

TubeScan 7.0 Release Report

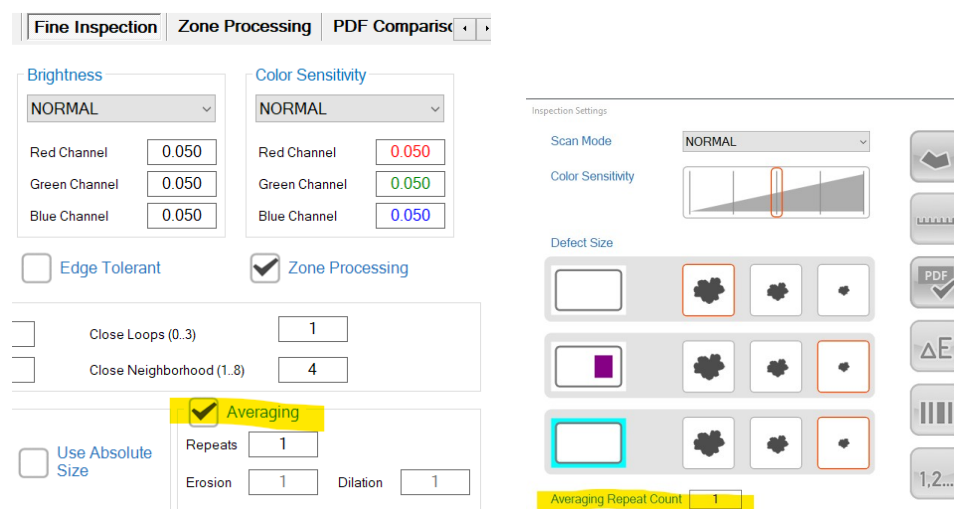
1 Revision 7.0.0

1.1 Features

1.1.1 4k Camera

A new camera interface was implemented to support the new camera model BlueFOX3-M2089aC from Matrix Vision

1.1.2 Averaging



Averaging: If not checked, *Averaging Repeat Count* in Inspection Settings is not displayed.

Default: On

Repeats / Averaging Repeat Count: The number of reference images, that will be taken into account for the averaging algorithm. The initial reference image is shown in the user interface. If set to 1, Averaging is disabled.

Default: 1

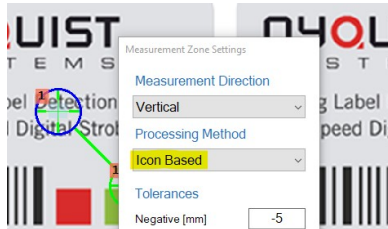
Erosion: Set to value ≥ 1 ; the higher the value, the smaller the number of defects, found by the inspection algorithm.

Default: 1

Dilation: Set to value ≥ 1 ; the higher the value, the smaller the number of defects, found by the inspection algorithm.

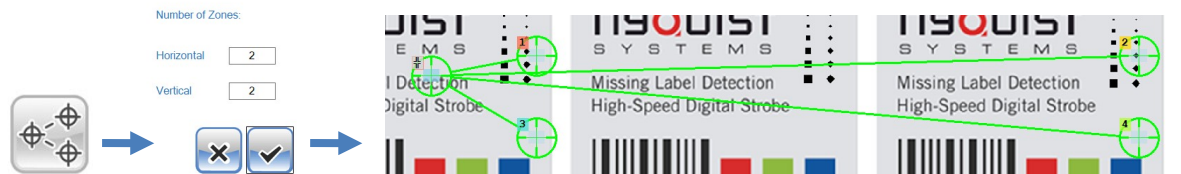
Default: 1

1.1.3 Icon-based Measurement (added to Distance Monitoring feature)

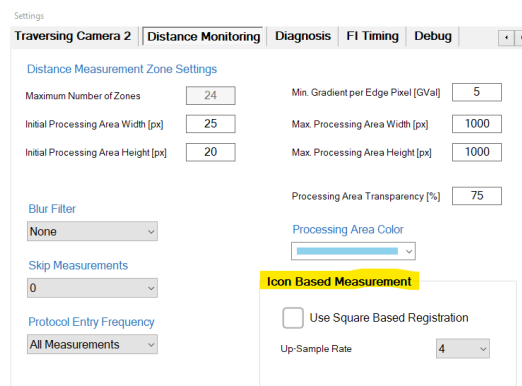


1.1.3.1 New Zone Type *Multi-Zone*

To allow multiple measurements zone to be measured against a single anchor zone, the new measurement zone type *Multi-Zone* has been added



1.1.3.2 General Settings



Use Square Based Registration: Alternative registration method, that is slightly slower than the default one, but provides more accurate results on special materials.

Default: Off

Up Sample Rate: The factor by which the number of pixels in the original image will be up-sampled, before the high precision measurement is processed.

Range: [1, 2, 4, 8], Default: 4

1.1.3.3 Additional Measurement Zone Settings

Icon Detection

Search Size X [mm]	2
Search Size Y [mm]	2
Min. Quality [%]	10

Search Size X [mm]: The search width in millimeter, left and right from the original position, in which the icon can be detected

Search Size Y [mm]: The search height in millimeter, left and right from the original position, in which the icon can be detected

Min. Quality [%]: The minimum quality of a detection required, that a measurement will not be rated as a defect

1.1.4 Teaching

Teaching is a new feature, which allows the operator to mark certain defects as invalid, so that further deviations of the live and reference image in that specific area will no longer be handled as a defect.

1.1.4.1 Pre-Requisites

Zone processing needs to be turned on in the settings under *Fine Inspection*

use **Fine Inspection** | **Zone Processing** | PDF Comparison

Brightness		Color Sensitivity	
NORMAL		NORMAL	
Red Channel	0.050	Red Channel	0.050
Green Channel	0.050	Green Channel	0.050
Blue Channel	0.050	Blue Channel	0.050
☐ Edge Tolerant		☒ Zone Processing	

1.1.4.2 Settings

Settings

Config 1 | Config 2 | License | **Fine Inspection** | **Zone Processing** | F

Defect Size Secondary		Defect Size Matrix		Magic Wand	
SMALL		SMALL		Threshold [Gr]	
Minimum Width	4	Minimum Width	12	43	
Minimum Height	4	Minimum Height	12	Expansion Step	
Min Density (%)	70	Min Density (%)	70	0	
Splash Length	4	Splash Length	12	Filling Hole Size	
				0	
☒ Teaching		Dilation		1	

Teaching: Activates Teaching, if checked

Default: On

Dilation: The number of pixels the defective area will be enlarged for Teaching

Default: 1

1.1.5 Added Danish language support

1.1.6 Auto-Zoom for Defect in Live Image Window

Additionally, the reference image will be displayed in the zoom settings window under the zoom rectangle

1.1.7 Lane Zoom Tool

For high precision demands, the lane separator positions can be individually adjusted in the Lane Zoom Tool. It will be opened by clicking on one of the lane separator buttons under the reference image.



1.1.8 Speed improvement for rendering of PDF Validation and pixel-based Zone Editor content and Foreground Map Detection

1.1.9 Added checkbox to allow operator to invert pixel based zone areas in the Zone Editor

2 Revision 7.0.1

2.1 Bug Fixes

- Width and Height values in measurement zone settings are no longer swapped, after the Measurement Direction has been changed.

Measurement Zone Settings

Measurement Direction
Vertical

Processing Method
Edge Based

Tolerances

Negative [mm] -1.0000

Positive [mm] 1.0000

Processing Area

Width [pixel] 20

Height [pixel] 20

3 Revision 7.0.2

3.1 Bug Fixes

- Fixed, that the camera image was distorted and the machine speed was no longer correct, after the software trigger was activated once

3.2 Improvements

- Show up to 50 live Distance Monitoring measurements in results window, without scrolling

4 Revision 7.0.3

4.1 Bug Fixes

- Fixed possible crash during inspection, introduced together with the recently implemented Auto-Zoom of defects in the live window
- Fixed that accurate lane positions were not updated correctly after auto lane detection

5 Revision 7.0.4

5.1 Bug Fixes

- Fixed jumping register mark after new reference image was taken
- Fixed that label top detection did not work correctly anymore

5.2 XML Configuration

- Added parameter *WaitForNextImageMasterCameraTimeout_ms* in *SystemSettings.xml* to allow to change the timeout for the stripe cameras via XML configuration. Default: 1000
- Added parameter *AutoDiscardReferenceRepeat* in *Core_Averaging_AveragingSettings.xml*, to be able to avoid that a repeat is skipped for averaging, if the machine speed once reached '0'. Default: true

6 Revision 7.0.5

6.1 Bug Fixes

- Fixed that the PDF report was showing only question marks instead of translated text for some languages with Cyrillic or Asian characters. Therefore, the PDF reports for the languages Bulgarian, Russian, Korean, Japanese and Chinese are output in English language.

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TubeScan ????? ?? ?????

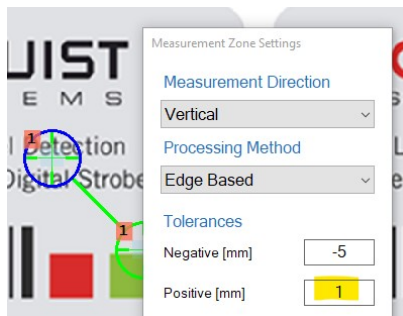
?????????: SP
????? ?? ??????:
?????: 2019-06-27 10:14
?????????: Default.Job

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7 Revision 7.0.6

7.1 Bug Fixes

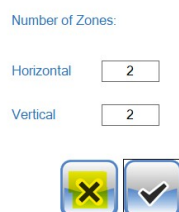
- Fixed that the parameter Positive Tolerance was always set to the default value, after loading the Distance Monitoring editor



8 Revision 7.0.7

8.1 Bug Fixes

- Fixed crash after cancel button was pressed on dialog for adding multi measurement zone



- Fixed black background instead of transparent area in PDF validation editor.



- Fixed that CalibrationTool was not starting anymore
- Fixed that zipped configuration files were archived in NYCAMPProg\TubeScan directory instead of NYCAMConfig\Archive
- Fixed that Coarse Inspection did not work anymore.
- Fixed possible roll counter irregularities

8.2 Improvements

- Finnish language supported

9 Revision 7.0.8

9.1 Improvements

- Waste signal is active during the whole waste area

10 Revision 7.0.9

10.1 Bug Fixes

- Fixed crash when closing Eagle View live window
- Fixed incorrect aspect ratio of the reference image displayed in the zoom navigator
- Fixed that defects were assigned to the wrong lane when loading a roll (the bug was introduced in V 7.x.x.x)
- Fixed that PDF loading possibly could last a long time
- QLink Press NetCounter window cannot get closed due to hidden button

10.2 Improvements

- FastCut enhancements according to requirements of Prati

11 Revision 7.0.10

11.1 Bug Fixes

- Fixed zero length rolls after roll reset from QlinkPress

12 Revision 7.0.11

12.1 Bug Fixes

- Access violation in pdf comparison
- Hidden rollmap behind TubeScan
- RollMap exception on inspection start
- Freezed or black live image

13 Revision 7.0.12

13.1 Bug Fixes

- 🕒 Hidden AddCylinder window (EagleView)
- 🕒 Fixed possible crash when opening the measurement editor the first time
- 🕒 Wrong rendering of WasteZones in RollMap when lanes are rendered bottom up
- 🕒 Missing assignments of settings in PdfReportSettings
- 🕒 No signals by inspection due to wrong use defect size filter

13.2 Improvements:

- 🕒 PlacementOffset now enabled for all scan modes and always added to any qlink signal
- 🕒 Fully named roll after reset in qlink press if text input is used

14 Revision 7.0.13

14.1 Bug Fixes

- 🕒 Fixed 2 lane detection exceptions
- 🕒 Fixed visual settings zoom
- 🕒 Minor qlink fixes
- 🕒 Fast cut fix for 14mm warning

14.2 Improvements:

- 🕒 change maximum for placement parameter *ResumeAfterStart_mm* from 2000 to 10000

15 Revision 7.0.14

15.1 Bug Fixes

- 🕒 Prevent lane indices out of range

16 Revision 7.0.15

16.1 Bug Fixes

- 🕒 Add backup mechanism for 4k camera configuration file

17 Revision 7.0.16

17.1 Bug Fixes

- Value for defect size classification did not get stored correctly

17.2 Improvements

- added option for QLink ERP/HotFolder interface request 'NameRoll' to allow an order change if order information differs or a roll splice if not

18 Revision 7.0.17

18.1 Bug Fixes

- Exception thread exception of RollmapWindow
- Rewinder rollmap gets stuck when syncing close to the beginning of the roll and a highly negative waste offset is set in the configuration

18.2 Improvements

- Added option to show averaged image on reference and live image by visual settings window
- Removed WPF caching for live image as performance tests did not show any Problems
- Add synchronization Offset

19 Revision 7.0.18

19.1 Bug Fixes

- Correctly show waste marker on qlink rewinder rollmap
- QLink signals could not be disabled by advanced defect control
- rotate averaging overlay according to settings
- warn if reference is too dark for detecting waste rewinder
- detect waste even if fine registration is off
- fix exception in qlink press when writing pdf comparison to “no order” folder

20 Revision 7.0.19

20.1 Improvements

- Workflow editor can load rolls via barcode reader

21 Revision 7.0.20

21.1 Bug Fixes

- Update issue on eagle view systems

22 Revision 7.0.21

22.1 Improvements

- Extension settings are now stored in NYCAMConfig
- QLink Hotfolder can now log all communication

22.2 Bug Fixes

- Lane detection for fast cut detects lanes now for first reference image
- Exception in OverladHandlerAvailable() on 4k systems

23 Revision 7.0.22

23.1 Improvements

- Rewinder sync position can be manually entered
- Hotfolder cleanup on start can be disabled
- Roll sealing in workflow editor can be disabled
- Roll in editor can be unloaded

23.2 Bug Fixes

- Make roll names from customer ids filename safe

24 Revision 7.0.23

24.1 Bug Fixes

- Fix update from 6.2
- Fix signals in coarse inspection

25 Revision 7.0.24

25.1 Improvements

- Allow erosion/dilation size of zero

26 Revision 7.0.25

26.1 Bug Fixes

- Fix auto zoom
- Fix wrongly drawn pdfs

26.2 Improvements

- Improve visibility of averaging differences in reference image view

27 Revision 7.0.26

27.1 Improvements

- Restore RollMap after TubeScan crash

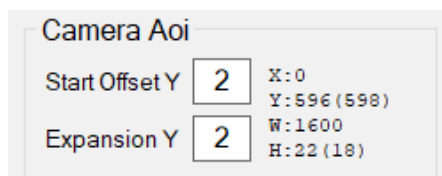
27.2 Fixes

- Color Parser in XML-Deserializer fixed

28 Revision 7.0.27

28.1 Improvements

- Aoi correction also available for IDS cameras, now (via *Debug* tap in settings window)



29 Revision 7.0.28

29.1 Fixes

- Fixed crash at start of calibration tool (introduced with changes of V 7.0.27)

30 Revision 7.0.29

30.1 Improvements

- Magic wand expansion in pdf zone editor
- Performance improvement: draw red/blue bookmarks below live image asynchronously

31 Revision 7.0.30

- xceed nuget downgrade

32 Revision 7.0.31

- Eagle View fix that window to add cylinder is hidden behind other window and UI does not react on touch input anymore

33 Revision 7.0.32

- Fix TubeScan dead lock / freeze

34 Revision 7.0.33

QLink Editor is now available as standalone package 'Qlink Editor 7.0.x.x.zip'.

Fixes:

- Registration zone is not visible: setting to use default pixel density and limit value for calculated screen resolution
-> new setting '**UseDefaultScreenPixelDensity**' in '**Core_HardwareSettings.xml**'

35 Revision 7.0.34

35.1 Improvements

- FastCut
- Label Top Detection
- Boundary Detection

35.2 Bug Fixes

- double execution of auto matrix detection when boundaries were moved
- fixed slider issue in zone editor

36 Revision 7.0.35

36.1 Bug Fixes

- fixed that distance monitoring settings haven't been stored

37 Revision 7.0.36

37.1 Improvements

- Added distortion compensation factor

38 Revision 7.0.37

38.1 Bug Fixes

- fix for possibly missing first lane with auto lane detection

39 Revision 7.0.38

39.1 Bug Fixes

- fix for black camera image / no flash after start

39.2 Improvements

- enhanced machine speed logging
- do not disable lane divider while in production

40 Revision 7.0.39

40.1 Bug Fixes

- don't remove qlink-signals when disabling inspection
- show pdf confirmation only on new validations

41 Revision 7.0.40

41.1 Improvements

- Introduce InspectionSetting For StripeBufferLength

42 Revision 7.0.41

42.1 Bug Fixes

- logging qlink signals via 'Diagnosis' tab on settings window

43 Revision 7.0.42

43.1 Bug Fixes

- fixed crash when starting calibration tool
- fixed, that MinMax live to reference inspection was not enabled again, after Averaging is turned off
- fixed that camera image was not getting brighter anymore from a certain illumination timing on, in software trigger mode

44 Revision 7.0.43

- send controller initialization of illumination settings with each camera start

45 Revision 7.0.44

45.1 Fixes:

- QLinkHotFolder io exception when roll paths get to long
- Roll ticket archiver does not use save file names
- MachineSpeedLogger repeatedly logging machine stopped event

46 Revision 7.0.45

- QLink file name lengths and roll naming via workflow

47 Revision 7.0.46

- Calibration tool start fixed
- Updater crash fixed

48 Revision 7.0.47

48.1 Fixes:

- fix NullPointerException in Bookmark Rectangle

48.2 Improvements:

- pixel rotation in pdf comparison

49 Revision 7.0.48

49.1 Fixes:

- Exception when drawing averaging overlay

49.2 Improvements

- Extended log for qlink rewinder
- Logfile per start
- Optional password protection for inspection settings
- Camera Error Events in Rollmap

50 Revision 7.0.49

- Fix Log Archiver

51 Revision 7.0.50

Improvements:

- Allow wildcards in pdf file names when loading file for pdf comparison via barcode scanner

Fixes:

- Message if both coarse and fine inspection are off
- Fix MeasurementSettings update from 5.6

52 7.0.51

Fixes:

- Exception when displaying more than one repeat in live view
- Exception when teaching from defect queue
- Exception when stepping through defect queue
- Missing serial number in QLink roll ticket

53 7.0.52

Improvements:

- Enhanced filter and sortable list for QLink roll dialogs

Fixes:

- Inspection active independent of alarm set

 Averaging settings when coarse inspection is enabled