

MIC1-400 aluminium

A&E Specifications – version 1.0

MIC1-400 aluminium fully functional PTZ camera

18x camera version

The fully functional PTZ camera shall be a MIC1-400 PTZ camera rated to IP68 / NEMA 4x with a high resolution 18x true day/night camera.

36x camera version

The fully functional PTZ camera shall be a MIC1-400 PTZ camera rated to IP68 / NEMA 4x with a high resolution 36x true day/night camera.

1.0 The physical attributes of the unit shall meet the following design and performance specifications:

- 1.1 The unit shall be environmentally rated to IP68 / NEMA 4x
- 1.2 The unit shall operate from +50 degrees* to -20 degree centigrade temperature variations (-30° with optional heater), up to hurricane force wind conditions (above 120mph winds) and underwater to a depth of 1 meter
- 1.3 The unit shall be machined from 6mm thick solid aluminium
- 1.4 The unit shall be classed as vandal resistant
- 1.5 The unit shall have a weather resistant coating in a choice of colours:
 - 1.5.1 The unit shall be black (RAL9005)
 - 1.5.2 The unit shall be white (RAL9003)
 - 1.5.3 The unit shall be grey (RAL7001)
 - 1.5.4 The unit shall be available in bespoke RAL colours if pre-agreed minimum quantity levels are reached
- 1.6 The unit shall have the ability to be mounted either upright, inverted or canted at 45°
- 1.7 The unit shall be no more than 5.5Kg in weight
- 1.8 The unit shall comply with ROHS, CE and FCC standards
- 1.9 The unit shall have dimensions of 205(W) x 360(H) x 165(D)mm
- 1.10 The unit shall feature an optically perfect, flat viewing window
- 1.11 All weatherproof seals within the unit shall last for the 3yr warranty period of the unit without need for maintenance or replacement
- 1.12 To facilitate installation the unit shall be supplied with attached 4 inch PCD base as standard with pre-drilled hole suitable for a safety chain
- 1.13 The unit shall be capable of full operation at a composite cable length of 25 metres maximum between PTZ camera head and the power supply

* Forward Vision recommends the use of a camera finished in white and using a sunshield in extremely sunny environments.

2.0 The unit's high speed pan/tilt drive unit shall meet or exceed the following design and performance specifications:

- 2.1 The unit shall feature precision brushless motor technology for its pan/tilt drive
- 2.2 The pan/tilt drive speed shall range from 0.2° per second to 90° per second
- 2.3 The unit shall be capable of 360° continuous rotation pan and 320° tilt
- 2.4 The unit shall utilise resolver positioning technology
- 2.5 The unit shall have a pan and tilt position accuracy of greater than 0.08°

3.0 The connectivity of the unit shall meet the following design and performance specifications:

- 3.1 Video, power and telemetry shall be supplied to the unit through Forward Vision's multi-connector via a single cable

4.0 The camera module within the PTZ unit shall meet or exceed the following design and performance specifications:

18x camera module

- 4.1 The camera module shall feature a 1/4" EXview™ CCD
- 4.2 The camera module shall be a true day/night unit
- 4.3 The camera module shall switch from day mode (colour) to night mode (monochrome) via a photocell integrated into the PTZ camera head that can be set to user selectable levels, or via a remote keyboard
- 4.4 The camera module shall have a resolution of 470TVL (NTSC) / 460TVL (PAL)
- 4.5 The camera module shall have an 18x optical zoom with 12x digital zoom
- 4.6 The camera module shall have a minimum illumination sensitivity of 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)
- 4.7 The camera module shall have selectable on/off Backlight Compensation (BLC)
- 4.8 The camera module shall have 16 steps aperture control
- 4.9 The camera module shall have Automatic Gain Control (AGC) from -3 to -28 dB in 2dB steps
- 4.10 The camera module shall feature an automatic mechanical IR cut-filter
- 4.11 The camera module shall have a signal to noise ration of greater than 50dB
- 4.12 The camera module shall use Internal / External (V-Lock) synchronisation
- 4.13 The camera module shall have a lens that performs to F=4.1mm (WIDE) to 73.8mm (TELE), F1.4 to F3.0
- 4.14 The camera module shall have an angle of view of 48° (WIDE end) to 2.8° (TELE end)
- 4.15 The camera module shall have a shutter speed of 1/1 to 1/10,000s (22 steps) NTSC
- 4.16 The camera module itself shall have up to 10 selectable settings that can be mapped to a preset on the remote keyboard, including shutter speed and colour control for ANPR applications

36x camera module

- 4.17 The camera module shall feature a 1/4" EXview™ CCD
- 4.18 The camera module shall be a true day/night unit
- 4.19 The camera module shall switch from day mode (colour) to night mode (monochrome) via the remote keyboard.
- 4.20 The camera module shall have a resolution of 470TVL (NTSC) / 460TVL (PAL)
- 4.21 The camera module shall have an 36x optical zoom with 12x digital zoom
- 4.22 The camera module shall have a minimum illumination sensitivity of 1.4 lux (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)
- 4.23 The camera module shall have selectable on/off Backlight Compensation (BLC)
- 4.24 The camera module shall have 16 steps aperture control
- 4.25 The camera module shall have Automatic Gain Control (AGC) from -3 to -28 dB in 2dB steps
- 4.26 The camera module shall feature an automatic mechanical IR cut-filter
- 4.27 The camera module shall have a signal to noise ration of greater than 50dB
- 4.28 The camera module shall use Internal / External (V-Lock) synchronisation
- 4.29 The camera module shall have a lens that performs to F=3.4mm (WIDE) to 122.4mm (TELE), F1.6 to F4.5
- 4.30 The camera module shall have an angle of view of 57.8° (WIDE end) to 1.7° (TELE end)
- 4.31 The camera module shall have a shutter speed of 1/4 to 1/10,000s (20 steps) NTSC, 1/3 to 1/10,000s (20 steps) PAL
- 4.32 The camera module itself shall have up to 10 selectable settings that can be mapped to a preset on the remote keyboard, including shutter speed and colour control for ANPR applications

5.0 The unit shall have the following operational design and performance specifications

- 5.1 The unit shall have 64 telemetry presets
- 5.2 The unit shall have preset titles of 20 characters for each preset
- 5.3 The unit shall have 6 tours, each with 32 preset positions
- 5.4 The unit shall have a random tour function
- 5.5 The unit shall have 64 sector titles, each with 20 characters
- 5.6 The unit shall have the ability to select a home position

6.0 The unit shall have the following electrical design and performance specifications:

- 6.1 Total power consumption of the standard camera shall be no more than 25.2W and no more than 50W when fitted with the heater option
- 6.2 The unit shall have available a Forward Vision power supply providing +18V DC from one of the following input voltages 12V DC to 24V DC, 24V AC, 115V AC & 240V AC
- 6.3 The unit shall have available an optional slim line power supply, for fitting in restricted spaces, providing +18V DC from the following input voltages 115V AC or 240V AC
- 6.4 The camera unit shall be fitted with control PCB's including a control processor, voltage regulator, brushless motor drives and connectivity of ancillary items such as heaters, infrared illuminators and speakers

7.0 The unit shall feature the following software specifications:

- 7.1 The unit shall have the ability to operate with protocols other than Forward Vision's proprietary software, programmed prior to leaving the factory:
 - 7.1.1 The unit shall be compatible with American Dynamics protocol
 - 7.1.2 The unit shall be compatible with Ernitec protocol
 - 7.1.3 The unit shall be compatible with Kalatel protocol
 - 7.1.4 The unit shall be compatible with Molynx protocol
 - 7.1.5 The unit shall be compatible with Panasonic protocol
 - 7.1.6 The unit shall be compatible with Pelco P / Pelco D protocol
 - 7.1.7 The unit shall be compatible with Philips Bosch protocol
 - 7.1.8 The unit shall be compatible with VCL protocol
 - 7.1.9 The unit shall be compatible with Vicon protocol

8.0 The unit shall have a range of options and accessories available for specific mounting and operational considerations:

- 8.1 Suitable accessories shall be available for the unit to be mounted in an upright or inverted position, either on a base, from a ceiling, on a wall or on at the corner of a structure
- 8.2 The unit shall have an option to fit a washer nozzle to the 4" PCD base
- 8.3 The unit shall have an option to fit a heater contained within the camera head & body
- 8.4 The unit shall have an optional integrated wiper with replaceable wiper blade
- 8.5 The unit shall have an optional safety chain
- 8.6 The unit shall have an optional 8 input alarm card (inc washer pump drive function) housed in the PSU
- 8.7 The unit shall have an optional washer pump drive card (no alarm inputs) housed in the PSU
- 8.8 The unit shall have an optional 3D, scaling perspective privacy card with unlimited zones (housed in the camera head)
- 8.9 The unit shall have available a Forward Vision power supply providing +18V DC from one of the following input voltages 12V DC to 24V DC, 24V AC, 115V AC & 240V AC
- 8.10 The unit shall have available a slim line power supply providing +18V DC from the following input voltages 115V AC or 240V AC
- 8.11 The unit shall have an optional sunshield available for use in environments with high levels of direct sunlight

9.0 The unit shall have the following support information and equipment shipped with it:

- 9.1 The unit shall have a comprehensive operation manual and installation manual provided by CD (English)
- 9.2 The unit shall come with a comprehensive quick start guide (English)