Release Notes for IVC Studio, version 3.3 SR3, March 2016

This document contains the release notes for the IVC Studio software version 3.3 SR3, released in March 2016.

This release adds support for a new special device based on IVC-3D 50, which has an extended operating temperature range, from 0°C to 50°C. In addition, there is a new tool, Rotate and Mirror, which is an extended variant of the Rotate Image tool. The BlobAnalyzer tool's boundary based method for finding the orientation and boundary of a blob has been improved, and the tools Find profile points, Get Calibrated Point, Extract profile and Set Output have also been modified slightly.

The release is based on the 3.3 SR1 release of IVC Studio.

Supported HW

Product	Type code
IVC-2D Standard (VGA)	IVC-2DM1111, IVC-2DM1112
IVC-2D HiRes (XGA)	IVC-2DM1121, IVC-2DM1122
IVC-2D UXGA	IVC-2DM1131, IVC-2DM1132
IVC-2D R (VGA)	IVC-2DR1111
IVC-3D 30	IVC-3D31111, IVC-3D31112
IVC-3D 40	IVC-3D61111
IVC-3D 50	IVC-3D21111, IVC-3D21112, IVC-3D21113, IVC-3D21111S02
IVC-3D 100	IVC-3D51111, IVC-3D51112, IVC-3D51113, IVC-3D51121
IVC-3D 200	IVC-3D11111, IVC-3D11112, IVC-3D11113
IVC-3D 300	IVC-3D41111, IVC-3D41112, IVC-3D41113

Included components

IVC Studio 3.3 SR3 including user documentation.

Installation and Uninstallation

Start the installation program "Setup.exe" and follow the on-screen instructions. The software can be uninstalled using the "Add or Remove Programs" functionality found in the Windows Control Panel.

System requirements

Fast Ethernet card and Windows XP Service Pack 3, Windows Vista Business Edition (32 bit) Service Pack 1, or Windows 7 Professional. Graphics driver with full support for OpenGL 1.3 or higher. It is recommended to check system requirements for Windows at a Microsoft Corporation website.

Note: Windows 2000 is not supported by IVC Studio.

Release Notes	Product Name	Version	Date
	IVC Studio	3.3 SR3	2016-03

Summary of product features

These are features added since the last official release (IVC Studio 3.3 SR1).

Functionality name and description	Valid for:
Improved performance and quality when computing the blob orientation and bounding box using the boundary based orientation method in the BlobAnalyzer tool.	IVC
Extract profile now handles missing data in a more robust way.	IVC-3D
The Find profile points tool has been improved in several ways. Note that this improved tool is not fully backwards compatible to older versions.	IVC-3D
Support is added for a special IVC-3D 50 with wider operating temperature range and increased laser power, while still being within the 2M laser specification.	IVC-3D
The Set Output tool now provides the encoder pulse count at the time of output change.	IVC-3D
The whole 127.x.x.x range is now blocked and cannot be set as the device IP address.	IVC-3D
The System diagnostics tool now offers the possibility to clear the errors list.	IVC
A new tool, Rotate and Mirror, has been added to the product. This tool reduces image clipping compared to the standard Rotate Image tool. In addition to rotation it also supports mirroring. The new tool is described in detail at the last page of this document.	IVC-3D
Keyboard shortcuts are now available for some common commands. Ctrl + Shift + N - New product Ctrl + S - Save product Ctrl + Shift + S - Save product as Ctrl + O - Open product Ctrl + N - New program Ctrl + T - New table	IVC
Get Calibrated point has been improved. It is now possible to input a non-integer coordinate as "Pixel X" and "Pixel Y" in Get Calibrated point and get a subpixel precision position in the results Calibrated X and Calibrated Y. In Calibrated Z, the returned height will be that of the nearest-neighbor pixel to the given coordinate. Note that this improved tool is not fully backwards compatible to older versions. Previously, the coordinate position was truncated; the same result can now be achieved by truncating the "Pixel X" and "Pixel Y" input.	IVC-3D

Known limitations

Known limitations	Valid for:
Emulator execution time The emulator does not predict the execution time in the real device. Optimization and verification of the application's cycle time needs to be performed on a real device to be reliable.	IVC Emulator
Inspect Pattern tool 1. For large images or ROIs, the Inspect Pattern tool is very slow and may cause timeouts in IVC Studio. It is recommended to use a Shape Locator step for coarse positioning (e.g. in the whole image) and refer to this in the Inspect Pattern tool, which is used for detailed inspection or fine positioning purposes. 2. The difference image may contain colored pixels when the difference value exceeds 243. This is caused by the color-mapping of values 243-255. The consequence is mainly visual, as the tools used for post-processing of the difference image can handle these values. 3. The numeric values corresponding to the drop-down list modes Fast, Normal and Robust are 0, 2 and 4.	IVC-2D
Shape Locator interactive setup For IVC-2D UXGA variants, the Shape Locator interactive setup responds slowly to resizing of the teach region. An hour glass cursor is shown while the shape is taught.	IVC-2D UXGA
OPC server on a PC without IVC Studio installed If the OPC server is installed separately on a PC where IVC Studio is not installed, the file "ivc_2d.jar" must be copied to the folder "`C:\Documents and Settings\All Users\Application Data\SICK\SOPAS OPC-Server\jars\devices`" after the installation. The file ivc_2d.jar is found in the folder "`<IVC Studio installation folder>\OPC Server\custom\jars\Devices`" on a PC where IVC Studio is installed.	IVC
Interactive help inside IVC Studio In later versions of Adobe Reader the support for older 32 bit applications such as IVC Studio has been dropped. This causes IVC Studio to display an error when attempting to open the help sections. Read more here: http://supportportal.sick.com/ivc/support-docs/ivc-studio-cannot-open-interactive-help/	IVC

Known issues

Known issue	Valid for:
Send to FTP It is not possible to send JPG color images with odd number of profiles	IVC-3D

Known issue	Valid for:
using the Send to FTP tool. Either change to an even number of profiles, or use the option "Jpg grayscale" for the parameter "Image format". It is not possible to send extracted 3D profiles in Image mode using this tool. Sending profiles works in Single profile mode.	
2D Coordinate alignment The coordinate alignment for 2D does not work for the UXGA product variants.	IVC-2D
Nested macros An out-of-synch error message, prompting the user to restart the Studio, may appear when clicking on a macro that contains another macro. The problem does not affect runtime performance, and the error message can be ignored.	IVC
If Error Goto When displaying an error code using the If Error Goto tool, the wrong error code might be returned. E.g. if Copy Image Bank step returns an error in argument 1, the If Error Goto tool result "02 = Last step with error" will report error code 2 instead of error code 1. This is a problem for error codes between 1 and 100 (error in arguments).	IVC
FTP Server Reception of data in the camera's FTP server on the device is sometimes delayed, which can cause timeouts in IVC Studio. Defragmenting the flash most often helps.	IVC
Web status page The camera may temporarily stop responding under certain circumstances when the web status page is fetching images with high frequency.	IVC

Contact

For general questions please contact your nearest SICK office.
Contact information to SICK worldwide:
http://www.sick.com/group/EN/home/general/Pages/Worldwide.aspx

For technical support, please use the SICK Support Portal:
http://supportportal.sick.com/

Rotate and Mirror

This tool rotates a rectangular region within an image by specifying the angle and the center of rotation. The image within the region can be rotated around its center or around a specified point. The center of rotation is in the first case the center of the region and in the latter case specified by the parameters Rotate Center X and Rotate Center Y.

The image can also be moved and/or mirrored after rotation, but before being copied to the destination bank.

The parameters Offset X and Offset Y specify the distance to move while Mirror determines if and in what direction to mirror.

Mirroring is also affected by the Rotation Center X/Y if Rotate Around Center is false. For example, if the parameter Mirror is set to X (and Rotate Around Center is set to False), then the parameter Rotate Center X specifies the location of the mirroring axis. Correspondingly, Rotate Center Y is used if Mirror is set to Y.

The resulting image is displayed in the destination image bank.

Input Parameters

01=Source Bank	Image bank containing the image to rotate/mirror.
02=Destination Bank	Image bank in which to place the result image.
03=ROI Definition Step	Step number where the ROI to use was created.
04=Mirror	Select how to mirror the image. Options are Disabled, X or Y.
05=Angle (degrees)	The counter-clockwise rotation angle, in degrees.
06=Rotate Around Center	Set to true to automatically use ROI center as center for rotation and mirroring.
07=Rotate Center X	The X coordinates for the rotation/mirroring point if Rotate Around Center is false. X = 0 is on the left side of the FOV.
08=Rotate Center Y	The Y coordinates for the rotation/mirroring point if Rotate Around Center is false. Y = 0 is at the top of the FOV.
08=Offset X	The distance in pixels along the X-axis to move the rotated and/or mirrored image.
09=Offset Y	The distance in pixels along the Y-axis to move the rotated and/or mirrored image.