

In-Sight® Explorer 5.8.0 Release Notes

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Overview

This document describes the In-Sight Explorer software, including the following topics:

- [System Requirements](#)
- [New Features](#)
- [Changes & Fixes](#)
- [Known Issues](#)

Note: Visit [In-Sight Support](#) to access the latest release notes and documentation, including localized versions.

System Requirements

This section describes system requirements for In-Sight Explorer software.

PC Hardware Minimum and Recommended Requirements

Notes:

- The following minimum hardware requirements are for PCs that are connected to a single low-resolution In-Sight vision system running at a slow production speed.
- The following recommended hardware requirements are for PCs that are simultaneously connected to up to four In-Sight vision systems.

Minimum	Recommended
Intel® Celeron® 1000M processor running at 1.8GHz (or equivalent)	Intel Core™ i7 processor running at 2.7GHz (or equivalent)
2GB of available RAM	4GB of available RAM
4GB of available disk space	8GB of available disk space
Video card that can display 1024 x 768 resolution at 24-bit color depth (the DPI Display setting must be set to 96 DPI)	Video card that can display 1920 x 1080 resolution at 32-bit color depth (the DPI Display setting must be set to 96 DPI)
Network interface card (at least 100Mbps) for connecting to an In-Sight vision system	Gigabit network interface card for connecting to multiple In-Sight vision systems

Operating System Requirements

In-Sight software has been tested on the following operating systems:

- Microsoft Windows 7 Professional, Service Pack 1 (64-bit)
- Microsoft Windows 10 Professional (64-bit)
- Microsoft Windows Server 2016

Although you can install and run In-Sight Explorer on other Windows operating systems, PCs that do not meet the preceding requirements are not officially supported.

Supported Languages

- Chinese (Simplified)
- English
- French
- German
- Japanese
- Korean
- Spanish (European)

Firmware Version Support

In-Sight 5.8.0 software contains two firmware versions:

- In-Sight 5.8.0
- In-Sight 4.10.5 PR2

In-Sight vision systems that have older firmware versions might work properly. However, some features are unsupported with older firmware versions and are not fully tested. For optimal performance, update vision systems that run older firmware to the most recent, supported firmware versions. For a list of models and supported firmware versions, see the Firmware Versions topic in the *In-Sight® Explorer Help* file.

In-Sight Firmware 5.8.0

- In-Sight 2000 series vision sensors
- In-Sight 5705 and 5705C vision systems
- In-Sight 7000 Gen2 series vision systems
- In-Sight 8000 series vision systems
- In-Sight 9000 series vision systems
- In-Sight Advantage Engine

In-Sight Firmware 4.10.5 PR2

- In-Sight Micro 1000 series vision systems
- In-Sight 5000 series vision systems (except In-Sight 5705 and 5705C vision systems)
- In-Sight 7000 series vision systems (except In-Sight 7000 Gen2 series vision systems)

Microsoft .NET Framework 3.5 SP1 and 4.5

In-Sight software requires Microsoft .NET Framework 3.5 SP1 and 4.5. If the In-Sight software installer fails to detect Microsoft .NET Framework 3.5 SP1 and/or 4.5, it attempts to download and install them.

Note: If you attempt to install In-Sight Explorer on a system with Microsoft .NET Framework 3.5 SP1 disabled while Windows updates are being installed, you may receive the following error message: Error installing Microsoft .NET Framework; Error code 0x800f081f. If this occurs, wait for the Windows updates to complete, reboot if necessary, and then install In-Sight Explorer.

New Features

New Feature	Applicable Firmware Version
<p>Supports PROFINET Conformance Class B, which adds the Simple Network Management Protocol (SNMP) support to PROFINET Conformance Class A's basic functions.</p> <p>Note:</p> <ul style="list-style-type: none"> PROFINET Conformance Class B is supported on In-Sight 2000 series, 7000 Gen2 series, In-Sight 8000 series and In-Sight 9000 series running firmware version 5.8.0 and later. PROFINET Conformance Class B is not supported on the In-Sight 5705 and 5705C vision systems. The In-Sight 5705 and 5705C support PROFINET Conformance Class A, as in previous releases. <p>Follow these steps when upgrading the vision system/sensor's firmware version to 5.8.0 if the vision system/sensor already has PROFINET enabled:</p> <ol style="list-style-type: none"> Install the new GSD file (GSDML-V2.34-Cognex-InSightClassB-20190809.xml) to the Siemens HW Config tool. This GSD file is included in the In-Sight Explorer 5.8.0 software (C:\Program Files (x86)\Cognex\In-Sight\In-Sight Explorer 5.8.0\Factory Protocol Description\GSD). Delete the In-Sight vision system (In-Sight XXXX version) from the PROFINET I/O system. <ul style="list-style-type: none"> Note: It is recommended that you take a screenshot of the IO module address for the existing In-Sight vision system/sensor before deleting it. This will make it easier to restore the same IO address to the new CC-B version. Select the In-Sight XXXX CC-B version from the Hardware Catalog, add that to your configuration, recompile and then download. When adding new configurations, it is important to double-check the IO module addresses because they may have changed. <p>If you do not perform the above steps, the PLC will no longer connect to the vision system.</p> <p>For more information, visit In-Sight Support to download the <i>Conversion Guide: PROFINET Class B and In-Sight Explorer 5.8.0 Upgrades for TIA Portal</i>, which includes detailed steps and best practices for updating the PLC.</p>	5.8.0

New Feature	Applicable Firmware Version
<p>Supports Open Platform Communications - Unified Architecture (OPC UA), which is a modern communication protocol developed by the OPC Foundation, to provide a platform-independent, secure, open-architecture solution for industrial devices and systems. For In-Sight, the vision system or vision sensor acts as the OPC UA Server and can communicate directly with an OPC UA client, eliminating the need for additional hardware.</p> <p>Note:</p> <ul style="list-style-type: none"> • The In-Sight OPC UA Server is supported on In-Sight 2000 series, 7000 Gen2 series, In-Sight 8000 series and In-Sight 9000 series running firmware version 5.8.0 and later. • The In-Sight OPC UA Server is not supported on the In-Sight 5705 and 5705C vision systems or on emulators. • The existing In-Sight OPC Classic Server is still supported, and can be used for vision systems running firmware 4.x.x and 5.x.x. • The OPC Classic Server is not supported for In-Sight 2000 vision sensors. 	5.8.0
<p>The Network Settings dialog and EasyBuilder Communication application step have been updated to include an Enable OPC UA Server checkbox. When checked, the In-Sight vision system/sensor acts as an OPC UA server that can communicate directly with the OPC UA client. For more information, refer to the <i>Enable the OPC UA Server</i> topic in the <i>In-Sight® Explorer Help</i> and <i>EasyBuilder Help</i> files.</p>	5.8.0
<p>Added the EV SetSystemConfig("OPCUA.TimeSync",[TimeSyncFrequency],[InitialTimeoutSec],[TimeSyncFrequencySec],[WriteProcSet]) Extended Native Mode command to configure time synchronization for OPC UA tag timestamps.</p>	5.8.0
<p>Added the Normalize Score option to the following EasyBuilder tools, which is useful for finding edges in a low contrast region:</p> <ul style="list-style-type: none"> • Location: Circle and Edge • Presence/Absence: Circle and Edge • Measurement: Circle Diameter and Measure Radius • Counting: Edge and Edge Pairs 	5.8.0

Changes & Fixes

Note
<ul style="list-style-type: none"> • For changes and fixes in previous releases, see past In-Sight Explorer release notes. Release notes for previous 5.x.x releases are available in the <i>In-Sight Explorer® Help</i> file. • The release notes include issue numbers (where applicable) to better track known issues reported by Cognex Technical Support.

Issue#	Change/Fix	Applicable Firmware Version
IS-332	Fixed an issue that occurred when adjusting the cell size of the spreadsheet on an In-Sight emulator. Previously, adjusting the cell size could cause In-Sight Explorer to become unresponsive.	5.8.0
IS-1829	If using a Dialog function, the Dialog no longer hangs, becomes unresponsive or eventually disappears when opening, closing or making changes within the dialog.	5.8.0

Issue#	Change/Fix	Applicable Firmware Version
IS-1869	<ul style="list-style-type: none"> • If more than 1024 files are stored to the vision system's flash or SD card, all files are now properly displayed when viewing the file list from the In-Sight Files pane, the Save and Open dialog, an FTP prompt or a Telnet session. Previously, only 1024 files were displayed, even if the vision system or SD card were capable of storing more than 1024 files. • If more than 1024 files are stored to the vision system's flash, the "SDCard" directory is now properly displayed in the In-Sight Files pane. 	5.8.0
IS-1947 IS-1948 IS-1949 IS-1969 IS-1970	<p>The vision system no longer disconnects from the audit message server. After the vision system's connection to the audit message server is reestablished:</p> <ul style="list-style-type: none"> • Audit messages are now properly sent to the audit message server. • Queued audit messages are no longer lost if too many pending messages are queued on the vision system. • Queued audit messages are sent in order. • Duplicate audit messages are no longer sent to the audit message server. 	5.8.0
IS-1992	Fixed an issue where the In-Sight 2000 series vision sensor's HSOUT 1 Strobe line did not work properly when triggered on Rising Edge or Falling Edge.	5.8.0
IS-2014	If the active job on the vision system contains the VerifyIDCode function (Vision Tools > ID > VerifyIDCode), the vision system memory no longer eventually becomes corrupted, resulting in the vision system going into a fatal state. Due to this change, the grade of the verified symbol returned by VerifyIDCode may be different.	5.8.0
IS-2024	Performance improvements have been made when using the keyboard up/down keys to increment/decrement an EditInt or EditFlota control.	5.8.0
IS-2048	If a spreadsheet cell containing a Checkbox control receives the same value that it already has, an audit message is no longer incorrectly sent. In addition, when audit messages are sent for changes to tagged cells containing Checkbox controls, the "newValue" and "oldValue" are now correct. Previously, if the Checkbox was manually checked within the spreadsheet cell (1) and a Native Mode command was sent to the vision system that set the same value (1), an audit message was incorrectly sent and incorrectly indicated that the newValue = Enabled and the oldValue = Disabled.	5.8.0
IS-2052	When logged onto an In-Sight 7000 Gen2 series vision system within In-Sight Explorer, the Light Settings dialog is now properly displayed and accessible from the Sensor menu (Sensor > Light Settings). Previously for In-Sight Explorer 5.7.3 and 5.7.4, the Light Settings option may not have been displayed from the Sensor menu, and the integrated and external light settings were not accessible.	5.8.0
IS-2110	On the Web HMI, non-ASCII characters are now correctly rendered. Previously, these characters were replaced with spaces.	5.8.0
IS-2156	The In-Sight 9902L line scan vision system no longer resets the Encoder Type setting to default after a restart.	5.8.0
IS-2162	False audit messages are no longer sent to the audit message server when the vision system's I/O line settings are changed.	5.8.0
IS-2199	<p>The GetBufferData function (Vision Data Access > Inputs/Outputs) now properly returns the indexed data from a UserData data structure.</p> <p>Note: If the GetBufferData function's Index parameter is configured to use an index outside of the Buffer, a Float value of 0.00 was previously returned. Now it will return #ERR. If a value of 0.00 is required, the ErrFree function (Mathematics > Lookup) should be used to convert #ERR to an empty cell, to suppress error propagation.</p>	5.8.0

Known Issues

Note: The release notes include issue numbers (where applicable) to better track known issues reported by Cognex Technical Support.

Issue#	Issue	Affected Firmware Version
IS-2200	<p>If using the Web HMI, the PROFINET connection between the PLC and the vision system may disconnect when using a 100 Mbps network. <i>Workaround:</i> Use a 1000 Mbps switch/network or increase the PROFINET Update Time to 16ms or higher within the PLC software.</p>	5.7.x and higher
IS-2195	<p>If In-Sight Explorer is installed to a PC with a Microsoft Windows 10 operating system and the Beta: Use Unicode UTF-8 for worldwide language support is checked in the Region dialog, the vision system or emulator may not be able to connect to the In-Sight Explorer Spreadsheet View. <i>Workaround:</i> Uncheck the Beta: Use Unicode UTF-8 for worldwide language support checkbox.</p> <ol style="list-style-type: none"> 1. In the search box on the Windows taskbar, type Control Pane and select the Control Panel App. 2. From the Windows Control Panel search box, type Region and select the Region text. 3. In the Region dialog that opens, click the Advanced tab and click the Change system locale... button. 4. In the Region Settings dialog that opens, uncheck Beta: Use Unicode UTF-8 for worldwide language support and click OK to close the Region Settings dialog. 5. Click OK to close the Region dialog. 6. Reboot the PC. 	N/A
FFP-1053	<p>When the vision system is configured to load a job at startup (Sensor menu > Startup) and the EV SetSystemConfig OPCUA.TimeSync Extended Native Mode command is issued, OPC UA Job Tags are missing in the OPC UA client when browsing the address space (Objects > Server > VisionSystem > Results > JobTags node). <i>Workaround:</i> Use the LoadJob method to reload the job file to the vision system/sensor. For more information, see the <i>In-Sight® Explorer Help</i> file.</p>	5.8.0
FFP-875	<p>Sending the communication settings, such as the IP address, from Mitsubishi iQ Sensor Solution (GX Works) to the In-Sight vision system/sensor is not supported.</p>	5.8.0
IS-334	<p>When you try to connect your vision system/sensor to the Web HMI for the first time, you may receive an error message: Permission error appears and connection is denied. <i>Workaround:</i> Reinstall or update the firmware on the vision system/sensor and then retry the Web HMI connection.</p>	5.8.0
48478	<p>If an In-Sight vision system that runs firmware 5.6.0 or later has a job with many instances of the ReadIDMax function, the job might require more memory than is available on the vision system. Any instances of the ReadIDMax function that exceed the available memory returns #ERR. For example, if an In-Sight 8405 vision system job contains more than 100 instances of the ReadIDMax function, you might encounter this problem.</p>	5.8.0
45581	<p>For In-Sight 7000 Gen2 series and 9000 series vision systems configured for CIP-Sync/PTP, 1588 synchronization accuracy through a transparent clock-switch might increase to more than 10µs offset from master.</p>	5.8.0
35828	<p>If an industrial Ethernet communication protocol triggers the vision system, the JobPass signal is sent only if the job contains a WriteResultsBuffer function. This issue does not occur with EasyBuilder applications once the Communication application step has been configured.</p>	5.8.0

Issue#	Issue	Affected Firmware Version
32479	<p>If you update the In-Sight vision system firmware while it is connected to a POWERLINK network, it results in a code 13710, with the vision system needing to be power cycled and the files restored (the firmware will be successfully updated, however).</p> <p><i>Workaround:</i> Before you update the vision system firmware, complete the following steps:</p> <ol style="list-style-type: none">1. Remove the vision system from the POWERLINK network and connect the vision system to a network port on the same subnet as the computer that runs In-Sight Explorer.2. Power cycle the vision system.3. Update the firmware while the vision system in Ethernet mode.4. Place the vision system back onto the POWERLINK network.5. Power cycle the vision system.	4.10.5 PR2