

VisionPro[®] Trevista Dome Light Area Scan Getting Started

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Precautions

To reduce the risk of injury or equipment damage, observe the following precautions when you install the Cognex product:

- Trevista Controller requires power supply connection from a supply network that meets the following requirements:
100-240 V AC +/- 1-%, 50-60 Hz, 550 VA
- This product is intended for industrial use in automated manufacturing or similar applications.
- The safety of any system incorporating this product is the responsibility of the assembler of the system.
- Do not install Cognex products where they are exposed to environmental hazards such as excessive heat, dust, moisture, humidity, impact, vibration, corrosive substances, flammable substances, or static electricity.
- Route cables and wires away from high-current wiring or high-voltage power sources to reduce the risk of damage or malfunction from the following causes: over-voltage, line noise, electrostatic discharge (ESD), power surges, or other irregularities in the power supply.
- Do not expose the image sensor to laser light. Image sensors can be damaged by direct, or reflected, laser light. If your application requires laser light that might strike the image sensor, use a lens filter at the corresponding laser wavelength. For suggestions, contact your local integrator or application engineer.
- This product does not contain user-serviceable parts. Do not make electrical or mechanical modifications to product components. Unauthorized modifications can void your warranty.
- Changes or modifications not expressly approved by the party responsible for regulatory compliance could void the user's authority to operate the equipment.
- Include service loops with cable connections.
- Ensure that the cable bend radius begins at least six inches from the connector. Cable shielding can be degraded or cables can be damaged or wear out faster if a service loop or bend radius is tighter than 10X the cable diameter.
- This device should be used in accordance with the instructions in this manual.
- All specifications are for reference purposes only and can change without notice.

Symbols

The following symbols indicate safety precautions and supplemental information:

 **WARNING:** This symbol indicates a hazard that could cause death, serious personal injury or electrical shock.

 **CAUTION:** This symbol indicates a hazard that could result in property damage.

 **Note:** This symbol indicates additional information about a subject.

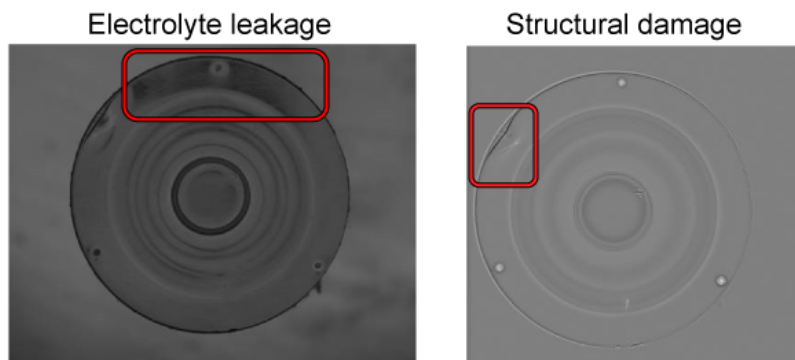
 **Tip:** This symbol indicates suggestions and shortcuts that might not otherwise be apparent.

Introduction

Cognex "shape from shading" technology determines topographical surface information of materials that range from a matte appearance to shining reflectance.

A VisionPro application using the Trevista Dome Light captures multiple images of an object as the lighting inside the Dome Light varies from image to image. Your application accepts the images from the Dome Light and allows you to choose one or more output images for additional analysis by other vision tools in your application.

For example, the following figure shows different output images from a Trevista Dome Light and how they enhance different defect information:

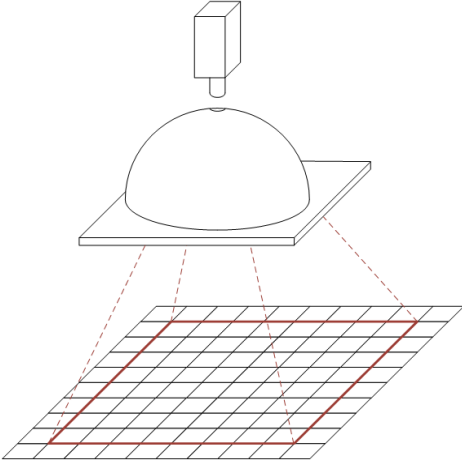
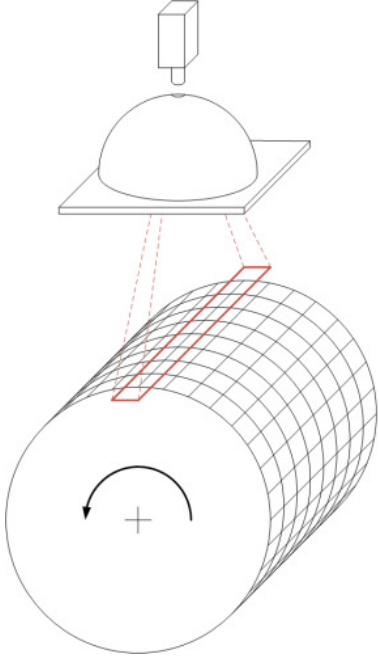


This document describes the use of a Trevista Dome Light with an area-scan camera and supported VisionPro software to capture an image and make output images available for additional analysis.

i **Note:** Refer to the Trevista Dome Light Line Scan Getting Started for an introduction to using the Trevista Dome Light with a line-scan camera.

Device Modes



The Trevista Dome Light supports two modes of operation for acquiring images:

Area Scan	Line Scan
<p data-bbox="278 321 612 348">Inspection of stationary objects:</p>  <p>The diagram illustrates the Area Scan mode. A dome-shaped sensor is mounted on a square base. Below the base, a grid of lines represents the scanned area. A red rectangular frame is overlaid on the grid, indicating the field of view. Dashed lines connect the corners of the red frame to the sensor's base, showing the projection of the scan area.</p>	<p data-bbox="871 321 1329 348">Inspection of rotationally symmetrical parts:</p>  <p>The diagram illustrates the Line Scan mode. A dome-shaped sensor is mounted on a square base. Below the base, a cylindrical object is shown with a grid of lines representing its surface. A red rectangular frame is overlaid on the grid, indicating the field of view. Dashed lines connect the corners of the red frame to the sensor's base, showing the projection of the scan area. A curved arrow with a plus sign indicates the rotation of the cylindrical part.</p>

Regulations and Conformity

Note: For the most current CE declaration and regulatory conformity information, see the Cognex support site: cognex.com/support.

The Trevista Controller has a Regulatory Model number 50240 and meets or exceeds the requirements of all applicable standards organizations for safe operation. As with any electrical equipment, however, the best way to ensure safe operation is to operate them according to the agency guidelines that follow. Please read these guidelines carefully before using your device.

Safety and Regulatory	
Manufacturer	Cognex Corporation One Vision Drive Natick, MA 01760 USA
	Trevista Controller: Regulatory Model 50240 This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take immediate measures. This equipment complies with the essential requirements of the EU Directive 2014/30/EU. Declarations are available from your local representative.
EU RoHS	Compliant to the most recent applicable directive.
FCC	FCC Part 15, Class A This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
Korea 	Trevista Controller, KC ID : R-R-CGX-TREVISTA2004 This device is certified for office use only and if used at home, there can be frequency interference problems.
TÜV	Trevista Controller: Regulatory Model 50240
	NRTL: TÜV SÜD SCC/NRTL OSHA Scheme for UL/CAN 61010-1.
	CB report available upon request. TÜV SÜD, IEC/EN 61010-1.
UK	Trevista Controller: Regulatory Model 50240 This is a class A product. In a domestic environment, this product can cause radio interference, in which case the user is required to take adequate measures. This equipment complies with the essential requirements of the Electromagnetic Compatibility Regulations 2016. Declarations are available from your local representative.

中国大陆RoHS (Information for China RoHS Compliance)

根据中国大陆《电子信息产品污染控制管理办法》(也称为中国大陆RoHS), 以下部份列出了本产品中可能包含的有毒有害物质或元素的名称和含量。



Hazardous Substances 有害物质						
Part Name 部件名称	Lead (Pb) 铅	Mercury (Hg) 汞	Cadmium (Cd) 镉	Hexavalent Chromium (Cr (VI)) 六价铬	Polybrominated biphenyls (PBB) 多溴联苯	Polybrominated diphenyl ethers (PBDE) 多溴二苯醚
Regulatory Model 50240	X	O	O	O	O	O

This table is prepared in accordance with the provisions of SJ/T 11364.

这个标签是根据SJ/T 11364 的规定准备的。

O: Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB / T26572 - 2011.

表示本部件所有均质材料中含有的有害物质低于GB / T26572 - 2011 的限量要求。

X: Indicates that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB / T26572 - 2011.

表示用于本部件的至少一种均质材料中所含的危害物质超过GB / T26572 - 2011 的限制要求。

For European Community Users

Cognex complies with Directive 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on waste electrical and electronic equipment (WEEE).

This product has required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment, if not properly disposed.

In order to avoid the dissemination of those substances in our environment and to diminish the pressure on the natural resources, we encourage you to use the appropriate take-back systems for product disposal. Those systems will reuse or recycle most of the materials of the product you are disposing in a sound way.



The crossed out wheeled bin symbol informs you that the product should not be disposed of along with municipal waste and invites you to use the appropriate separate take-back systems for product disposal.

If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You may also contact your supplier for more information on the environmental performance of this product.

