

# In-Sight® Explorer 5.6.1 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 the [In-Sight Online Support Center](#) to download the latest release notes and documentation, including localized editions. To access the updated documentation from the In-Sight Explorer user interface and Microsoft® Windows® Start menu, complete the following steps:

1. Log on to the PC with administrative privileges.
2. Copy the downloaded documentation to the appropriate location in the installation directory. The default location is: C:\Program Files (x86)\Cognex\In-Sight\In-Sight Explorer 5.x.x\Documentation.

## System Requirements

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

### PC Hardware Minimum Requirements

The following minimum hardware requirements are for PCs that you connect to a single low-resolution In-Sight vision system running at a slow production speed:

- Intel® Celeron® 1000M processor running at 1.8GHz (or equivalent)
- 2GB of available RAM
- 4GB of available hard-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)
- Network interface card (at least 100Mbps) for connecting to an In-Sight vision system

### PC Hardware Recommended Requirements

The following recommended hardware requirements are for PCs that you simultaneously connect to up to four In-Sight vision systems:

- Intel Core™ i7 processor running at 2.7GHz (or equivalent)
- 4GB of available RAM
- 8GB of available hard-disk space

- Video card that can display 1920 x 1080 resolution at 32-bit color depth (the DPI Display setting must be set to 96 DPI)
- Gigabit network interface card for connecting to In-Sight vision systems

## Operating System Requirements

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

- Microsoft Windows 10 Professional (64-bit)
- Microsoft Windows 7 Professional, Service Pack 1 (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 5.6.1 software contains three firmware versions:

- In-Sight 5.6.1
- In-Sight 5.2.2
- In-Sight 4.10.5

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 5.6.1

- 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 9902L line scan vision system

### In-Sight Firmware 5.2.2

- In-Sight Advantage Engine

### In-Sight Firmware 4.10.5

- 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 4.5

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

## New Features

New Feature	Applicable Firmware Version
Supports the new In-Sight 9902L line scan vision system.	5.6.1
Added an Acquisition Duration parameter to the AcquireImage property sheet that specifies when to end image acquisition if the Clip Mode parameter is set to Fill Black or Reduce Image lines. This parameter is supported for only the In-Sight 9902L line scan vision system.	5.6.1
<p>Several improvements have been made to the Line Scan Settings dialog when connected to the In-Sight 9902L line scan vision system:</p> <ul style="list-style-type: none"> <li>• The Max Image Height drop-down now includes 12288 and 16384 options, to increase the standard area image height.</li> <li>• Added the 1K Resolution (Low Light Mode) check box. When selected, the standard area image is decreased to 1024 pixels wide, providing increased light sensitivity.</li> </ul>	5.6.1
<p>Added an Eighth (1/8) image resolution option for live acquisition and Online images to the following areas of the product:</p> <ul style="list-style-type: none"> <li>• Live Acquisition Resolution and Online Resolution drop-down list in the Image Settings dialog box.</li> <li>• Image Resolution drop-down list, available from the Record tab of the Record/Playback Options dialog box.</li> <li>• Image Resolution drop-down list, available from the Record Defaults panel in the Options dialog box.</li> <li>• The EV SetSystemConfig("LiveImage",Resolution,MaxFrameRate) and EV SetSystemConfig("OnlineImage",Resolution,MaxFrameRate) Extended Native Mode commands now support the Eighth resolution option, with a Resolution parameter value of 4.</li> </ul>	5.6.1
<p><b>Note:</b> The Eighth resolution option is not supported for color vision systems.</p>	

New Feature	Applicable Firmware Version
<p>Added support for scheduling multiple time-based triggers, sent from a PLC (over an EtherNet/IP connection) to the vision system. The vision system can respond to a PLC trigger within 100 microseconds of the actual trigger that the PLC sends. This feature is supported for In-Sight 7000 Gen2 series and In-Sight 9902L vision systems configured to use CIP-Sync and the Precision Time Protocol (PTP), defined by the IEEE 1588 (version 2) standard.</p> <ul style="list-style-type: none"> <li>Updated the EV SetSystemConfig("Eip.TriggerTimestampInputOffset",Offset) Extended Native Mode command to set the offset into the EtherNet/IP output assembly, which is used to trigger the vision system. For vision systems that run In-Sight firmware version 5.6.1 and later, it captures the 64-bit system time offset in microseconds, followed by the 64-bit timestamps in microseconds.</li> <li>Added the EV SetSystemConfig("Eip.TriggerTimestampNumInputs",Timestamps) Extended Native Mode command to set the number of timestamps that the vision system can process simultaneously from one PLC user data packet. The PLC can send a maximum of four timestamp triggers in one user data packet.</li> <li>Added the EV SetSystemConfig("Eip.TriggerTimestampMaxQueueLength",Timestamps) Extended Native Mode command to set the maximum number of timestamps the vision system can store simultaneously. The vision system can store a maximum of ten timestamps in the queue.</li> <li>Added the EV SetSystemConfig("Eip.TriggerTimestampOverrideWindowUs",Microseconds) Extended Native Mode command to set the number of microseconds a pending PLC timestamp has to fall within, before it can override an existing timestamp on the vision system.</li> <li>Added the EV SetSystemConfig("Eip.TriggerTimestampLegacyMode",TriggerMode) Extended Native Mode command that enables the legacy mode for single timestamp user data format and triggering. You must issue this command only if you migrate from a vision system that runs 4.5.0 - 4.10.x firmware to a vision system that runs 5.6.1 firmware or later and must reuse the existing PLC logic.</li> </ul>	5.6.1

## Changes & Fixes

**Note:**

- 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 *In-Sight Explorer® Help* file.
- The release notes include Change Request numbers (CR#) (where applicable) to better track known issues reported by Cognex Technical Support.

CR#	Change/Fix	Applicable Firmware Version
81197	If you configure the Sensor Filmstrip Queue Size to save the maximum number of images to the vision system, place the vision system Online and select an image in the filmstrip queue, the spreadsheet cell content remains intact. Previously, the contents of the spreadsheet cells might have been erased.	5.6.1
79668	When an In-Sight 2000 series color vision sensor is connected to a Web HMI and it acquires images as fast as possible, the vision sensor trigger rate is no longer affected. Previously, the trigger rate could drop significantly.	5.6.1
79073	For In-Sight 2000 series vision sensors with the HMI Server enabled, stability issues no longer occur when the sensor is connected to the Web HMI through a high-traffic network. Previously, the vision sensor could become unresponsive and disconnect from the network, requiring a power cycle.	5.6.1
43186	When you configure a Serial Text, Serial Native, TCP/IP or UDP device in the Communication application step on an In-Sight 2000 series vision sensor, the FormatString dialog box displays the Output String correctly. Previously, the FormatString dialog box displayed #ERR.	5.6.1

# Known Issues

**Note:** The release notes include Change Request numbers (CR#) (where applicable) to better track known issues reported by Cognex Technical Support.

CR#	Issue	Affected Firmware Version
81464	<p>If you programmatically change the AcquireImage Clip Mode or Acquisition Duration parameter values while the In-Sight 9902L line scan vision system is Online, when you place the vision system Offline, the changes do not take effect.</p> <p><i>Workaround:</i> To update the parameter value after you place the vision system Offline, manually acquire an image.</p>	5.6.1
79652	<p>For In-Sight 2000 series vision sensors that run firmware version 5.6.0, the Maximum View Connections (In-Sight Explorer, VisionView or Web HMI) is limited to 2.</p>	5.6.1
79345	<p>When Web HMI is in use, do not run PROFINET cyclic I/O faster than 8ms.</p>	5.6.1
48478	<p>If an In-Sight vision system that runs firmware 5.6.0 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>	5.6.1
45581	<p>For In-Sight 7600/7800 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>	5.6.1
42550	<p>In-Sight models that run 5.1.0 and later firmware versions do not support In-Sight Track &amp; Trace job files.</p>	5.6.1
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.</p>	5.6.1
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"> <li>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.</li> <li>2. Power cycle the vision system.</li> <li>3. Update the firmware while the vision system in Ethernet mode.</li> <li>4. Place the vision system back onto the POWERLINK network.</li> <li>5. Power cycle the vision system.</li> </ol>	4.10.5