

# AlignPlus® 4.3.0

## Release Note

2020 December 16

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## About This Release

AlignPlus 4.3.0 introduces many new features. This release works with VisionPro 9.6 SR2 and Cognex Designer 4.3.2

## Supported Operating Systems

AlignPlus 4.3.0 supports development and deployment on single or multiprocessor machines using native languages (English, Japanese, German, Korean, and Simplified Chinese) on a variety of Windows 64-bit operating systems.

- Windows 10 and Windows 10 IoT Enterprise
- Windows 7 Premium, Professional and Ultimate (Service Pack 1)

## Supported Visual Studio Environments For Plugins Development

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Designer 4.3.2 and AlignPlus 4.3.0 support development and deploying using the following compilers that target the .NET Framework version 4.7.2:

- Microsoft Visual Studio 2015 (v. 14.0), Update 3
- Microsoft Visual Studio 2017 (v. 15.0)

## Security Key Firmware

AlignPlus uses a USB security key attached to your computer to ensure the software is properly authorized for use. This release supports firmware version 4.30 for AlignPlus security keys.

If you are using a security key with a previous version of firmware, contact Cognex Support for assistance in upgrading to the latest version. Keep your security key firmware up to date to take advantage of the latest features and improvements to Cognex software security.

## Security License

Security License should include the following part:

1. VisionPro License
2. Cognex Designer License
3. AlignPlus License

The needed VisionPro and Designer licenses are included with the AlignPlus Products.

## New Features

1. Mult-Part Pickup  
Supports single camera and single acquisition applications.
2. Inspection  
Supports measurement and gauging applications
3. One Time Calibration
4. Using Camera Center as Golden Pose
5. Independent Calibration Plate Configuration for different stations

6. Supports image acquisition from Basler USB 3.0 cameras, Hikvision GigE and USB 3.0 cameras
7. Documentation about AlignPlus Concept, user manual and communication protocol. (Complete documents for new features above will be released in next A+ release)

## Improved Features

1. Enhanced manual trigger button for auto calibration
2. Enhanced recipe management for safety check
3. Improved layout of navigation tree
4. Added more exception messages for user to identify acquisition issues
5. Improved L-Check usability
6. Improved Offset compensation usability
7. Mechanism to avoid rerunning a on-going deployed application
8. Added ACB, AC commands to exported command sequence
9. Added a warning when left-handed coordinate is detected after hand-eye calibration

## Known Issues in This Release

1. Issues related to calibration when separate calibration plates are used
  - Cross calibration computation error.
  - Hand-eye calibration result could be unreliable.
2. Program regeneration with wizard configuration changes takes as long as 5-10 minutes.
3. Part based calibration accuracy could be lowered when using a sparse/single feature tracking with an inaccurate motion device.
4. Feature finding task cannot run properly when feature finder component is configured to connect to more than one calibration components in configuration wizard.
5. Switching to display page whose live mode is on takes long time and could lead to an application freeze.

## Fixed Issues

1. LFGP Command execution error: alignment task is executed before feature finding task finishes execution
2. GP command is supposed to run synchronously but runs asynchronously
3. Camera enable/disable status for feature finding task sometimes is not updated during recipe change.
4. ACB command execution error when real part is used for a vision guided hand-eye calibration.

## Additional Documentation Online link

3rd Party Acquisition Development SDK

## TCP/IP Commands Changes

New commands add in this release:

<b>Command Key</b>	<b>Application</b>	<b>Description</b>
MEA	AOI	Run inspection task synchronously after feature fining
MEAA	AOI	Run inspection task asynchronously after feature fining
LFMEA	AOI	Run feature fining task first, and then inspection task synchronously
MGP	Multiple Parts Pickup	Run multiple part alignment task synchronously after feature fining
MGPA	Multiple Parts Pickup	Run multiple part alignment task asynchronously after feature fining
LFMGP	Multiple Parts Pickup	Run feature fining task first, and then multiple part alignment task synchronously



