

SAFETY AND
INNOVATION

argus[®]
thermal imaging from e2v

argus[®] 4



The Argus[®]4-160 is a member of the next generation of highly successful Argus[®] Thermal Imaging Camera (TIC) from e2v.

The Argus[®]4-160 uses an uncooled high-resolution 160 x 120 pixel, Amorphous Silicon (ASi) Microbolometer Detector. It has been designed using advanced digital imaging technology for a sharper picture and provides superior performance.

The Argus[®]4-160 is a simple-to-operate, self-contained and robust camera, which can be used in a fully automatic mode of operation.

The Argus[®]4-160 has been specifically designed to help fire fighters to see in conditions of zero visibility including complete darkness, and smoke. It allows them to identify and rescue casualties, locate hot spots and the seat or spread of the fire.

The camera is also lightweight, ergonomic and capable of withstanding harsh environments.

The Argus[®]4-160 can be used with all the Argus[®]4 camera accessories including Truck Mounts, Transmitters and Video accessories.

No end-user maintenance is required other than recharging of batteries and post-use external cleaning with a soft cloth.

CAMERA STANDARD FEATURES

The Argus[®]4-160 comes with the most advanced features available in any Thermal Imaging Camera. **These include:**

Scene Colourisation - user selectable choice of colour palettes

Direct Temperature Measurement (DTM)

SceneSave[™] Digital Image Capture - 100 image capacity

Tri-Mode Sensitivity

Customisable Start-up Screen

Ambient Temperature Measurement

Digital x2 Zoom

On-Screen Time and Date

CAMERA STANDARD ACCESSORIES

The Argus[®]4-160 comes with the following accessories as standard:

Handle

Soft carry case (Hard carry case optional)

Side straps

Remote control

Two rechargeable battery packs

Battery charger with mains plug (US, UK and Europe)

Neck strap

USB connection lead for PC/ Laptop

User manual

Customer CD ROM

CAMERA OPTIONAL ACCESSORIES

Truck Storage Mount. (Order code: P7030TSM, P7030TSMBC)

Truck Battery Charger. (Order code: P7030TBC, P7030BCTM, P7030BCTM/TBC)

Video Transmitter & Receiver. (Order code: P7030RRS, P7030RKT, P7030TX)

Video capture battery pack. (Order code: P7030VC)

External Video output adaptor (Order code: P7030EPVA)

External video output battery pack (Order code: P7030AVBP)

CAMERA ORDER CODES

Please refer to the Argus website for details.

Code

P7050 Supplied in soft carry case

P7050/N Hard carry case option

P7059 9Hz version

P7059/N 9Hz version with hard carry case option

Customer configurable variants are available on request:
NSN: 5855-99-297-7821

WARRANTY

24-month warranty as standard (exclusions apply)

Warranty can be extended for up to an additional three years at the time of purchase (exclusions apply).

TO BOOK A DEMONSTRATION OR FIND OUT MORE GO TO:

argusdirect.com

ENVIRONMENTAL DATA

Thermal conditions	The camera has been designed to operate: <ul style="list-style-type: none"> • -10°C (-14°F) and +80°C (176°F) • withstand +150°C (300°F) for 15 minutes • withstand +260°C (500°F) for 5 minutes
Sealing	IP67, will withstand short-term immersion in water
Impact	The camera will withstand a drop from a height of 2m (78 inches) onto concrete
Storage	It is recommended that for maximum effective operational life, the storage temperature is kept between -10°C (14°F) and +40°C (104°F)

OPTICAL DATA

Detector

Sensor type	Un-cooled Microbolometer
Sensor material	Amorphous Silicon (ASi)
Resolution	160 x 120 array
Pixel size	25µ
Spectral response	8 – 14µm
MDTD	70 mK typical (Minimum Discernible Temperature Difference)
Dynamic range	-40°C to 800°C (-40°F to 1472°F) via 3 ranges with autoswitching
Refresh rate	P7050 - 120Hz
Spot temperature range	0°C to 800°C (32°F to 1472°F)
Ambient temperature range	-15°C to 150°C (5°F to 300°F)

Lens

Lens material	Germanium
Focal length	4.6mm
Focal distance	1m to infinity, optimised at 4m. (3ft to infinity, optimised at 13 ft)
Horizontal Aperture	f/1.0
Field of view	50° horizontal, 37.5° vertical

Display

Type	High grade, Industrial, colour TFT active matrix LCD
Size	90mm (3.5 inches)
Pixel format	QVGA 320 x 240, (each pixel RGB format, total pixels 230,400 pixels)
Video input	Sensor synchronised direct digital drive
Backlight	430cd/m ² at 20mA (High brightness, white LED)

MECHANICAL DATA

Camera dims (H x W x D)	130mm x 185mm x 185mm (5.1 x 7.2 x 7.2 inches) (nominal)
Camera weight	1.3kg (2.8lb) without battery 1.6kg (3.4lb) with battery
Outer camera case and handle	Radel®R-5100 and Santoprene®
Rear and front bumpers	Multiflex® or Santoprene®
Neck and side straps	Nomex®
Lens window	Germanium (2mm thick) with durable coating

ELECTRICAL DATA

Power consumption	<3 W typical
Start-up time	5 seconds typical
Battery type	Ni-MH Rechargeable Battery
Battery capacity	2 Ah
Battery life	4 hours @ ambient temperature (22°C, 72°F)
Battery charge time	2 hours nominal
Battery recharge cycles	500 to 80% capacity, 1000 recharges in total cycles
Battery sealing	IP67
Charging temp.	0°C to 40°C (32°F to 104°F) 65°C (150°F) can be tolerated
Charger input voltage	100V – 240VAC, 50/60 Hz, 1A max
Charger operating temp.	0°C to 40°C (32°F to 104°F)

VIDEO OUTPUTS

Digital	MPEG4, RTSP video streaming @ (P7050 - 10 fps, P7059 - 9fps)
Analogue	NTSC 525-line 60 Hz, EIA RS-170 (P7050 - 30 fps, P7059 - 9 fps)

COMPLIANCE DATA

RFI/EMC

Emissions	BS EN 61000-6-3:2007, FCC CFR-47 Subpart B, Class B, AUS/NZ 4251.1
Immunity	BS EN 61000-6-2:2005
Safety	IEC 60950-1 and related national standards P7050 approved to ANSI/ISA 12.12.01:2007 Class I, Division 2, Groups C, D T4.
Vibration/Shock	BS EN 60721-3-2 Class 2M3
RoHS	All parts of the system are compliant with EU directive 2011/65/EC

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