

# IR-012

Mid-format VOx Uncooled Thermal Camera



## Features

- CameraLink™
- State of the art VOx thermal detector
- Automatic Non-Uniformity Correction (NUC)
- Automatic sunburn protection and recovery
- Advanced image processing
- Compliant with automotive DC power input

## Description

The IR-012 is a Mid-format thermal camera based on a state of the art 25um VOx thermal detector. Due to advanced analog power and control circuitry, the camera provides high-quality digital video output. Optimal power management flexibility is provided due to the advanced TEC control circuit offering programmable FPA temperature and TEC current.

To provide 1-point NUC calibration the IR-012 features a fast and silent shutter solution with superior shock resistance, even in power-off mode. The shutter holding torque is software controlled, thus providing flexible user-defined trade-off between power consumption and shock resistance.

Camera features include Non-Uniformity Correction (NUC), Automatic Contrast Enhancement (ACE), Gamma correction Black-Hot/White-Hot modes, and horizontal/vertical flip.

The CameraLink™ output provides 8 bit non-uniformity corrected (2-point linear corrected) digital video or raw (only 1-point corrected) video directly from the detector.

For digital video out-of-the-box, the IR-012 is shipped with a camera control application for Windows XP and Vista. Basic control features include: Freeze/Live, Horizontal and Vertical flip, Black-Hot/White-Hot, NUC control, Histogram display, Automatic Contrast Enhancement, Gamma correction, Image depth selection and digital zoom.

The camera can be fully controlled through the CameraLink™ interface or the additional serial RS-232/RS-485 interfaces.

IR-012 is classified Dual-Use. The product is subject to Danish and Israeli export controls.

## Applications

- Machine vision
- Homeland security
- Scientific imaging

## General specifications

Detector type	Vanadium Oxide Microbolometer
Detector formats	384x288 or 320x240
FPA diagonal size	12 mm
Pixel pitch	25 um
Spectral range	8-14 um
NETD	<50mK (300K scene, f/1, 50Hz)
Detection temp. range	-35 to 100 °C (default configuration)
Shutter cycle	800 ms with 1:84 gear
Shutter holding torque	Programmable, 8-bit
FPA temp. change	1 °C/s (programmable TEC current)
Turn-on time	20 s Max.
Power cons.	Typical 5 W
Input voltage	9-30V DC (Automotive compliance)
Weight	350 grams
Dimensions	85 x 85 x 88 mm
Operating temp.	-20 to +60°C (ambient)
Storage temp.	-40 to +70°C (ambient)
Humidity	5-85% non condensing
Vacuum Integrity	>15 years

## CameraLink™

Image depth	8bit 14bit raw image (Not corrected)
Video modes	384x288, 25Hz max. (Default format) 320x240, 30Hz max. (Optional format)
Connector	Standard CameraLink™
Frame sync.	Synco pulse on opto-coupled input

## Accessories

Standard lens options	9.5mm f/1.2, 14.25mm f/1.3, 20mm f/1.85 Many others on request
Lens adaptor	Adaptors available for standard lenses Other adaptors are build to order
CameraLink™ Cables	1m, 2m, 3m, 5m, 7m, 10m
Camera Case	Rugged camera case with room for the below listed accessories
Serial Com Cable	Cable for RS232 communication, 1.8m (used together with breakout cable)
Breakout cable	Cable for power & serial com, 1.5m
Power supply	AC-DC converter with international plugs
Camera bracket	Camera bracket with X" thread
Tripod	Table top tripod

## Camera Control Software

Demo application	Camera control program that provides an easy to use GUI for controlling various camera functions
OS supported	Windows XP and Vista