

SCORPION BASIC ALIGN VISION APP

Scope

The Scorpion Basic Align Vision App locates a corner of any object. It is perfect and very useful in object localisation, an important and common task in machine vision.

App Features

Scorpion Vision Apps define a completely new entry level in Machine Vision designed for Scorpion Vision Integration and Scorpion Vision OEM.

Common features for Scorpion Vision Apps

- Internet Download
- Internet Upgrade
- Deployment with Scorpion Installer
- Based on proven Scorpion Vision
 Framework
- Licensed to the camera
- Development with Scorpion SDK
- OEM Development upon request
- Multiple Scorpion Vision Apps can run on a single computer



The Scorpion Basic Align Vision App is easy to use. It has a simple operator screen, and is easy to configure without machine vision knowledge.

The app can do the following:

- Locates a corner of an object
- The corners are located using two robust linefinders
- The ROI of the linefinders is user defined
- · Calculates the reference
 - The reference is defined by the translation and rotation of the object
 - The position (x,y) and the rotation angle is estimated
- User defined coordinate system
- Configurable IO with RS-232 and TCP/IP



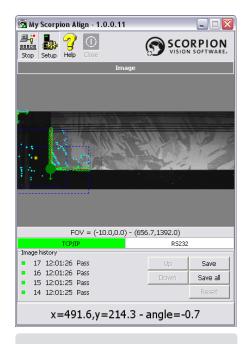
The app runs on the Scorpion Mono Stinger camera from Tordivel AS.

APPLICATION AREAS

The Vision App is designed to be used in:

- 2D Robot Vision
- Object Part Alignment
- Object Counting
- Position Verification

The Vision App is easy to deploy and to get working with the Scorpion Mono Stinger camera from Tordivel AS.



Standard Vision App User Interface

CONFIGURATION

The configuration Settings panels are password protected accessable via the Setup button. The panels are easy to use and understand.

GENERAL

The Apps General panel gives information about the vendor. The application name can be defined in this panel.

Settings - Basic A	Reference Camera Setup TCP-IP R5-232 Analysis Time	Deerbel
	Data Input	
System		Apply
Application Name My S	corpion Align	Undo
Vendor		Undo
renadi	The Basic Align App is produced by Tordivel AS	Refresh
	All right reserved copyright 2011	
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TORDIVEL		

The App General Settings

🔻 Scorpion Vision OEM

Product no. SVA-2011-0003-BasicAlign





This panel defines the core image processing setup of the App. The linefinders are defined with a number of tracelines. The length and width of the traceline are given. The Reference tab defines the App's reference system. The edge threshold defines the sensitivity of the edge detector. The system has two perpendicular linefinders named Top and Center. The system locates the corner when both edge finders locate a line. The line detector parameters are the minimum edgepoints located within the Line Fit Tolerance which defines the line. The center of the Region Of Interest - ROI - of the Top and Right linefinders are user configurable.

SCORPION INSTALLER

The Scorpion Vision Installer manage the Vision Apps installation. The Installer installs first the complete Scorpion Vision Framework and provides tutorials to learn more about Scorpion Vision and Vision Apps.

The Scorpion Vision Apps are downloaded, installed and updated from the Scorpion Server over the Internet.

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6) . 4	Please click on the 'Install' button to download and update the required deno Please click on the Youn' button to load the deno profile in Scorpion Vision Softw Please click on the 'Uninstal' button to remove the required deno profile			profile tware and I	so try it
	2D-Demo Scorpion Plugins 3D-Demo Ni	sc Scorpion V	sion Apps		
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	Scorpion Barcode App	Installed	Instal	Uninstall	Run
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	Scorpion 3D Stinger for Robot Vision Demo	Not Installed	Instal	Uninstall	Run
(C)i	Scorpion Basic Align App	Installed	Instal	Uninstall	Run
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For more information:

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🕥 Settings - Basic Align			X
App General App Setup Referen	nce Camera Setup TCP-IP R5-232 Analysis Time R	esults	
Edge			Apply
No of Tracelines	31		
Traceline Length	400.00		Undo
Traceline Width	500.00		Refresh
Threshold	6.00		
Minimum point to be fitted on line	10		
Line Fit Tolerance	3.0	pixels	
Тор			
Center X	500.00		
Center Y	210.00		
Right			
Center X	400.00		
Center Y	120.00		
Operations			
Backup Save Profile	Grab Inspect		

Reference

The system reference system is user defined with a default pixel reference system.

	Apply
ScaleX 0.75	
scaleX 0.75	
scaleX 0.75	Undo
	Refresh
scaleY 1.00	
originX 10.00	
originY 0.00	

pp General App Setup Reference Camera Setup TCP-IP RS-232 Analysis Tim	Results	
Trigger		Apply
Self Trigger Period 500.00	ms	Undo
Live Video		Refresh
Camera Setup		
Select Properties		
Unibrain Fire-I BCL 1.2 - 40077552		
Exposure Set Get Auto		
Shutter Set Get 🗖 Auto		
Camera Simulation		
Antive		
Directory Images		
Directory [Images Debug		

TCP/IP or RS-232

The App transmits the object location over RS-232 or/and TCP/IP to any host system. The configuration below shows the options for the TCP/IP connection.

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 Active Remote istenPort 	locahost:8701	Undo
	locahost:8701	
istenPort		0100
	8700	Refresh
Format	x=%.1f,y=%.1f,a=%.1f	
ail String	0000000	
Help Descrip	The spo all spaces the location over top(p to annote device.) The outpains priorit is defined as c-paidd>>:cpat> = 139.69.2398701 is calculated.311 and the listenport is described with port 4 ordy = 7000. If procession is considered and and the listenport is provident is considered and the listenport is remote client; can Start and Stop the reader by Sending Start or Stop'	

CAMERA SETUP

The camera settings are managed over a generic interface. Based on the Scorpion Vision Camera driver framework the Apps supports internal and command based triggering over RS-232 or TCP/IP. Both monochrome and color images are supported.

To verify the App Setup, offline camera simulation mode is available. All camera properties are managed from the Camera Setup panel.

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