

Datasheet

MIC1-412 Thermal

Precision through flexibility

BRUSHLESS
MOTOR TECHNOLOGY



STANDARD BLACK



Inverted Mount



Upright Mount

ALSO AVAILABLE IN STANDARD GREY, STANDARD WHITE & BESPOKE COLOURS

EXAMPLES OF OPTICAL AND THERMAL MODES



Optical image



Thermal image -
White hot spot mode



Thermal image -
Black hot spot mode



Thermal image -
Ice and fire mode



Thermal image -
Glow bow mode



Thermal image -
Iron bow mode

Forming part of the MIC1 series of fully functional PTZ cameras, the “Metal Mickey” MIC1-412 thermal range has been designed to offer an extremely reliable, robust and high quality surveillance solution for security applications that demand the very best performance. Precision engineered to exacting standards, the range offers the most ruggedized dual spectra image capture solution available on the market today.

Containing both a high quality optical day/night camera module and FLIR thermal imaging module that sit side-by-side within the housing, the compact MIC1-412 thermal range turns from a high resolution overview camera to high performance thermal camera at the press of a single button on the control keyboard.

A choice of 18x or 36x day/night camera modules are available with the latest 50mm un-cooled FLIR thermal imager to provide a range of enhanced viewing options such as spectral heat variance and hot and cold spot highlights up to a distance of over 780 meters. What's more, the FLIR thermal imager has built-in sun protection that allows the camera to self-heal should it be pointed directly at the sun.

Brushless motor technology ensures ultra-reliable, whisper quiet operation while groundbreaking resolver technology provides pin-point accuracy and affords the user full 360° continuous rotation pan and an unprecedented 320° tilt control.

The MIC1-412 thermal range is compatible with all MIC1 series connection cables, bracketry, control equipment and Power Supply Units (PSUs) for ease of installation, integration and operation.

For further information and application examples please visit us at FVcctv.co.uk

Features at a glance

Dual spectra imager

Switch between optical camera mode and thermal imager mode at the press of a single button

Brushless Motor Technology

Whisper quiet operation and smooth control is provided through the use of ultra-reliable brushless motors

Robust design

Featuring aluminium construction rated to IP67 and a corrosion proof coating, the MIC1-412 thermal range has been designed to withstand even the harshest of conditions

Integrated wiper unit

Regardless of the weather the MIC1-412 thermal range is able to capture the highest possible quality image all year around thanks to its integrated wiper

Host of mounting and viewing options

Faultless operation either upright or inverted gives the user a host of mounting and viewing possibilities

Easy to use

The same easy to use functionality of all MIC1 series cameras, including the same connection cables, bracketry, control equipment and PSUs

Aluminium – Stainless Steel – Underwater – ATEX Certified – Static – Infrared – Public Address – Thermal

Military – Perimeter Security – Border Patrol – Rescue Services – Fire Departments – Law Enforcement

Camera Module (optical)

Image sensor	1/4" EXview CCD
Picture elements	380K NTSC / 440K PAL (WIDE)
Horizontal resolution	470TVL NTSC / 460TVL PAL (WIDE)
Filter	Automatic mechanical IR cut filter
Focus system	Auto or manual
Iris	Auto or manual with slow shutter integration modes
Synchronisation	Internal / External (V-Lock)
Recommended illumination	100 to 100,000 lx
Signal/Noise ratio	50dB or more
Back Light Compensation (BLC)	On/Off
White balance	Automatic
Automatic Gain Control (AGC)	-3 to -28 dB, 2dB steps
Aperture control	16 Steps

18x optical zoom module

Lens	F=4.1mm (WIDE) to 73.8mm (TELE), F1.4 to F3.0
Zoom	18x optical (12x digital)
Angle of view	48° (WIDE end) to 2.8° (TELE end)
Minimum illumination	0.7 lux (F1.4, 1/60s NTSC, 1/50s PAL), 0.11 lux (F1.4, 1/4s NTSC, 1/3s PAL), 0.01 lux or less (F1.4, 1/4s NTSC, 1/3s PAL, ICR ON)
Shutter speed	1/1 to 1/10,000s (22 steps) NTSC, PAL

36x optical zoom module

Lens	F=3.4mm (WIDE) to 122.4mm (TELE), F1.6 to F4.5
Zoom	36x optical (12x digital)
Angle of view	57.8° (WIDE end) to 1.7° (TELE end)
Minimum illumination	1.4 lx (1/60s NTSC, 1/50s PAL), 0.1 lux (1/4s NTSC, 1/3s PAL), 0.01 lux or less (1/4s NTSC, 1/3s PAL, ICR ON)
Shutter speed	1/4 to 1/10,000s (20 steps) NTSC, 1/3 to 1/10,000s (20 steps) PAL

Camera Module (thermal)

Lens	50mm
Image sensor	Focal Plane Array (FPA), un-cooled Vanadium Oxide microbolometer (standard: 7.5Hz NTSC, 8.3Hz PAL) (US export licence required: 30Hz NTSC, 25Hz PAL)
Picture elements	324 (H) x 256 (V)
Spatial resolution	0.760 mrad with 50 mm lens
Field of view	14° (H) x 11° (V) with 50 mm lens
Focus	Factory-set at infinity focus
Detection range	780M human detection range, 2.2km object detection
Spectral response	7.5 to 13.5µm
Thermal sensitivity	85 mK at F1.6
Features	White hot, black hot and false colour

Operational*

Manual flip	Yes
Presets	64 telemetry presets accurate to less than 0.1° utilising resolver technology (using FV protocol, 10 camera set-up presets to allow ANPR, colour correction etc.)
Preset tours	6 tours, each with up to 32 presets
Sector titles	Yes (64 sectors), 20 characters per title
Preset titles	20 character caption for each of the 64 presets
Home position	Yes (preset 1 or tour)

Communication & Protocols

Communication	RS485 / RS422
Control protocol	Refer to current supported protocol list

Connectivity

Video	Co-axial via composite cable
Telemetry	Twisted pair. Simplex, half and full duplex operation via composite cable
Power	Via composite cable

Alarms

Alarm inputs	1 x tamper input (additional inputs possible with optional alarm card in PSU)
Alarm communication	Tamper switch (ground connection)

Mechanical

Drive unit	Integral pan/tilt motor drive
Pan angle	360° continuous rotation
Pan speed	Variable, up to 90° per second
Tilt angle	320°
Tilt speed	0.2° to 90° per second variable
Speed control	Closed loop electronics
Preset accuracy	Better than 0.08°
Proportional P/T to Zoom	Yes

Physical

Construction material	6mm thick aluminium
Viewing window	Tempered flat glass (optical) & germanium glass (thermal)
Standard colours	Black (RAL9005), Grey (RAL7001) or White (RAL9003)
Standard finish	Powder coated
Dimensions	267(W) x 439(H) x 200(D)mm
Weight	9.5Kg (including 4" PCD base)

Environmental

Operational temperature	-20°C to +50°C (-30°C with optional heater)
Weather proofing	NEMA 4x / IP67

Electrical

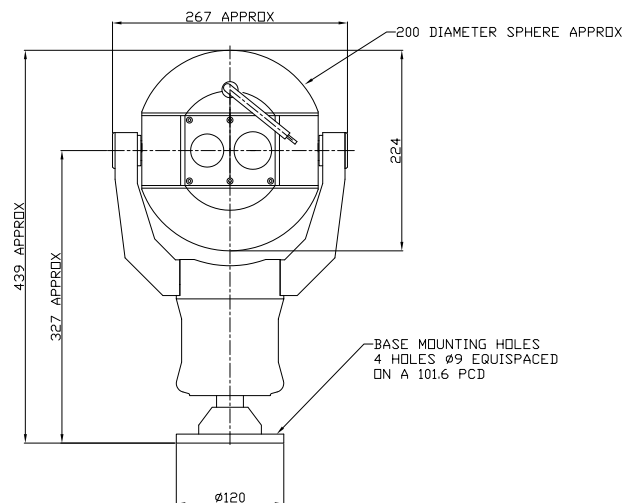
Input voltage	24V AC/DC
Power consumption	30W max

Available Options

Configuration	Upright mount or inverted mount options
Colour/Finish	Bespoke colours and finishes available on request
Camera module (optical)	18x camera module or 36 x camera module
Camera colour system	NTSC or PAL
Installed protocol	Choose from current protocol list
Telemetry control card	Supplied as standard
Window wiper	Supplied as standard
Heater	Optional, factory fit
Alarm card	Optional (In PSU), factory fit
Washer	Optional (washer bracket only)

Accessories

Power supply	Choice of 115V AC, 230V AC, 24V AC & 12V DC versions
Mounting hardware	Compatible with all MIC1 series bracketry
Cabling	Optional. Choose from 2M, 10M, 20M or 25M versions



412 DUAL OPTICAL/THERMAL OUTLINE DIMMS

All measurements in mm.

*functions available when used with the Forward Vision protocol, other protocols may vary.

DEALER / DISTRIBUTOR


Specifications are subject to change without notice

MIC1_412_thermal_version3


**FOR FURTHER INFORMATION
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