

## SCORPION 3D VENOM CAMERA

### SCOPE

Scorpion Venom™ is a family of machine vision components. They provide building blocks for OEM and system integrators. Scorpion Venom products have focus on:

- industrial strength
- flexibility
- functionality

The Scorpion 3D Venom Camera has the following features:

### 3D FIELD OF VIEW

- From 20 x 20 mm x 15 mm to more than 200 x 200 x 150 mm
- Resolution: 0.01 mm to 0.1 mm.
- Nominal working distance: 50 mm to 600 mm

### INTEGRATED LED AND LASER CONTROL

- Built in Strobing for Laser and LEDs
- Support for RPP line lasers
- User selectable wavelength including IR and Red lasers and LEDs
- Support external LED and Lasers

### INDUSTRIAL HOUSING

- Power over Ethernet - POE
- Flexible baseline configuration
- H = 60 mm W = 85 mm L = 160 mm

### HIGH QUALITY GIG E IMAGE SENSORS

- VGA to 5MP Resolution
- Monochrome or Color
- Typical framerates from 1 to 10 fps - high framerate from 10 - 200 fps

### PROVEN SOFTWARE SUPPORT

- Scorpion Vision Software
- Scorpion 3D Stinger for Robot Vision
- Scorpion 3D SMARTcapture

For more information:

Tordivel AS  
Phone +47 2315 8700  
Fax +47 2315 8701  
office@tordivel.com  
www.scorpionvision.com



Scorpion Vision Software® is a registered trademark and Scorpion 3D Venom™ is a trademark of Tordivel AS.

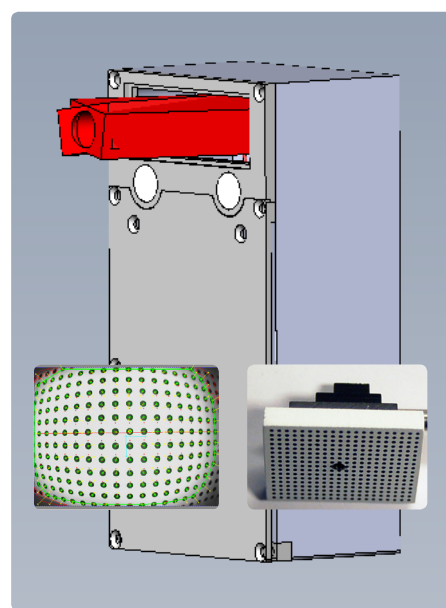
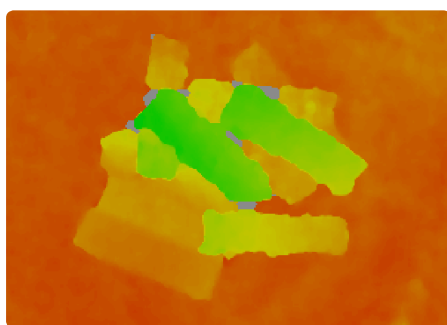
The global shutter Scorpion 3D Venom Camera is designed to be used in cutting-edge short range 3D Stereo Vision applications. Combines 2D color and monochrome images with 3D data and 3D images to make a unique blend for advanced machine vision.

**CREATES DENSE 3D POINT CLOUDS - CAN SEE WHERE THERE IS NO CONTRAST.**

To be used for 3D Robot Vision, 3D Assembly Verification and 3D Measurement.

Main target applications are ID Tracking, Object Tracking, Height Measurement, Object Counting and more. Fast feature location and 3D image generation will support fast tracking framerates from 5 to 15 fps.

Global shutter 3D Camera locates moving objects in real-time - ideal for real-time tracking and position servos.



The Scorpion 3D Venom Camera is factory calibrated. Blending 2D and 3D machine vision in a compact enclosure with integrated led illumination powered by a single POE ethernet cable is a true innovation in the machine vision market

The 3D Venom Camera replaces a 2D camera where a 2D plus a sense of 3D is needed for to create a 100% robust and accurate solution. It is easily connected to a PC using power over ethernet or POE using a single Cat6 ethernet cable.

The 3D Camera is the perfect companion for Scorpion Vision Software. Scorpion Vision can control multiple 3D cameras from a single Scorpion Embedded PC. Combining multiple 3D cameras can be used to provide multiple viewing angles and to extend 3D FOV without losing resolution.



*Scorpion 3D Venom Camera supplements the Scorpion 2D and 3D Stinger camera range from Tordivel*

### POWER CONSUMPTION

The units is powered over POE - power over ethernet.

Type typical power consumption is 5 Watts.

The actual power consumption depends on camera configuration.

The Scorpion 3D Venom Camera consists of:

- an aluminium enclosure
- one cameras including lens and optical splitter
- two LEDs and optional laser
- termination panel & cables
- Compact SMARTcard
  - strobing
  - 24v input, 5v and 12v output

The camera is factory calibrated and is used out of the box. The 3D Field of View is configured from 20 x 20 mm x 15 mm to 200 x 200 x 150 mm with a basic resolution of 0.01 mm to 0.1 mm.

The Scorpion Compact SMARTcard provides the ability to capture one 3D images with a laser projection and then capturing a 2D image set.

The 3D images are used to locate objects in 3D. In the 2D image, the 3D references from the 3D image is used to do 3D measurements in 2D images with the highest possible accuracy.

The Scorpion 3D Venom Camera™ is a high performance industrial camera enclosed in an industrialised housing which contains electronics for illumination, camera connectivity and power distribution.

The Venom Camera is designed to be mounted on a robot or placed over a pallet.

The extensive connector panel shows the flexibility of the camera:

CONNECTOR	A
1	TRIG IN
2	EXPOSURE OUT
3	OUT +
4	IN - TACHO +
5	RS-485 +
6	A +

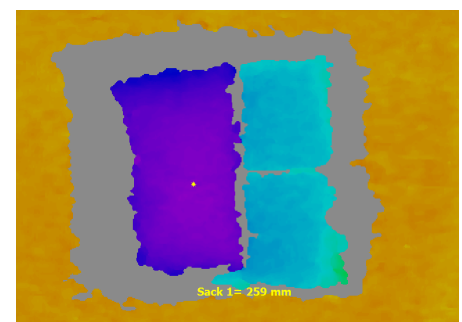
CONNECTOR	B
1	GND
2	GND
3	OUT -
4	IN - TACHO -
5	RS-485 -
6	A -

CONNECTOR	POWER
1	24 V IN +
2	GND IN
3	12 V Out
4	GND Out
5	5 V Out
6	GND Out

CONNECTOR	C
1	LED 1 +
2	LED 1 -
3	LED 2 +
4	LED 2 -
5	LASER +
6	LASER -

### DIMENSIONS - WEIGHT 0.5 KG

- Height = 60 mm
- Width = 85 mm
- Length = 160 mm



*Scorpion 3D Venom Heightmap*