

ThermoVision™ A40-V

Infrared imager producing high-quality thermal images

The ThermoVision A40-V is a rugged, compact and low-cost infrared imager. It is designed for those applications that require excellent thermal image quality but where exact temperature measurements are not needed.

The A40-V produces extremely sensitive, high-quality infrared images.



- **AFFORDABLE, FULLY INTEGRATED THERMAL IMAGING SOLUTION**
- **BUILT-IN ALARM FUNCTIONALITIES**
- **HIGH-QUALITY THERMAL IMAGES (320 X 240 PIXELS)**
- **OUTSTANDING THERMAL SENSITIVITY**
- **MAINTENANCE-FREE UNCOOLED MICROBOLOMETER DETECTOR**
- **RUGGED AND COMPACT**
- **BUILT-IN FOCUS MOTOR/AUTOFOCUS**
- **AVAILABLE VERSIONS:**
 - **FIREWIRE (IEEE-1394): 16-BIT IMAGE OUTPUT AND CONTROL**
 - **ETHERNET: 8-BIT IMAGE OUTPUT (RTP) AND CONTROL (TCP/IP)**



Visible light camera

ThermoVision A40-V:
see in complete darkness



Visible light camera

ThermoVision A40-V:
see in low-light conditions



Visible light camera

ThermoVision A40-V:
see through fog

SUPERB IMAGE QUALITY

The ThermoVision A40-V detects temperature differences as small as 0.08°C in a range from -40°C up to +500°C (+2000°C optional). It produces crisp high-resolution images (320 x 240 pixels) and enables viewing of fast-moving and low-temperature targets with remarkable image clarity unmatched by less sensitive IR cameras.

EXTENSIVE CONNECTIVITY OPTIONS: FIREWIRE OR ETHERNET

The A40-V features a choice of connectivity options. For real-time image and fast data transfer of 8-bit images, you can choose for an IEEE-1394 FireWire digital output.

For network and/or multiple camera installations, Ethernet connectivity is available. Each A40-V can be equipped with its own unique URL allowing it to be addressed independently via its Ethernet connection. It allows controlling all menu systems of the camera and provides instant access to A40-V thermal images for any authorized user with a web browser. Images are streamed in semi real-time.

INPUT / OUTPUT FUNCTIONALITY

Simple and straightforward inputs and outputs provide ease of integration and flexibility in OEM applications. It allows the A40-V either to be integrated quickly and easily in your security and control systems or to be set up as a stand-alone system.

ULTRA COMPACT, RUGGED AND LIGHTWEIGHT

Its compact and ultra-light design allows the A40-V to be easily mounted in hard-to-get-at locations.

EASY OPERATION: PLUG AND PLAY

Simply connect the camera to a PC or a monitor and produce high-quality real-time infrared images. The camera can be fully controlled either from the PC or with the integrated keyboard.

INTEGRATED KEYBOARD

For those applications where the infrared camera and the PC are a distance away from each other, the ThermoVision A40-V has an integrated keyboard. With a few buttons, conveniently placed at the top of the camera, you can control all features.

MULTIPLE PROGRAMMING OPTIONS

The A40-V output can be easily used to control an application. No need for months of programming. Multiple options exist to dramatically reduce the time it takes to program a custom solution.



TECHNICAL SPECIFICATIONS

ThermoVision™ A40-V includes:

- IR CAMERA
- POWER SUPPLY INCLUDING CABLE
- FIREWIRE CABLE (FIREWIRE VERSION ONLY)
- CONFIGURATION CD
- LENS CAP
- MANUAL

FLIR SYSTEMS AB

World Wide Thermography Center
Rinkebysvägen 19 - PO Box 3
SE-182 11 Danderyd
Sweden
Tel.: +46 (0)8 753 25 00
Fax: +46 (0)8 753 23 64
e-mail: sales@flir.se
www.flir.com

FLIR SYSTEMS LTD.

United Kingdom
Tel.: +44 (0)1732 220 011
e-mail: sales@flir.uk.com

FLIR SYSTEMS Co. LTD.

Hong Kong
Tel.: +852 27 92 89 55
e-mail: flir@flir.com.hk

FLIR SYSTEMS GMBH

Germany
Tel.: +49 (0)69 95 00 900
e-mail: info@flir.de

FLIR SYSTEMS SARL

France
Tel.: +33 (0)1 41 33 97 97
e-mail: info@flir.fr

FLIR SYSTEMS S.R.L.

Italy
Tel.: +39 02 99 45 10 01
e-mail: info@flir.it

FLIR SYSTEMS AB

Belgium
Tel.: +32 (0)3 287 87 10
e-mail: info@flir.be

WWW.FLIR.COM



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IMAGING PERFORMANCE

Field of view / min focus distance	24°x18° / 0.3 m (with 35 mm lens)
Spatial resolution (IFOV)	1.3 mrad
Thermal sensitivity	0.08°C at 30°C
Focusing	Built-in focus motor. Manual or automatic focus
Detector type	Focal Plane Array (FPA), uncooled microbolometer (320 x 240 pixels)
Spectral range	7.5 to 13 μm
Image frequency	50/60 Hz
Viewing temperature range	-40°C to +500°C (-40°F to +932°F), in 2 ranges Optional: Up to +1500°C (2732°F) or +2000°C (3632°F)

IMAGE PRESENTATION

Image output	RS170 EIA/NTSC or CCIR/PAL composite video IEEE-1394 FireWire output (optional) RJ-45 Ethernet output (optional)
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LENSES (OPTIONAL)

Field of view / min focus distance	7° x 5.3°/4 m (with 122 mm lens) 12° x 9°/1.2 m (with 71 mm lens) 45° x 34°/0.1 m (with 18 mm lens) 80° x 60°/0.1 m (with 9 mm lens) 200 μm close-up (64 mm x 48 mm/150 mm) 100 μm close-up (34 mm x 25 mm/80 mm) 50 μm close-up (15 mm x 11 mm/19 mm) 18 μm close-up (6 mm x 4 mm/7 mm)
Lens identification	Automatic

POWER SOURCE

AC operation	AC adapter 110/220 V AC, 50/60 Hz
Voltage	10/30 V nominal, < 6 W

ENVIRONMENTAL SPECIFICATIONS

Operating temperature range	-15°C to +55°C (+5°F to +122°F)
Storage temperature range	-40°C to +70°C (-40°F to +158°F)
Humidity	Operating and storage 10% to 95%, non condensing
Encapsulation	IP 40 (determined by connector type)
Shock	Operational: 25G, IEC 68-2-29
Vibration	Operational: 2G, IEC 68-2-6

PHYSICAL CHARACTERISTICS

Weight	1.4 kg (3.1 lbs)
Size	207 mm x 92 mm x 109 mm (8.2" x 3.6" x 4.3")
Tripod Mounting	1/4" - 20

INTERFACES

Digital image output and camera control	6-pin FireWire (IEEE-1394) connector handling iso-chronous 16-bit digital image data and asynchronous control data or standard RJ-45 Ethernet connector handling image data (RTP) and control data (TCP/IP)
BNC	Composite video (NTSC/PAL)
6-pin screw terminal (upper)	Digital I/O: 3 Output - 1 Input 1 Input/Output selectable. User configurable*
6-pin screw terminal (lower)	Analog I/O: 2 Output - 1 Input User configurable* - see user configuration table

USER CONFIGURATION TABLE*

TYPE	FUNCTION	REMARK
Digital input	TTL Level: Shutter disable, Store image, Batch enable	Isolation and relay function in external module
Digital output	TTL Level: Internal temperature sensor alarm, V-sync	Isolation and relay function in external module
Analog output	Internal temperature sensor out 0 - 5 V	Scaled to Tlow - Thigh
Analog input	External temperature sensor in 0 - 10 V	Scaled to Tlow - Thigh Isolation in external module