopped communicating with fast changing values when using continuous reads for MONITOR events.
960103571 960215285	1471502 2063779	COSYS driver did not support Authentication required by controllers that have embedded security management configured.
960106829	1527207	MOTCP driver did not show correct precision for floating point values.
960107712	1502031	ABCIP Tag Integration failed when there were structures with unsupported or invalid members.
960108385	1506164	OMRON Tag Integration continuously refreshed when verifying the application, creating duplicate classes with different StructureName properties for the imported tags.
960109588	1503498	SNMP driver failed when there were invalid items in a read group.
960111116	1512680	MQTT driver when using Sparkplug failed when exceeding 80 tags.
960117727	1591495	SCHNE driver was not able to correctly communicate with TOD datatype arrays with overlapping (drift) values.
960120016	1593504	CODESYS Tag Integration did not show Enumeration type variables when using Symbol File Browsing (Offline).
960124628	1631832	MQTT driver stopped requesting values for fast changing data on the broker and eventually stopped communication.
960129901	1804357	TI500 was not able to consistently reestablish connections.
960136124	1662656	ABCIP driver in physical mode was reading and writing to invalid array indexes.
960140258	1687602	COSYS and SOMAC drivers were reading incorrect values for Enumeration type tags.
960140264	1687393	ABCIP driver did not create groups for string tags correctly.
960144436	1730279	MELSE driver on Linux runtime did not communicate when there were two or more PLC stations on the main driver sheet.
960146100	1725158	TWCAT Tag Integration was not correctly parsing tags when there were some invalid tags.
960146359	1710667	MELSE driver was not correctly reading from and writing to bits of word registers.

960148214	1733097	SIETH and SITIA secure PG/PC and HMI communication option was not documented.
960148279	1717513	OMETH driver on Linux runtime was not able to communicate correctly and always returned Status Code "-15".
960149236	1736303	In ABCIP physical mode, string tags that expected Date and Time values were reading "0".
960150498	1731502	OMETH driver on Linux runtime printed out debug trace messages to the log.
960150512	1731513	OMETH driver halted Linux runtime on devices with x86 architecture.
960155494	1775829	MQTT driver was not correctly reading Arabic strings.
960156831	1789107	SNMP driver was not communicating correctly with secure and authenticated SNMP v3 devices.
960167935	1838041	SCHNE driver did not correctly read or write to boolean members of structs with mixed data types.
960193313	1964247	IE104 driver did not support multiple Common Addresses on Station for a single driver instance.
N/A	584623	MOTCP driver could not read or write strings of 82 or more characters.
N/A	1996079	OMETH driver was not validating source node number on Windows or Linux runtimes.
N/A	2036341 2047710	MQTT 'Write Status', 'Write Completed', and 'Read Status' were not functioning correctly.

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Known Issues and Workarounds

This is a list of known issues that remain in this version, with appropriate contingencies and workarounds.

ID	Description
1135583	Issue: Only the first 512 characters of a String tag are saved when selecting the Retentive Value string tag property for projects running in the Embedded HMI runtime edition on Windows Embedded. Workaround: Limit String tags to 512 characters when running projects in the Embedded HMI runtime edition on Windows Embedded.
1631020	Issue: Some communication drivers (e.g., MODBU) have not yet been improved to support long strings, which means they are limited to 81 characters per read operation. Workaround: Divide long strings into shorter strings of 81 or fewer characters per string, and then store those shorter strings in multiple device registers.
1788460	Issue: Screen viewer performance suffers if SetTagDisplayUnit function is called more than 21 times by a screen. Workaround: Limit the number of times a screen calls to function SetTagDisplayUnit to 21 or fewer.

N/A	Issue: Text Box objects are drawn incorrectly in project screens that are viewed through Mobile Access. This might be due to scaling of the user interface. As computer displays have achieved higher resolutions, operating systems have implemented UI scaling to ensure that text, apps, and other items are displayed large enough to be usable. However, this UI scaling can affect the behavior of some apps, especially those that include drawing or rendering functions. Workaround: 1. Exit the development environment. 2. Go to the Display control panel in Windows, and then make sure Scale and layout is set to 100%. 3. Run the Studio development environment. 4. Save your project screens as HTML, and then test your project again. 5. If the issue persists, restart your computer to make sure the scale is applied correctly.

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Installation Guide

Upgrading from a Previous Version and Licensing

More than one major version (for example version 8.x or 2020) of BLUE Open Studio can be installed on the same computer, because each major version is installed in its own appropriately named program folder. For example, this major version is BLUE Open Studio 2020, so by default it is installed in the following location on your hard drive: C:\Program Files (x86)\Pro-face\BLUE Open Studio 2020

Many users keep a previous major version installed on their computer while they become familiar with the changes in the latest major version. You can run only one version at a time, however, so you should remove the previous version when you no longer need it. If you are installing a service pack or patch to an existing version, it will update that version, not any other versions you have installed.

When you upgrade from a previous major version to the latest major version, you also need to upgrade your software license(s). To purchase a license upgrade, contact your software distributor. To apply that upgrade to the software, use the Protection Manager utility that is installed with the software (Start > BLUE Open Studio 2020 > BLUE Open Studio 2020 Register). For more information about licensing, see the Help Manual.

If you do not upgrade your software license(s), it will still run in its full-featured Evaluation Mode for up to 40 hours. After that time expires, however, you can only run the software in its limited Demo Mode.

When you update a major version to its latest minor version, you do not need to update your software license(s). The license is for the major version, so it includes all of the subsequent updates, patches, and hot fixes for that major version.

Finally, when you open an existing project for the first time in a new version, that project is automatically and permanently updated to the new version. This is true regardless of whether you have upgraded your software license(s). Therefore, you should back up your existing projects before you open them in the new version. Each major version of the software creates a corresponding projects folder (e.g., BLUE Open Studio 2020 Projects) in your user directory, so you can simply copy (not move) your projects from the old projects folder to the new projects folder.

System Requirements

This section describes the system requirements and additional considerations for installation in order to develop projects, or to use the computer as a project runtime

server and/or thin client.

Hardware Requirements

Standard Requirements

- A Windows-compatible computer with a standard keyboard, a pointer input (mouse, trackpad, or touchscreen. etc.), and an SVGA-minimum display.
- Minimum 2 GB available storage (hard drive or non-volatile).
- Minimum 1 GB available memory (RAM).
- An Ethernet or Wi-Fi network adapter.

Optional Items

- A USB port or memory card slot, to be used for hardkey licensing of the software.

  This item is optional because softkey licensing is also available.
- Serial COM ports and adapters, to be used for direct communication with PLCs and other devices.

  This item is optional because many newer device protocols use Ethernet communication (TCP or UDP) instead of serial communication.

Software Requirements

One of the following operating systems:

- Windows:
  - Windows 11
  - Windows 10, version 1909 or later (including LTSC/LTSB versions)
  - Windows 8.1
- Windows Server:
  - Windows Server 2022
  - Windows Server 2019
  - Windows Server 2016
  - Windows Server 2012 R2
- Windows Embedded
  - Windows 11 IoT Enterprise
  - Windows 10 IoT Enterprise (LTSC/LTSB version only)
  - Windows Embedded 8.1 Industry Pro

Use the "Pro" or "Enterprise" editions of Windows because they include Internet Information Services (IIS) as a pre-installed feature that can be turned on. Do not use the "Home" and "Education" editions of Windows, because many features are hidden or disabled in these editions.

You can install the full software on a Windows Embedded device, as long as it meets the system requirements listed above. If you do not plan to develop projects on that device then you should install Embedded HMI instead. For more information, see the help manual.

Update Windows before you install the software in order to have the latest security fixes and system components.

.NET Framework

You need to have both .NET Framework 3.5 and .NET Framework 4.8 (or later) installed and enabled.

If Windows is fully updated on your computer, the latest versions of .NET Framework should be installed, but they might not be enabled. Use either the Windows Features control panel in Windows or the Server Manager console in Windows Server to confirm that both versions of .NET Framework are enabled.

In some cases, it might not be possible to update Windows through normal means. For example, if your computer is on a private network without access to the Internet, it might not be able to contact the Windows Update service. You can use another computer to download an offline installer for each .NET Framework and then transfer it.

Optional Software

- Internet Information Services (IIS) installed and turned on. IIS is the default web server for Windows.

  This item is optional because it is not required to develop a basic project and then run it on a standalone device, but it is required in order to use more advanced features.

  - In most cases, IIS is required in order to install and then use Mobile Access. You may choose not to install the Mobile Access Runtime feature at this time. You can install it at a later time, for either IIS or CGI. For more information, see the "Mobile Access Runtime" feature in the "Selectable Features" section below.
  - IIS is required in order to run projects that include Industrial Graphics symbols.
- Either Microsoft Edge or Google Chrome, to be used for viewing project screens in Mobile Access.

  This item is optional because you can always use the built-in Viewer program to view project screens.
- Internet Explorer 11, to be used for viewing project screens in Web Thin Client.

  This item is optional because you can always use the built-in Viewer program to view project screens.

  Previous versions of Internet Explorer are no longer supported. In some cases, you can use Microsoft Edge in Internet Explorer (IE) mode, which enables backward compatibility for legacy websites and applications like Web Thin Client. It is supported with limitations, however, and you might see unexpected behavior while viewing project screens. For more information, go to: https://www.microsoft.com/en-us/edge/business/ie-mode

System Sizing

The operating system, storage, and memory requirements will necessarily increase for larger projects; the minimum requirements listed above are only for projects of up to 4,000 tags. The following table shows the complete requirements:

Project Size	**Operating System**	**Storage**	**Memory**
up to 4,000 tags	Windows, Windows Server, Windows Embedded Standard	2 GB available	1 GB available
up to 64,000 tags	Windows, Windows Server	4 GB available	2 GB available

up to 10 million tags	Windows Server only (multi-core)	8 GB available	4 GB available

Your computer needs to meet only the minimum requirements when you first install the software and begin to develop your project, but the requirements will increase as your project grows. Every computer or device that you plan to use as a runtime station is subject to the same requirements.

Industrial Graphics

If you are using Industrial Graphics screens, the project should be hosted on a dedicated Windows system with IIS installed. The additional system recommendations for this dedicated system are:

- CPU PassMark® > 5200 pts
- 16 GB available RAM memory (Each client session requires ~200 MB of memory, depending upon graphics complexity.)

These recommended requirements are suitable for a system with ten clients, browsing pages with approximately 40 dashboard/charting components with ~250 I/O tags on the page. Pages may take a longer time to display on the first visit. The display time depends on graphics and script complexity. Additional clients can be supported by increasing the number of CPU's, CPU speed, and Memory.

User Privileges

You need to have administrator privileges on your computer in order to install any software. If you are not already signed on as a user with administrator privileges when you run the software installer, you can choose to run the installer as an administrator. To do this, right-click the installer program file (setup.exe), and then on the shortcut menu, click **Run as administrator**. You will be asked for the appropriate user name and password.

Selectable Features

On the Select Features page of the installation wizard, you can select which features and software components to install. If you deselect features that you know you will not use, you will decrease the amount of hard drive space required for installation.

Feature	**Description**
Program Files	The main program files for the project development environment, the project runtime software for Windows and Windows Server, and the thin client software for viewing project screens. You cannot deselect this feature.
Custom Widget Framework	Additional software that is required to develop HTML5-based widgets and then use them in project screens. You cannot deselect this feature.
AVEVA Historian	Additional software that is required to save historical data from your project to an external database, such as AVEVA Historian. If you want to use this feature in your project, you must have .NET Framework 4.8 (or later) installed and turned on.
BDE for PanelMate™ Import Wizard	Borland Database Engine (BDE), which is required to import a PanelMate Plus or PanelMate Power Pro program into

	a new project. This feature is not selected by default, because it is used only in some cases.
Demo Projects	Pre-made projects that demonstrate the product capabilities.
Hardkey Support	Additional software that supports the use of Wibu-type hardkeys (a.k.a. dongles). You may deselect this feature if you are using either Sentinel-type hardkeys or softkey licenses. For more information, see "Third-Party Software" below.
Industrial Graphics	The Industrial Graphics editor and symbol library, which works as a companion to our native graphics tools.
Mobile Access Runtime	Add-on software for Internet Information Services (IIS) that lets you use HTML5-compatible browsers to view your project screens. If you select this feature, the installer will try to confirm that IIS is installed and turned on in Windows, and if it is, the add-on software will be installed. Regardless of whether you select this feature for installation, a separate Mobile Access Runtime software installer (MobileAccessSetup.exe) will be copied to your program folder. You can run that installer at a later time.
OPC Components	Additional components that are required for communication with other OPC-compatible devices. This includes OPC DA (a.k.a. OPC Classic), OPC XML-DA, and OPC UA.
PDF Printing	Additional software that lets projects save runtime reports as PDF files.
Runtimes – Additional > IoT View	This is the platform-agnostic project runtime software for Linux and other operating systems. Selecting this feature will not actually install IoT View on your computer at this time. It will only copy the installation files to your program folder, so that you can install IoT View on another computer or device at a later time.
Runtimes – Additional > Windows Embedded Standard	Also called Embedded HMI, this is the project runtime software for Windows Embedded Standard computers. Selecting this feature will not actually install Embedded HMI on your computer at this time. It will only copy the installation files to your program folder, so that you can install Embedded HMI on a Windows Embedded Standard computer at a later time.
Runtimes – Additional > Windows Embedded Compact	Also called Compact HMI, this is the project runtime software for Windows Embedded Compact devices. Check the manufacturer's documentation for your device to see which processor it uses. Selecting this feature will not actually install Compact HMI on your computer at this time. It will only copy the installation files to your program folder, so that you can install Compact HMI on a Windows Embedded Compact device at a later time.
Symbol Library	A large library of pre-made but customizable screen objects such as pushbuttons, toggle switches, gauges, dials, and indicator lights.

Items Added to the Start Menu

The installer creates a shortcut on your desktop and adds the following items to the Start menu:

Item	Description
BLUE Open Studio 2020 Help Manual	A complete technical reference and user guide.
BLUE Open Studio 2020 Quick Start Guide	A brief, printable guide to the project development environment, including a step-by-step tutorial for how to develop and deploy a simple project.
BLUE Open Studio 2020 Register	A utility program that you can use to view and change your software license settings.
BLUE Open Studio 2020 Release Notes	The document that you are reading now.
BLUE Open Studio 2020 Remote Agent	A utility program that lets other stations remotely manage the project runtime when it is running.
BLUE Open Studio 2020 SCADA	A shortcut that automatically runs the most recently opened project.
BLUE Open Studio 2020 Studio	The project development environment, project runtime and/or project viewer. Its actual capabilities are determined by your software license settings.

Third-Party Software

Third-party software components are installed and added to Windows > Control Panel > Programs > Programs and Features. Do not manually uninstall any of these items until after you have uninstalled our software.

Item(s)	Description
Microsoft Visual C++ Redistributable (multiple versions)	These items are required to run C++ applications that were developed using Visual Studio. Several different versions (e.g., 2012, 2013, 2015–2019) may be installed. Do not uninstall these items; they may be used by other applications.
novaPDF SDK 10 Printer Driver novaPDF SDK 10 COM (x64) novaPDF SDK 10 COM (x86) Studio PDF3	These items let projects save runtime reports as PDF files. They are installed when you select the PDF Printing feature for installation; for more information, see "Selectable Features" above.
Sentinel Protection Installer 7.6.9	This item supports the use of Sentinel-type hardkeys (a.k.a. dongles). It is always installed regardless of whether you select the Hardkey Support feature for installation; for more information, see "Selectable Features" above.

CodeMeter Runtime Server

When you select the Hardkey Support feature for installation, Wibu Systems' CodeMeter Development Kit is installed on your computer. It supports the use of Wibu-type hardkeys (a.k.a. dongles). These hardkeys are offered as alternatives to Sentinel-type hardkeys. For more information about the differences between Sentinel and Wibu, ask your software distributor.

Unlike the other items described above, CodeMeter Development Kit is not added to the control panel Programs and Features. It runs as a background process named CodeMeter Runtime Server, which you can find in the Windows Task Manager.

When you uninstall our software, CodeMeter Development Kit is also uninstalled automatically.

Possible Issues During Installation

This section describes issues that might occur during installation.

"Failed to complete script based install"

You might receive the following message during installation: "Error 1628: Failed to complete script based install." For more information about this issue and how to resolve it, go to: https://community.flexera.com/t5/InstallShield-Knowledge-Base/Error-1628-Failed-To-Complete-Script-Based-Install/ta-p/4014

"CodeMeter Development Kit is already installed"

If you try to install an earlier version on a computer that already has a later version installed, you might receive the following message during installation: "Version x.x.x.x of CodeMeter Development Kit is already installed. Downgrading to Version x.x.x.x is not possible, installation will be aborted." CodeMeter is supplemental software used to manage hardkey licenses. To resolve this issue, use Task Manager in Windows to stop CodeMeter Runtime Server (CodeMeter.exe) before you install the earlier version.

"The local print spooler service is not running"

If you select the PDF Printing feature for installation but the Print Spooler service is not running on your computer, you might receive the following message during installation: "The local print spooler service is not running. Please restart the spooler or restart the machine." You can click OK to acknowledge the message and finish the installation, but the PDF Printing feature will not be installed correctly. To resolve this issue, do the following:

1. Use the Services app in Windows make sure the Print Spooler service is running.
2. Run the software setup again and then use the Repair command to repair the installation on your computer.

Restore from a System Restore point

If the installation fails for any reason, you can use the System Restore feature in Windows to revert your computer to a previous restore point.

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Documentation Installed with the Software

The following documentation is installed in the program folder, which means you do not need an Internet connection to access it:

Document	Description and Location / Access

Release Notes (Readme.html)	This is the document that you are reading now, and it summarizes product news and installation information. These notes are revised for each update (e.g., version 20.0.3), but not for each patch (e.g., version 20.0.3.1). To access this document: • From the Windows Start menu: go to Start > BLUE Open Studio 2020 > BLUE Open Studio 2020 Release Notes. • From within the project development environment: go to the Help tab of the ribbon and then click Release Notes. • From the file: assuming default installation location on the hard drive, the file is located at C:\Program Files (x86)\Pro-face\BLUE Open Studio 2020\ReadMe.html
Help Manual (TechRef.chm)	The help manual provides comprehensive and searchable help for the project development environment, instructions for how to develop and deploy projects, and complete descriptions of all of our built-in functions. To access this document: • From the Windows Start menu: go to Start > BLUE Open Studio 2020 > BLUE Open Studio 2020 Help Manual. • From within the project development environment: go to the Help tab of the ribbon and then click Help. • From the file: assuming default installation location on the hard drive, the file is located at: C:\Program Files (x86)\Pro-face\BLUE Open Studio 2020\Bin\TechRef.chm
Quick Start Guide (QuickStart.pdf)	The Quick Start Guide provides a tour of the project development environment, descriptions of essential concepts, and a simple project development tutorial. All of this information is also included in the Help Manual. To access this document: • From the Windows Start menu: go to Start > BLUE Open Studio 2020 > BLUE Open Studio 2020 Quick Start Guide. • From the file: assuming default installation location on the hard drive, the file is located at: C:\Program Files (x86)\Pro-face\BLUE Open Studio 2020\Bin\QuickStart.pdf
Driver documents (<driver name>.pdf)	Each communication driver has its own document that describes the protocol used by the driver, how to configure the communication settings for the driver, how to format station IDs and I/O addresses in driver worksheets, and any other technical requirements for connected devices. If you download an updated driver package from our website, that package should include an updated driver document. Each driver has its own separate <driver name>.pdf docment. For example, the driver document for the basic Modbus driver (MODBU) is MODBU.pdf. To access there documents: • From within the project development environment: go to the Help tab of the ribbon and then click Communication Drivers. • From the file: assuming default installation location on the hard drive, the files are located at: C:\Program Files (x86)\Pro-face\BLUE Open Studio 2020\Drv\<driver name>.pdf
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