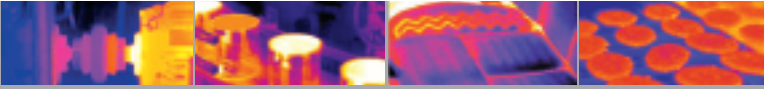




The Global Leader in Infrared Cameras

ThermoVision™ A20V

IMAGING



The ThermoVision® A20V provides an affordable and accurate solution for industrial product and process monitoring, and security applications.



- > Real-time Digital Video Output
- > Rugged and Compact
- > Extensive Connectivity Options
- > FireWire or Ethernet Connection
- > Affordable Infrared Imaging Solution
- > Maintenance-free, Uncooled, Microbolometer Detector
- > LabView and C++ / Visual Basic Support
- > Longwave Imaging Performance

Quickly Find Faults

Subtle temperature variations, undetectable by any other means, stand out clearly in a thermal image. Finding and resolving problems early can improve product quality and cut down on scrap or warranty expense – saving thousands of dollars.

Outstanding Imaging and High Thermal Sensitivity

The A20V features an advanced, uncooled microbolometer FPA detector technology that delivers crisp, longwave images in a multitude of palettes. Each thermal image is built from 19,000 individual picture elements that are sampled 60 times per second by the camera's on-board software and electronics, which can discriminate temperature variations as small as 0.12° C. Real-time image acquisition at standard video rates (60 Hz) can reveal rapid, thermally transient events and generate clear images of moving objects.

Plug-and-play Setup

The A20V features plug-and-play setup. You can simply connect the camera to a standard monitor and immediately produce high quality, real-time thermal images that accurately show heat patterns and thermal anomalies.

Easy to Configure and Operate

The user-intuitive A20V is extremely easy to operate. Its onboard logic and menu-driven configuration controls enables you to select and control target spots, temperature range, image color palettes and more, quickly and easily.

Ultra-compact, Rugged and Lightweight

Built to operate unattended for long periods in harsh industrial environments, the A20V has an IP40 rating. Its compact design and light weight (less than 1.7 lbs.) allow it to be mounted in hard-to-access locations that may be optimal for data collection. Fully configurable I/O functionality allows the A20V to be integrated quickly and easily into your control systems.

Extensive Connectivity Options

The A20V features RJ-45 Ethernet or FireWire (IEEE 1394) connectivity that is ideal for individual or networked multiple camera installations. Each A20V can be equipped with its own unique IP address allowing it to be addressed independently via TCP/IP over the network. This provides instant access to thermal images by any authorized user via the LAN, WAN, or the Internet using a Web browser. The camera can be configured via the network, or with its on-board soft button interface.

Multiple Programming Options

The A20V can be easily leveraged to control a process with LabVIEW and FLIR's LabVIEW Developers toolkit — to turn the A20V into a powerful machine vision tool with a minimal investment in machine vision software development.

Or, work in your own programming environment with the ThermoVision System Developers Kit (SDK) based on ActiveX and Visual Basic C++. The SDK provides full access to Camera Control and Digital Video functionality that will dramatically reduce the time it takes to program a custom solution.

ThermoVision™ A20V Technical Specifications

Imaging Performance	
Field of view/min focus distance	25° x 19° / 0.3 m
Spatial resolution (IFOV)	2.7 mrad
Thermal sensitivity @ 50/60Hz	0.12° C at 30° C
Focusing	Manual, external motor focus optional
Detector type	Focal Plane Array (FPA), uncooled microbolometer
Spectral range	7.5 to 13 µm
Image Presentation	
Type	Single JPEG on-demand
Video output	RS170 EIA/NTSC or CCIR/PAL composite video
Lenses (optional)	
Field of view/min. focus distance	12° Telescope (12° x 9°/1.2m) 45° Wide angle (45° x 34°/0.1m)

Power Source	
AC operation	AC adapter 110/220 VAC, 50/60Hz (included)
DC operation	8-30V nominal, <6W
Environmental	
Operating temperature range	-15° C to +50° 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	0.8 kg (1.7 lbs)
Size	157mm x 75mm x 80mm (6.2" x 2.9" x 3.1")
Tripod mounting	1/4"– 20

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 • Spot/Area threshold ALARM • Internal temperature sensor ALARM • V-sync	Isolation and relay function in external module
Analog Output	• Spot/Area out: 0-5V • Internal temperature sensor out: 0-5V	Scaled to Tlow – High Isolation in external module
Analog Input	• External temperature sensor in: 0-5V	Scaled to Tlow – High Isolation in external module

CAMERA INTERFACES

Digital I/O ports—jackable screw terminal
3 output/1 input, 1 input/output selectable; function is user configurable*

Analog I/O ports—jackable screw terminal
2 output/1 input; function is user configurable*

RS-232 (DB-9)—connection to PC
Camera control

DC power in—2-pin jackable screw terminal
12/24V nominal



8-button keyboard

Ethernet jack (RJ45) or FireWire jack (IEEE-1394)

BNC—C-Video (NTSC/PAL)

2.5 mm DC power in
12/24V Nominal; camera needs only one power source

*See Configuration Table above



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