# network Dyna**Hawk**™ 720/820Z-F Series

## Full HD Ultra WDR Speed Dome IP Camera

720/820Z F series Speed Dome IP Camera, with latest encoding technology, is the very first 1080P @ 30fps real-time true WDR speed dome product in the surveillance market. It is also able to deliver crystal clear image with high quality 30x optical zoom lens in very long distance.
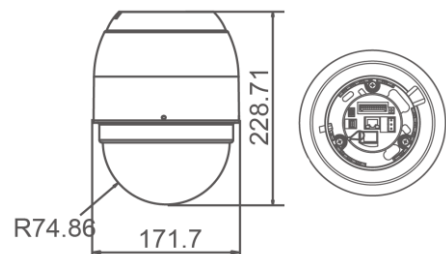
This model can offer simultaneous Quad Streams and Qual Codec, H.264 Baseline / Main / High Profile, MJPEG for various network applications via speeding or limited bandwidth. With software stablizer algorithm, image can still keep steady in windy weather. Compliance with ONVIF Test tool 14.06 and Profile S, this model is able provide fully compatibiloity to any VMS around the world. It can seemlessly connect to the backend system with universal ONVIF protocol.

With built-in heater and 60W PoE power source, this model is able to operate in extreme weather
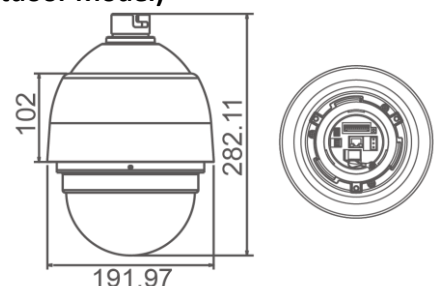
## ▮ Key Features

- Sony Progressive Scan CMOS Sensor
- Up to 30x Optical Zoom
- 12x Digital Zoom
- Dual Shutter Wide Dynamic Range (>96dB)
- 1080P @ 30fps + 1080P @ 30fps
- Supreme Frame Rate Support: 1080P @ 60fps + SXGA @ 60fps
- Quad Streams Support
- Quad Codec: H.264 Baseline / Main / Hight Profile +
- Eletronic Image Stabilizer
- 2D/3D Noise Reduction
- 802.3at 60W PoE+ Support for Heater Activation
- Weatherproof (IP66 International)*

**720 (Indoor Model)**

228.71
R74.86    171.7

**820 (Outdoor Model)**

102    282.11
191.97

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## Camera

| Camera | | F1 (18x) | F2 (20x) | F3 (30x) |
|---|---|---|---|---|
| Image Sensor | | | 1/2.8" Sony Progressive CMOS | |
| Optical Zoom | | 18x | 20x | 30x |
| Digital Zoom | | | 10x | |
| Minimum Illumination | | | 0.5 lux (Color),  0.095 lux (B/W) @ F1.6 | |
| Wide Dynamic Range | | | Shutter WDR (>96dB) | |
| Focus Mode | | | Auto / Manual | |
| White Balance | | | Auto / Indoor / Outdoor / ATW / Manual | |
| Iris Control | | | Auto / Manual | |
| Electronic Shutter | | | 1/1 ~ 1/10000 sec. | |
| AGC Control | | | Auto / Manual | |
| Backlight Compensation | | | On / Off | |

## Lens

| Lens | F1 (18x) | F2 (20x) | F3 (30x) |
|---|---|---|---|
| Focal Length | 4.7 ~ 84.6 mm | 4.7 ~ 94 mm | 4.3 ~ 129 mm |
| Min. Focus Length | 1 m (Wide); 1 m (Tele) | 1 m (Wide); 1 m (Tele) | 1 m (Wide); 1.2 m (Tele) |
| F Number | F 1.6 (Wide); F 2.8 (Tele) | F 1.6 (Wide); F 3.5 (Tele) | F 1.6 (Wide); F 4.7 (Tele) |
| FOV | 55.2˚ (Wide); 3.2˚ (Tele) | 55.8˚ (Wide); 4˚ (Tele) | 65.5˚ (Wide); 3.18˚ (Tele) |

## Operation

| Operation | | |
|---|---|---|
| Pan Travel | | 360° endless |
| Tilt Travel | | -10° ~ 190° |
| Manual Speed | | 0.5° ~ 90°/s |
| Presets | | 256 |
| Preset Accuracy | | 0.225° |
| Preset Speed | | 5° ~ 400°/s |
| Sequence | | 8 |
| Auto Pan | | 4 |
| Cruise | | 8 |
| Privacy Mask | | 16 |
| Proportional Pan & Tilt | | On / Off (Pan and tilt speed proportional to zoom ratio) |
| Resume after Power loss | | Support |
| Home Function | | Preset / Sequence / Auto pan / Cruise |
| Auto Flip | | Image / Mechanical / Off |
| Motion Detection | | Motion Detection Window x 4 sets |
| Day / Night: IR Cut Filter | | On / Off |
| Image Rotation | | Flip / Mirror / Inverse |
| Eletronic Image Stabilizer | | On / Off |
| Noise Reduction | 2D | On / Off |
| | 3D | On / Off |

## Network

| Network | | |
|---|---|---|
| Networking | | RJ-45, 1Gbps Ethernet |
| Video Compression | | MJPEG / H.264 (MPEG-4 Part 10/AVC) Baseline / Main Profile / High Profile |
| Video Stream | Single | H.264 1080P @ 30fps (Shutter WDR Ensable)<br>H.264 1080P @ 60fps (Shutter WDR Disable)<br>Note: Stream can be MJPEG |
| | Dual | H.264 1080P @ 30fps + 1080P @ 30fps (Shutter WDR Enable)<br>H.264 1080P @ 60fps + H.264 D1 @ 30fps  (Shutter WDR Disable)<br>Note: One if the stream can be MJPEG |
| | Multiple | H.264 1080P @ 30fps + H.264 SXGA @ 30fps + H.264 720P @ 30fps + H.264 CIF @ 30fps  (Shutter WDR Enable)<br>H.264 1080P @ 60fps + H.264 CIF @ 60fps + H.264 CIF @ 30fps + H.264 CIF @ 30fps  (Shutter WDR Disable)<br>Note: One if the stream below 1080P can be MJPEG |
| Video Resolution | | H.264/MJPEG - Full HD 1080P / SXGA / HD 720P / XGA / SVGA / D1 / VGA / CIF / QVGA |
| Audio Compression | | G.711 / G.726 |
| Audio Stream | | Two-way Audio |
| Protocols | | IPv4/v6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, SNMP, QoS, ONVIF, ARP |
| Security | | HTTPS / IP Filter / IEEE 802.1x |
| Alarm | Input | 4 Sets / 5V 10kΩ pull up |
| | Output | 2 Set / Relay output, max. 2A DC 30V / 0.5A AC 125V |
| Alarm Reaction | | Preset / Sequence / Auto Pan / Cruise |
| Micro SD | | microSDXC  64GB Support |
| Supported Web Browser | | Internet Explore (6.0+) / Chrome / Firefox / Safari |
| Password Levels | | User and Administrator |

## General

| General | | |
|---|---|---|
| Environment | | Indoor / Outdoor |
| Operating Temperature | Indoor | 0°C ~ 40°C (32°F ~ 104°F) |
| | Outdoor | -40°C ~ 50°C (-40°F ~ 122°F) |
| Dimension | Indoor | Ø 171.7 x 228.7 mm (Ø 6.7 x 9 in.) |
| | Outdoor | Ø 191.9 x 282.1 mm (Ø 7.5 x 11.1 in.) w/ Sunshield |
| Weight | Indoor | 1.6 kg (3.57 lb) |
| | Outdoor | 2.3 kg (5.11 lb) w/ Sunshield |
| Power Source | Indoor | 802.3at PoE+ (30W)/ AC 24V ± 10% |
| | Outdoor | 802.3at PoE+ (60W)/ AC 24V ± 10% |
| Power Consumption | Indoor | 24 W |
| | Outdoor | 59.5 W (w/ Heater) |
| Regulatory | | CE / FCC / RoHS / IP66 (Outdoor) |

\* mark for optional items
Product specification and availability are subject to change without notice.