VE and iVu Software Release Notes

Release Notes

This document contains information on current and past releases of Vision Manager PC Software as well as VE and iVu sensor firmware. Refer to the *Software Compatibility* matrix near the end of this document to determine the software version for your sensor model.

Version 1.7.0 (2019R2) June 2019

VE Series

New Features

- ☑ Perspective Correction calibration allows device to match real world coordinates.
- ☑ Ability to connect to web browser to view live images.
- ☑ Bounding box coordinates for Blob Tool.

Version 1.6.0 (2019R1) March 2019

iVu Series

New Features

- ☑ iVu and iVu Color Models
  - Total Area test for Area and Color Area sensors.
  - Ability to test RGBI/HSI with Average Color sensor.
  - Match Sensor Abilities:
    - Edit pattern allows for pixels in taught pattern to be removed.
    - Set a custom search ROI for taught pattern.
    - Use Motion to inspect for movement or rotation.
    - ROI locations can be translated with respect to Motion sensor.

Resolved Issues

- ☑ All models
  - For PCCC communication channel, connection for N7 command failed.

Version 1.5.1 (2018R2A) November 2018

Vision Manager

Resolved Issues

- ☑ When using multiple tools in an inspection the ROI did not select the corresponding tool for VE devices or emulators.

Version 1.5.0 (2018R2) October 2018

Vision Manager

New Features

- ☑ Ability to connect to iVu devices.
  - Ethernet Gen2 models only.
  - Requires iVu firmware v2.4.0 or newer.

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- ☑ Ability to connect to iVu Emulators.
- ☑ Combined installer for VE and iVu products.

iVu Series

New Features

- ☑ All models
  - Added capability to connect with Vision Manager.
  - Support for latest PROFINET specification (PNIO v2.33).
    - Existing users will need to use new version of Banner GSD file installed on their PC using Vision Manager installer, or download from www.bannerengineering.com
  - Improved IP address assignment when PROFINET is enabled.
- ☑ iVu BCR
  - Added support for EAN13 (Addon) and UPCE (Addon).
  - Added support for mirror mode QR barcodes.

Resolved Issues

- ☑ All models
  - Profinet connection stability and network jitter during long term usage.
- ☑ iVu BCR
  - When Unicode enabled, but QR type disabled, it caused unexpected behavior with data of other barcode types.
  - Triggers from Industrial Ethernet protocols was not allowed when sensor set in Gated Trigger mode.

NOTE – Prior releases of iVu Emulator installers and release notes can be downloaded from www.bannerengineering.com.

Version 1.4.2 (2018R1) August 2018

VE Series

New Features

- ☑ JPEG image export is now supported.
- ☑ System level CRC is now available and can be exported through communication channels.
- ☑ Tool ROIs can be modified using PC keyboard arrow keys.
- ☑ Tool results (blobs, edges, objects, etc.) can be highlighted on image and edge profile by selecting items on tool results table.
- ☑ Current tool result values are displayed with corresponding test parameters.
- ☑ Precision of data is now user selectable with decimal places of 1-6 points.
- ☑ Minimum Hold READY Time is user selectable.
- ☑ Pass/Fail/General Output discrete IO signal can now be latched until next trigger.
- ☑ Total Area for Blob Tool can now be tested for minimum value of 0.
- ☑ Widths for Object Tool can now be tested for minimum value of 0.
- ☑ Default values of Count test parameters for all tools is now set to 1.
- ☑ Match tool works better with symmetric patterns.

Resolved Issues

- ☑ Match tool timeout did not function properly.
- ☑ Match tool reports duplicate matches for very small targets.
- ☑ Reset inspection history was not allowed for 'Operator' User Profile even when not restricted.

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Version 1.4.0 (2017R3) October 2017

VE Series

New Features

- ☑ Supports new model - VE205G1A (2592x2048).
- ☑ User profiles and password – includes custom profiles to manage restrictions for multiple users.
- ☑ Match tool improvements to handle perspective distortion.

Version 1.3.0 (2017R2) June 2017

VE Series

New Features

- ☑ Circle Detect tool – allows to find a single circle or a piece of a circle (arc).
- ☑ Image Export via FTP – allows to export images with custom names over an FTP connection.
- ☑ Inspection Test Summary displayed in normal and full-screen mode.
- ☑ Size of grippers for ROIs can be adjusted.
- ☑ Display current values in Match Tool Percent Match setting.
- ☑ Edge detected by Locate tool is now displayed even when 'Enable Rotation' is disabled.

Resolved Issues

- ☑ Emulator could not be reset to default.
- ☑ Bead Tool ROI width was allowed to be set to sub-pixel resolution.
- ☑ Camera Tool was marked as failed in Logic tool when Focus Info was disabled.

Version 1.2.1 (2017R1) February 2017

VE Series

New Features

- ☑ Line Detect tool – allows to find single, straight line segments.
- ☑ Data Export – allows to export custom inspection result data through Ethernet or serial port.
- ☑ Reduced allowed minimum size of rectangular ROI.
- ☑ ROIs are locked in full-screen mode.
- ☑ Pass/Fail counts are displayed in full-screen mode.
- ☑ Size and transparency of ROI monikers can be customized.
- ☑ Blob tool Total Area test allows a minimum value set to 0.
- ☑ Added Blob Tool's min/max radius to Measure Tool.

Resolved Issues

- ☑ Vision Manager did not handle invalid values in numeric fields appropriately.
- ☑ Vision Manager responsiveness would get reduced as more tools were added to an inspection.
- ☑ Connectivity with VE camera could get lost under varying conditions.
- ☑ Tests on tools did not get executed when Count result is 0.
- ☑ Timestamps on System Logs were shown incorrectly.
- ☑ Tool name moniker not displayed when "Single ROI mode" selected for image view.
- ☑ Line ROI could get lost on Image View when it is reduced to small size.

Version 1.1.0 (2016R2) November 2016

VE Series

New Features

- ☑ Supports new models - VE200G1A (752x480) and VE201G1A (1280 x 1024).
- ☑ Custom Industrial Ethernet maps can now be created with tool results.

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- ☑ Logic tool - allows to connect a discrete output pin to Boolean outcome of tool(s).
- ☑ Individual tools can be selected to contribute to inspection Pass/Fail outcome.
- ☑ Backup and restore inspections and device settings with emulator.
- ☑ Reset to defaults now available on Emulator.
- ☑ Background inspection now runs for all parameter changes for immediate feedback.
- ☑ Image can now be viewed in full-screen mode.
- ☑ Image Export:
    - Improved output bandwidth.
    - Added capability to save all images received by the application.
    - Source Code for Image Export sample application is now available.

Resolved Issues

- ☑ Connecting using Manual IP address could cause the Vision Manager not to work properly with the device.
- ☑ Vision Manager could lose connection with the camera.
- ☑ Vision Manager could stall when trying to connect again to Emulator immediately.
- ☑ Emulator skipped images when running fast trigger.
- ☑ Math tool did not show scaled data for Blob position data.
- ☑ CRC could be different when copying/transferring inspections, or is occasionally shown out of date.
- ☑ Bead points were not adjusted after moving Locate tool.
- ☑ Inspection Log filter could not handle more than thirteen inspection slots.
- ☑ Annotations in Blob tool were cut off when too many blobs found.
- ☑ Max Edge Strength was not displayed with other tool results.
- ☑ Online status of sensor was incorrect during boot-up and shutdown process.
- ☑ Sensor allowed Industrial Protocol client to connect during boot-up.
- ☑ Sensor could connect to an Image Export client even when feature is disabled.
- ☑ Product Change ACK bit was not set when changing to an inspection configured for internal trigger mode.
- ☑ Object tool did not find objects when ROI set too tight around the part being inspected.
- ☑ Measure tool line-to-line intersection point was intermittently incorrect.
- ☑ Time to lock on-board display was too long.

Version 1.0.0 (2016R1)

May 2016

VE Series

- ☑ Initial release of VE202G1A and VE202G2A vision sensors and Vision Manager application.
- ☑ Connect Vision Manager application to VE202G1A or VE202G2A sensor to configure inspections and monitor the sensor.

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VE Series Software Compatibility

The table below indicates the software version compatibility among all releases of the Vision Manager (GUI), VE sensor firmware and all supported sensor models. Underneath each sensor family are the specific models. Hardware revisions for each model are indicated within the table.

Banner Engineering recommends using the latest versions of software whenever possible.

Software Compatibility Matrix

		Model			
		VE WVGA • VE200G1A	**VE 1.3MP** • VE201G1A	**VE 2MP** • VE202G1A • VE202G2A	**VE 5MP** • VE205G1A
Release Label	**VE Firmware Binary**				
2019R2	VE2_v1.5.0.bin	✓	✓	✓	✓
2019R1 2018R2A 2018R2 2018R1	VE2_v1_4_2.bin	✓	✓	✓	✓
2017R3	VE2_v1_4_0.bin	✓	✓	✓	✓
2017R2	VE2_v1_3_0.bin	✓	✓	✓	
2017R1	VE2_v1_2_1.bin	✓	✓	✓	
2016R2	VE2_v1_1_0.bin	✓	✓	✓	
2016R1	VE2_v1_0_0.bin			✓	

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iVu Series Software Compatibility

The table below indicates the software version compatibility among all releases of the Vision Manager (GUI), iVu sensor firmware and all supported sensor models. Underneath each sensor family are the specific models.

Banner Engineering recommends using the latest versions of software whenever possible.

Software Compatibility Matrix

		Model		
		iVu • IVU2PTGXXX • IVU2PRGXXX	iVu Color • IVU2PTCXXX • IVU2PRCXXX	iVu BCR • IVU2PTBXXX • IVU2PRBXXX
Release Label	**iVu Firmware Binary**			
2019R1 2019R2	TG2_V250.bin TC2_V250.bin TB2_V250.bin	✓	✓	✓
2018R2A 2018R2	TG2_V240.bin TC2_V240.bin TB2_V240.bin	✓	✓	✓

Vision Manager System Requirements

- *Microsoft Windows 10/8/7.*
- *Typical installation requires 100MB of free disk space.*
- *Minimum display resolution setting is 1024x768.*
- *Typical 500MB of RAM usage.*
- *Acrobat Reader to read product literature.*

Glossary Of Terms

Downgrading:	The process of installing older software (for example: older firmware) in place of newer software. WARNING: Downgrading firmware can lead to existing inspections behaving differently.
Firmware:	This is the software that runs in a sensor.
Firmware Binary:	A single PC file (in binary format) is required as part of the sensor's firmware update process. The Vision Manager will prompt for this file when initiating a firmware update. A firmware binary corresponding to the version of Vision Manager gets copied to the PC during the installation process.
Model:	The unique identifier of a single sensor type.
Release Label:	This is the official identifier for a packaged software release. Each packaged release (web installer or CD) contains a installable version of the Vision Manager PC software, the sensor firmware binary file, emulators, sample images, documentation, utilities, etc.
Vision Manager:	The Vision Manager is the PC-based graphical user interface (GUI) used to update, configure and monitor VE and iVu series sensors.

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