

INTRODUCTION

The Argus Mi-TIC range is the next generation of the highly successful Personalised style (mini) Argus® Thermal Imaging Camera (TIC) from e2v.

The Argus Mi-TIC Cameras use either the 160x120 or 320x240 uncooled high-resolution, amorphous silicon (ASi) microbolometer sensor. The cameras have been designed using Argus' advanced digital imaging technology to provide sharper imaging and superior performance.

The Argus Mi-TIC camera is a fully featured customer configurable thermal camera that is extremely simple-to-operate & maintain.

The Argus Mi-TIC has been specifically designed to help fire fighters to see in conditions of zero visibility including complete darkness, and smoke. It allows them to assess the scene, locate seats of fire or hot spots and helps identify/rescue casualties.

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

The Argus Mi-TIC is a fully featured camera and comes as standard with a vehicle/desktop charger.

The Argus Mi-TIC range uses the new temperature and compression safe lithium phosphate battery technology for low user maintenance. No end-user maintenance is required other than cleaning the product after use

CAMERA STANDARD FEATURES

The Argus Mi-TIC comes with the most advanced features available in any Thermal Imaging Camera. These include:

- Direct Temperature Measurement (DTM)
- Tri-Mode Sensitivity
- Customizable Start-up Screen
- On-Screen Time and Date (user configurable)

3-button variant:

- Application specific modes
 - Fire Mode
 - Overhaul/Search Mode
- Digital Zoom

Additional Options (both 1 button & 3 button variant):

- Advance Imaging Pack
 - Provides video capture for one button variant
 - Provides video, image, and image freeze capability for 3 button variant



CAMERA STANDARD ACCESSORIES

The Argus Mi-TIC comes with the following standard accessories:

- Lithium Phosphate Battery pack
- Truck/Desktop Charger with mains plug for (US, UK, Europe, AUS, South America)
- Retractable Lanyard
- Picatinny rail accessory mount
- USB Connection Lead for PC / laptop
- User manual

CAMERA ORDER CODES

The Mi-TIC has the following order codes:

- MI-16X-Y – 160x120 resolution version
- MI-32X-Y – 320x240 resolution version

when X = 0, camera is 30Hz; when X = 9, camera is 9Hz;
when Y = 1, camera has one button; when Y = 3, Camera has 3 buttons

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).

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CAMERA SPECIFICATION

Environmental Data

- Thermal conditions - The camera has been designed to operate:
 - continuously between -10 °C (14 °F) and +80 °C (176 °F) or
 - 150 °C (300 °F) for 15 minutes
 - 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 2 metres (78 inches) onto concrete
- Storage - It is recommended that for maximum effective operational life, the storage temperature is kept between -10 °C and +40 °C (14 °F and 104 °F)

Optical Data

Detector

- Sensor type - Uncooled Microbolometer
- Sensor material - Amorphous Silicon (ASi)
- Resolution - MI-160 : 160 x 120 pixels; MI-320 : 320 x 240 pixels
- Pixel size - 25µ
- Spectral response - 8 – 14 µm
- MDTD - 70 mK (0.07 °C) typical (Minimum Discernible Temperature Difference)
- Dynamic range - -40 °C to 800 °C (-40 °F to 1472 °F) via 3 ranges with auto-switching.
- Refresh rate - 120Hz for 160 sensor, 60 Hz for 320x240 sensor
- Spot temperature range - 0 °C to 800 °C (32 °F to 1472 °F)

Lens

- Lens material - Germanium
- Focal distance - 1 m to infinity, optimized at 4 m (3 feet to infinity, optimized at 13 feet)
- Aperture - f/1.0
- Field of view - 50° horizontal, 37.5° vertical

Display

- Type - High grade, Industrial, color TFT active matrix LCD
- Size - 69 mm (2.7 inches)
- Pixel format - QVGA 320 x 240, (each pixel RGB format, total pixels 230,400 pixels)
- Video input - Sensor synchronized direct digital drive
- Backlight - 400cd/m²

Mechanical Data

- Camera dimensions (H x W x D) - 200 mm x 88 mm x 85 mm (without Picatinny rail)
585g (1lb and 5oz) without battery;
- Camera weight - 750g (1lb and 10oz) with std. battery;
840g (1lb and 14oz) with high capacity battery
- Battery dimensions (H x W x D) - 87mm x 76mm x 28mm (std. battery)
87mm x 76mm x 35mm (high capacity battery)
- Battery weight - 160g (6oz) (std. battery)
250g (9oz) (high capacity battery)
- Charger dimensions (H x W x D) - 167mm x 112mm x 120mm
- Charger weight - 550g (1lb 3oz)
- Outer camera case and handle - Radel[®]R-5100 and Santoprene[®]
- Rear and front bumpers - Multiflex[®] or Santoprene[®]
- Lens window - Germanium (2 mm thick) with durable coating

Electrical Data

- Power consumption - <3W typical
- Start-up time - <5 seconds typical
- Battery type - Lithium Phosphate Rechargeable Battery
- Battery capacity - 1100 mAh, 6.6V (std battery); 2500mAh, 6.6V (high capacity battery)
- Std Battery life - 2 hours @ ambient temperature (22 °C, 72 °F)
- Std Battery charge time - 1 hour nominal
- High Capacity Battery Life - 4 hours @ ambient temperature (22 °C, 72 °F)
- High Cap. Battery charge time - 2 hours nominal
- Battery recharge cycles - Over 1000 cycles
- Battery sealing - IP67
- Charging temperature - 0 °C to 40 °C (32 °F to 104 °F); 65 °C (150 °F) can be tolerated
- Charger input voltage - 10V – 32V DC (12 V and 24 V vehicle systems)
- Charger operating temperature - 0 °C to 40 °C (32 °F to 104 °F)

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
- Vibration/Shock - BS EN 60721-3-2 Class 2M3.
- RoHS - All parts of the system are compliant with EU directive 2002/95/EC