FALCON EYE
COLOR NIGHT VISION
View and record in colors during day and night
NEW TECHNOLOGY – UNIQUE FEATURES
A breakthrough in advanced CMOS and noise elimination technology is the secret behind the revolutionary Falcon Eye cameras.

FALCON EYE - COLOR NIGHT VISION
A new range of Falcon Eye cameras with truly unique features making it possible to view and record in colors during night – even in the near total darkness of scenes invisible to the human eye.

MADE IN JAPAN
All parts 100% designed, manufactured and assembled in Japan including sensor, housing, and optics.

EASY IDENTIFICATION
High resolution in clear colors and progressive scanning technology gives outstanding target recognition and identification capability.

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EASY IDENTIFICATION
High resolution in clear colors and progressive scanning technology gives outstanding target recognition and identification capability.

ADAPTS TO LIGHT CHANGES
Rapid overload response gives smooth transition when illumination is changed.

AFFORDABLE LENSES
Interchangeable CS-mount lenses offers great flexibility in focal length for different applications at an affordable price level.

NIGHT AND DAY
High quality viewing, video recording and photo capturing during day and night.

NEW TECHNOLOGY – UNIQUE FEATURES
A breakthrough in advanced CMOS and noise elimination technology is the secret behind the revolutionary Falcon Eye cameras.
MILITARY
Recording of military drills and actual operations during night and
day with an easy to use camera build for rough environments.
The high resolution color image is pleasant for the eye even after
long time use, and reveals important details in the recorded
scene.

SURVEILLANCE
Gives the power to see and record unwanted personnel
and threats invisible to the naked eye, and helps secu-
rit y professionals, homeland security officers and coast
guards to improve surveil-
ance, increase security and
prevent crimes.

ENVIRONMENT RESEARCH
Documentation and research of the nature and environment
is no longer limited by availability of light. With the Falcon Eye
camera scientists have a tool to enhance our knowledge and to
increase the protection of the environment.

NEWS & DOCUMENTATION
Broadcast companies, TV stations, newspapers, and magazines
can report in HD full color videos and still images of events and
disasters happening around the clock.

LAW ENFORCEMENTS
Excellent recognition performance and tamper proof data makes
the Falcon Eye system ideal for monitoring of crime scenes and
recording as evidence.

RESCUE
Operations are needed
night and day all year round.
The Falcon Eye camera is
designed to be effective
regardless of weather or
lighting conditions, and gives
the maximum support to
rescue teams in their effort
to save lives.

NATURE
Outdoor recording of
wildlife at night in HD
color can now docu-
ment and entertain us
in ways we have never
seen before.

FALCON EYE
"Defog mode" not activated.

FOG OFF

The Falcon Eye cameras includes a fog elimination feature. The Fog Mode cuts through mist - boosts contrast to enhance clarity.

"Defog mode" activated.
**Imaging Unit**
- Minimum Subject Illumination: 0.005 lx (F1.4, 30 frames per second)
- Image Sensor: CMOS, 2/3” size
- Resolution: HD (High Definition) resolution. 1280 (H) x 720 (V) pixels.
- Pixel size: 7.1μm (H) × 7.1μm (V)
- Image Sensing: Color
- Filter: RGB Primary Color Filter (Bayer Array).
- Spectral Sensitivity: 390-700 nm
- Dynamic Range: 250%
- Scanning system: Progressive
- Overload response: Rapid, makes consecutive recording possible even with large change in ambient light
- Compression: Video mode: H.264 / Still image: JPEG
- Frame rate: Video mode: 30 fps

**Recording and settings**
- Exposure mode: Automatic, and manual settings of exposure time (1/8 sec – 1/10,000 sec).
- Focus Settings: Manual
- Autofocus System: N/A
- White Balance setting: Automatic, and manual select between 6 pre-sets.
- Recording Media: SD Card (standard and WORM)
- Menu system: Yes
- Fog removal: Yes, can enhance image quality and make details more visible. Setting: OFF / AUTO

**Lens**
- Lens System: Interchangeable Lens System
- Lens Mount: CS (C mount lenses can be used together with the optional 5mm adaptor ring).

**Viewing**
- Viewfinder: Electronic (EVF) with Diopter Adjustment
- LCD Monitor: Not Available

**Audio**
- Recording Format: Linear PCM 16bit/48KHz. Build in microphone: mono, optional microphone: stereo
- Audio input: Build in microphone
- External audio input: Optional external microphone, 3.5mm stereo mini-jack port
- Audio settings: Automatic
- Audio output: Built-in Speaker: None
- Headphone Jack: Available; 3.5mm stereo mini-jack

**Output**
- Format: HD 1280×720 (with embedded audio)
- HDMI: Yes (Type A)

**Power**
- Power Source: 7.4 V Li-ion battery, 4,900 mAh
- Power supply: DC
- Max. Recording Time: 5 hours consecutively with the standard battery
- Tripod screw: Yes, 1/4” diameter
- Accessory mount: Hot shoe
- Construction: Weather sealed / Splash-proof, rugged compact housing made of aluminum
- Weight camera: 995 g (accessories and battery not included)
- Dimensions: 85 mm diameter x 150 mm length
- Temperature: -15°C to 40°C

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**FALCON EYE KC-2000 CAMERA**

**DUAL FUNCTION**
Captures video and still images with simple two button operation.

**USE AS EVIDENCE**
Movies and images can be used as evidence of crime scenes, as tamper-proof SD cards can be used (Write Once Read Many SD memory cards).

**FULL METAL JACKET**
Build for operation in tough environments. Housing made of aluminum. Weather proof.

**PLEASANT FOR THE EYE**
High resolution image (HD) with natural colors makes it pleasant for the eye also after long time use.

**AUTOMATIC**
Easy to operate with most settings done automatically. Video recording can be handled by persons without photographic background.

**HANDHELD OPERATION**
Compact, lightweight and excellent portability. Designed for handheld shooting.

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**KC-2000**
MADE IN JAPAN FALCON EYE
Falcon Eye KC-2000 Accessories

**Lithium Ion Battery**
A high capacity rechargeable Li-ion battery for use with Falcon Eye KC-2000 camera.
- **Capacity:** 7.4V, 4900mAh, 37Wh (minimum capacity)
- **Safety features:** Over charge, over discharge and over load protection
- **Maximum load:** 3.6A / 21W
- **Dimensions:** 43(W) x 70.4(H) x 47(D) mm
- **Weight:** 225g approx.

**2-Channel Battery Charger**
7.4V 2-Channel Simultaneous Quick Charger for the KC-2000 Li-ion battery.
- Each channel is operated independently, so batteries can be placed on charge in any order and at any time for a quick turnaround
- **AC Adaptor input voltage:** AC100 240V 50/60Hz
- **Charger input voltage:** 12~19V DC
- **Charge current:** 1.6A
- **Compatible batteries:** IDX SSL-JVC50
- **Charging time:** 230 mins approx.
- **Dimensions (mm):** 140(W) x 46(H) x 129(D)
- **Weight:** 500g approx.

**Optional accessories** - (not included with camera):

**Stereo Directional Microphone**
Stereo Electret Condenser type (dual uni-directional).
- **Frequency Response:** 100-18,000Hz
- **Sensitivity:** -40dB @1kHz (1V/Pa)
- **Output Impedance:** 1.5 k ohm @1kHz
- **Dynamic Range:** 66dB
- **Power Supply:** 1.5VDC (“AAA” size battery)
- **Max. SPL:** 100dB
- **Battery Current Drain:** 0.5mA
- **Battery Life:** 400 hours with Alkaline battery
- **Weight w/o battery:** 52g
- **Dimensions:** 177mm long – 18.2mm diameter
- **Output cable:** attached with 3.5mm plug
- **Supplied Accessories:** Camera hot-shoe mic holder, windscreens

**Kowa TP556 f/5.6 Telephoto Lens**
A versatile long telephoto lens adjustable for 3 different focal lengths using same master lens and three adapters.
- **Fluorite crystal Prominar XD lenses.**
- **Lightweight & compact design. Dust & weather proof.**
- **Dual focus rings**
- **Focal length:** 350 mm, 500mm, and 850 mm
- **Focus type:** Manual
- **Aperture:** Maximum: f/5.6 Minimum: f/11
- **Angle of View:** 4.9°
- **Minimum Focus Distance:** 3.0 m
- **Magnification:** 0.17x
- **Elements/Groups:** 7/7
- **Diaphragm Blades:** 9
- **Image Stabilization:** No
- **Tripod Collar:** Yes, Removable – rotating
- **Filter Thread:** Front:95 mm
- **Dimensions (DxL):** 10.16 x 34.04 cm
- **Weight:** 1.97 kg

**Kowa LMZ69M Macro Zoom lens**
Iris Range: F1.4 - Close,
- **Focal Length:** 11.5 mm - 69 mm (6x)
- **Iris, Focus, Zoom Control:** Manual
- **Size:** 48 x 102.7 mm
- **Mount:** C-mount
- **Weight:** 300 g
- **Temperature range:** -10 C° - +45 C°

**Elicar V-HQ Macro Zoom Lens**
f/4.1-5.7 Macro Zoom Lens, 300 – 600mm IF ED
- **Focal Length on c-mount:** 450-900 mm
- **Continuous focusing from 0.55 cm to infinity.**
- **All rings (focusing/zooming/aperture/macro) are of solid metal, not rubberized.**
- **The markings of all scales are engraved.**
- **Focus type:** Manual
- **Zoom type:** Rotating
- **Aperture:** Maximum: f/4.1 Minimum: f/32
- **Max. reproduction ratio:** 1:4
- **Elements/Groups:** 19/16
- **Diaphragm Blades:** 10
- **Minimum Focus Distance:** 0.55 m
- **Angle of View:** 7’55” – 4’06’
- **Coating:** Multi-coated
- **Hood:** Build-in retractable
- **Tripod Mount:** Build-in
- **Magnification:** 0.17x
- **Filter Thread:** 112 mm
- **Mount:** C/CS
- **Dimensions (DxL):** 120mm x 414 cm
- **Weight:** 3,750 g
- **Warranty:** Five-Year
Falcon Eye KC-1000

**Camera Head Unit**

- **Minimum Subject Illumination:** 0.005lux (F1.4, 1/30, +66 dB)
- **Image Sensor:** CMOS, 2/3” size, Color
- **Pixel size:** 7.4um (H) x 7.4um (V)
- **Resolution - total:** Approx. 147 Mpxles, 1408 (H) x 1042 (V) pixels
- **Resolution - effective:** Approx. 133 Mpxles, 1288 (H) x 1032 (V) pixels
- **Filter:** RGB Primary Color Filter (Bayer Array).
- **Sensitivity:** F1.6 2000lux
- **S/N ratio:** Over 50dB (Gamma =1, edge enhancement OFF)
- **Spectral Sensitivity:** 390-700 nm
- **Dynamic Range:** 1250%
- **Scanning system:** Progressive
- **Frame rate:** 60 fps
- **Spectral Sensitivity:** 390-700 nm
- **CCU Port:** J45 x 1 (screw lock)
- **Lens mount:** C
- **Overload response:** Rapid, for recording with large change in ambient light

**Camera Control Unit**

Video output format: HDMI x 1, HD-SDI (BNC) x 1, USB x 1
- **Sync signal input:** External sync input [VBS / bi-level] BNC-1
- **USB:** USB 2.0 x 1
- **Serial port:** RS-232C (D-Sub 9-pin male) x 1
- **GPI (Contact type):** 2 circuits (using unutilized serial port pins)
- **LAN:** RJ45 x 1 (10Base-T, 100Base-TX)
- **IR remote receiver (optional):** Front x 1, rear expansion port x 1
- **Camera port:** Camera x 1
- **Video output format 3G-HDSDI:** NTSC, PAL down converted (letterboxed)
- **Video output format Composite:** USB (JPEG) 1280-1024
- **Fog Mode:** Yes, boost contrasts. Setting: OFF / AUTO

**General Specifications**

- **DC Input Voltage:** DC12V ± 10%
- **Power consumption:** 3W or less
- **Operating temp. / humidity range:** 0°C - 45°C / 35-90%
- **Storage temp. / humidity range:** -20°C - 60°C / 20 - 90%
- **Dimensions Camera head:** 46.0 (W) x 55.2 (H) x 51.9 (D) mm
- **Weight camera head:** 160g
- **Dimensions camera control unit:** 170.0 (W) x 47.0 (H) x 183.5 (D) mm
- **Weight camera control unit:** 1100g
- **Operating temp./ humidity range:** 0°C - 45°C / 35-90%
- **Power consumption:** 13W or less
- **DC Input Voltage:** DC12V ± 10% (ripple 50mVp-p or less)
- **Operating temp. / humidity range:** 0°C - 45°C / 35-90%
- **Storage temp. / humidity range:** -20°C - 60°C / 20 - 90%
- **Dimensions (Excluding protrusions):** 78.0 (W) x 64.0 (H) x 139.0 (D) mm
- **Storage temp. / humidity range:** -20°C - 60°C / 20 - 90%
- **Dimensions (Excluding protrusions):** 78.0 (W) x 64.0 (H) x 139.0 (D) mm
- **Power consumption:** 7W
- **DC Input Voltage:** DC12V ± 10% (ripple 50mVp-p or less)
- **Operating temp. / humidity range:** 0°C - 45°C / 35-90%
- **Storage temp. / humidity range:** -20°C - 60°C / 20 - 90%
- **Dimensions (Excluding protrusions):** 78.0 (W) x 64.0 (H) x 139.0 (D) mm
- **Weight:** 650 g

**Falcon Eye KC-1100 MK2**

**Camera Specifications**

- **Minimum Subject Illumination:** 0.005lux (F1.4, 1/30, +66 dB)
- **Image Sensor:** CMOS, 2/3” size, color
- **Pixel size:** 5.0um (H) x 5.0um (V)
- **Resolution - total:** Approx. 2.6 Mpxles, 2270 (H) x 1144 (V) pixels
- **Resolution - effective:** Approx. 2.2 Mpxles, 1974 (H) x 1100 (V) pixels
- **Filter:** RGB Primary Color Filter (Bayer Array).
- **Sensitivity:** F1.6 2000lux
- **Horizontal definition:** Over 900TV lines
- **Spectral Sensitivity:** 390-700 nm
- **Dynamic Range:** 250%
- **S/N ratio:** Over 50dB (Gamma =1, Detail mode OFF)
- **Scanning system:** Progressive
- **Overload response:** Rapid, makes recording possible with large change in ambient light
- **Frame rate:** 60 fps
- **Electronic zoom:** x1, x2, x3, x4, x5, x6, x7, x8, x9, x10
- **Picture flip:** Vertical flip, horizontal flip, vertical & horizontal flip
- **Test patterns:** Color bars, grayscale, crosslines available inter- nally
- **Privacy mask:** 8 masks GRAY/WHITE/BLACK
- **OSD:** Operation menu S/N RATIO Over 50dB (-1, edge enhancement OFF)
- **Lens mount:** C
- **Lens control:** 4-pin DC iris control
- **Picture Quality Control:**
  - **Electronic sensitivity boost:** OFF / AUTO / STD / MOVE / MANUAL
- **Electronics shutter:** OFF, 1/50, 1/60, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
- **Backlight correction:** 9-5 area select
- **Gamma correction:** 45 / 0.75 / 1
- **DNR:** Off, Low, High
- **White balance:** ATW1 / ATW2 / AVC / Manual
- **WDR mode:** OFF / WDR / AUTO KNEE / AUTO BLACK STRETCH
- **Fog mode:** Yes, boost contrasts to make details more visible. Setting: OFF / LOW / MID / HIGH
- **Color matrix:** R/G/B/Ye/Cy/Mg 6-axis control
- **Other:** Digital / Chroma / Black Level

**Interface Specifications**

- **Video output:** HD-SDI (BNC) - 1
- **Video output:** Composite video (BNC) - 1
- **Synchronization signal input terminal:** External sync input [VBS / 2 level sync ] BNC - 1
- **Port:** Serial RS-485
- **GPI (Contact type):** IR cut filter (switchable)
- **Output format HD-SDI:** 1080i/59.94, 1080p/29.97, 720/59.94, 720p/29.97, 1080i/50, 1080p/50, 720/50, 720p/50
- **Output format Composite video:** NTSC, PAL downconverted (letterbox / side cut / squeeze)

**Other features**

- **Auto Adjustment:**
  - **Gain:** AUTO / MANUAL (0 - 78.0dB)
  - **Gamma:** Gamma =1, edge enhancement OFF
  - **Picture Quality Control:**
    - **Electronic sensitivity boost:** OFF / AUTO / STD / MOVE / MANUAL
    - **Gain:** Auto: AGC / HYPER-AGC, Manual: LOW / MID / HIGH
  - **Electronics shutter:** OFF, 1/50, 1/60, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
  - **Backlight correction:** 9-5 area select
  - **Gamma correction:** 45 / 0.75 / 1
  - **DNR:** Off, Low, High
  - **White balance:** ATW1 / ATW2 / AVC / Manual
  - **WDR mode:** OFF / WDR / AUTO KNEE / AUTO BLACK STRETCH
  - **Fog mode:** Yes, boost contrasts to make details more visible. Setting: OFF / LOW / MID / HIGH
  - **Color matrix:** R/G/B/Ye/Cy/Mg 6-axis control
  - **Other:** Digital / Chroma / Black Level

**Picture Quality Control:**

- **Electronic sensitivity boost:** OFF / AUTO / STD / MOVE / MANUAL
- **Gain:** Auto: AGC / HYPER-AGC, Manual: LOW / MID / HIGH
- **Electronics shutter:** OFF, 1/50, 1/60, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
- **Backlight correction:** 9-5 area select
- **Gamma correction:** 45 / 0.75 / 1
- **DNR:** Off, Low, High
- **White balance:** ATW1 / ATW2 / AVC / Manual
- **WDR mode:** OFF / WDR / AUTO KNEE / AUTO BLACK STRETCH
- **Fog mode:** Yes, boost contrasts to make details more visible. Setting: OFF / LOW / MID / HIGH
- **Color matrix:** R/G/B/Ye/Cy/Mg 6-axis control
- **Other:** Digital / Chroma / Black Level

**General Specifications**

- **DC Input Voltage:** DC12V ± 10% (ripple 50mVp-p or less)
- **Power consumption:** 7W
- **Operating temp. / humidity range:** 0°C - 45°C / 35-90%
- **Storage temp. / humidity range:** -20°C - 60°C / 20 - 90%
- **Dimensions (Excluding protrusions):** 78.0 (W) x 64.0 (H) x 139.0 (D) mm
- **Weight:** 650 g
THE COMPANY BEHIND FALCON EYE
Komamura Corporation was established in 1947 and has for more than 60 years been an important player in the international professional camera business.
Komamura Corporation developed and marketed the Horseman Professional Camera product range. First for large format film and later new models with world first technology for digital photography.
Komamura Corporation has now shifted the focus from professional photographic equipment into ultra high sensitivity recording technology, and has amazed the world with the introduction of the new Falcon Eye product range.

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