

# Surveillance cameras



*Product line card*

# Surveillance cameras

Box | Box zoom



| Model                      | Box   |   |   |   |   |
|----------------------------|---|---|---|---|---|
|                            | BC820v2   | BC822   | BC822A  | BC822A-HSE  | BC860   |
| Image sensor               | 1/3" CMOS   | 1/2.8" CMOS   | 1/2.8" CMOS   | 1/1.9" CMOS   | 1/2.8" CMOS   |
| Lens                       | C/CS Mount  | C/CS Mount  | C/CS Mount  | C/CS Mount  | C/CS Mount  |
| Focus                      | Auto back focus   | -   | Auto back focus   | Auto back focus   | Auto back focus   |
| Horizontal FOV             | -   | -   | -   | -   | -   |
| Day/night (ICR)            | ✓   | ✓   | ✓   | ✓   | ✓   |
| Supported encoding type    | H.264, MJPEG  | H.264, MJPEG  | H.264, MJPEG  | H.264, MJPEG  | H.264, MJPEG  |
| Multistreaming             | ✓   | ✓   | ✓   | ✓   | ✓   |
| Max resolution             | 1920x1080 @60 fps                                       | 1920x1080 @60 fps                                       | 1920x1080 @60 fps                                       | 1980x1080 @60 fps                                       | 2048x1536 @30 fps                                       |
| Light sensitivity (30 IRE) | 0.04 lux colour<br>0.002 lux B/W                        | 0.01 lux colour<br>0.001 lux B/W                        | 0.01 lux colour<br>0.001 lux B/W                        | 0.01 lux colour<br>0.0005 lux B/W                       | 0.2 lux colour<br>0.02 lux B/W                          |
| IR illuminator             | -   | -   | -   | -   | -   |
| Video enhancements         | 120 dB WDR, BLC, 3DNR                                   | 120 dB WDR, BLC, 3DNR, EIS                              | 120 dB WDR, BLC, 3DNR, EIS                              | 120 dB WDR, BLC, 3DNR, EIS                              | 120 dB WDR, BLC, 3DNR                                   |
| Alarm inputs/outputs       | 2/1   | 1/1   | 1/1   | 1/1   | 1/1   |
| Analog video output        | PAL/NTSC  | PAL/NTSC  | PAL/NTSC  | PAL/NTSC  | PAL/NTSC  |
| Audio                      | 2-way   | 2-way   | 2-way   | 2-way   | 2-way   |
| Integration protocols      | ONVIF Profile S, CGI                                    | ONVIF Profile S, CGI                                    | ONVIF Profile S, CGI                                    | ONVIF Profile S, CGI                                    | ONVIF Profile S, CGI                                    |
| PTZ range                  | -   | -   | -   | -   | -   |
| Auto tracking              | -   | -   | -   | -   | -   |
| Video analytics            | Basic   | Basic   | Basic   | Basic   | Basic   |
| Privacy masks              | 5   | 5   | 5   | 5   | 5   |
| Security                   | Password protected, HTTPS, 802.1x, IP address filtering | Password protected, HTTPS, 802.1x, IP address filtering | Password protected, HTTPS, 802.1x, IP address filtering | Password protected, HTTPS, 802.1x, IP address filtering | Password protected, HTTPS, 802.1x, IP address filtering |
| Micro SD support           | 64 GB   | 128 GB  | 128 GB  | 128 GB  | 128 GB  |
| SFP interface              | -   | -   | -   | -   | -   |
| Ingress protection         | -   | -   | -   | -   | -   |
| Vandal proof               | -   | -   | -   | -   | -   |
| UL/UR Listed               | -   | -   | -   | -   | -   |
| Power consumption          | 4 W   | 4 W   | 9.5 W   | 8 W   | 4 W   |
| Power                      | 12/24 Vdc, 24 Vac, PoE (802.3af)                        | 12/24 Vdc, 24 Vac, PoE (802.3af)                        | 12/24 Vdc, 24 Vac, PoE (802.3af)                        | 12/24 Vdc, 24 Vac, PoE (802.3af)                        | 12/24 Vdc, 24 Vac, PoE (802.3af)                        |
| Operating temperature      | -20 °C to +55 °C<br>-4 °F to +130 °F                    | -10 °C to +60 °C<br>14 °F to 140 °F                     | -20 °C to +60 °C<br>-4 °F to 140 °F                     | -10 °C to +50 °C<br>14 °F to +122 °F                    | -20 °C to +60 °C<br>-4 °F to 140 °F                     |
| Dimensions                 | 75 x 52 x 155 mm<br>3.0 x 2.1 x 6.1 in                  | 76 x 53 x 126 mm<br>3.0 x 2.1 x 5.0 in                  | 76 x 52 x 152 mm<br>3.0 x 2.1 x 6.0 in                  | 76 x 52 x 152 mm<br>3.0 x 2.1 x 6.0 in                  | 76 x 52 x 152 mm<br>3.0 x 2.1 x 6.0 in                  |

For more information: [www.tkhsecurity.com](http://www.tkhsecurity.com)

## Koh Samui, Thailand

Praised for its breathtaking beaches, delightful holiday resorts and densely forested interior, Koh Samui has quickly become one of Thailand's most popular tourist destinations. In an effort to create a safe environment for the growing number of people visiting the island, Koh Samui invested in a multipurpose video surveillance network.

## Other product groups



Explosion-proof cameras



Video over fiber



Video encoders



Network equipment



Video management



|  |   |  |  |  | Box zoom  |   |
|--|---|--|--|--|---|---|
| BC1103-2   | BC880   | BC840-PID                              | BC840-MC                               | BC840-PID-XT                           | BC822H2   | BC820v2H3   |
| 1/2.8" CMOS  | 1/1.7" CMOS   | 1/2.8" CMOS                            | 1/2.8" CMOS                            | 1/2.8" CMOS                            | 1/2.8" CMOS   | 1/2.8" CMOS   |
| C/CS Mount   | C/CS Mount  | C/CS Mount                             | C/CS Mount                             | C/CS Mount                             | Motorised 18x optical zoom 4.7 - 85 mm, F1.6            | Motorised 30x optical zoom 4.3 - 129 mm, F1.6           |
| Auto back focus  | Auto back focus   | -                                      | -                                      | -                                      | Autofocus   | Push to focus   |
| -  | -   | -                                      | -                                      | -                                      | 55.2° - 3.2°  | 67.4° - 2.6°  |
| ✓  | ✓   | ✓                                      | ✓                                      | ✓                                      | ✓   | ✓   |
| H.264, H.264i, MJPEG   | H.264, MJPEG  | H.264, MJPEG                           | H.264, MPEG-4, MPEG-2, MJPEG           | H.264, MJPEG                           | H.264, MJPEG  | H.264, MJPEG  |
| ✓  | ✓   | ✓                                      | ✓                                      | ✓                                      | ✓   | ✓   |
| 2048x1536 @45 fps<br>1920x1080 @60 fps                             | 3840x2160 @30 fps                                       | 1920x1080 @30 fps                      | 1920x1080 @30 fps                      | 1920x1080 @30 fps                      | 1980x1080 @60 fps                                       | 2048x1536 @60 fps                                       |
| 0.05 lux colour<br>0.005 lux B/W                                   | 0.2 lux colour<br>0.02 lux B/W                          | 0.1 lux colour<br>0.01 lux B/W         | 0.1 lux colour<br>0.01 lux B/W         | 0.1 lux colour<br>0.01 lux B/W         | 0.05 lux colour<br>0.004 lux B/W (IR50)                 | 0.04 lux colour<br>0.002 lux B/W                        |
| -  | -   | -                                      | -                                      | -                                      | -   | -   |
| 120 dB WDR, 3DNR, BLC, HLC, ROI, Defog                             | 72 dB WDR, BLC, 3DNR                                    | 70 dB WDR, BLC, 3DNR                   | 70 dB WDR, BLC, 3DNR                   | 70 dB WDR, BLC, 3DNR                   | 120 dB WDR, BLC, 3DNR, EIS                              | 120 dB WDR, BLC, 3DNR                                   |
| 1/1  | 1/1   | 2/2                                    | 2/2                                    | 2/2                                    | 1/1   | 1/1   |
| PAL/NTSC   | PAL/NTSC  | PAL/NTSC                               | PAL/NTSC                               | PAL/NTSC                               | PAL/NTSC  | PAL/NTSC  |
| 2-way  | 2-way   | 2-way                                  | 2-way                                  | 2-way                                  | 2-way   | 2-way   |
| ONVIF Profile S+G, PSIA, CGI, ISAPI                                | ONVIF Profile S, CGI                                    | ONVIF Profile S, OSA (HTTP API), NTCIP | ONVIF Profile S, OSA (HTTP API), NTCIP | ONVIF Profile S, OSA (HTTP API), NTCIP | ONVIF Profile S, CGI                                    | ONVIF Profile S, CGI                                    |
| -  | -   | -                                      | -                                      | -                                      | -   | -   |
| -  | -   | -                                      | -                                      | -                                      | -   | -   |
| Intelligent  | Basic   | PID                                    | Basic                                  | PID                                    | Basic   | Basic   |
| 4  | 5   | 10                                     | 10                                     | 10                                     | 5   | 5   |
| Password protected, HTTPS, 802.1X, IP address filtering, Watermark | Password protected, HTTPS, 802.1X, IP address filtering | Password protected, HTTPS              | Password protected, HTTPS              | Password protected, HTTPS              | Password protected, HTTPS, 802.1X, IP address filtering | Password protected, HTTPS, 802.1X, IP address filtering |
| 128 GB   | 128 GB  | 32 GB                                  | 32 GB                                  | 32 GB                                  | 128 GB  | 64 GB   |
| -  | -   | Optional                               | Optional                               | Optional                               | -   | -   |
| -  | -   | -                                      | -                                      | -                                      | -   | -   |
| -  | -   | -                                      | -                                      | -                                      | -   | -   |
| ✓  | -   | -                                      | -                                      | -                                      | -   | ✓   |
| 6 W  | 11 W  | 7 W                                    | 7 W                                    | 7 W                                    | 9 W   | 8 W   |
| 12 Vdc, 24 Vac, PoE (802.3af)                                      | 12/24 Vdc, 24 Vac, PoE (802.3af)                        | 12/24 Vdc, 24 Vac, PoE (802.3af)       | 12/24 Vdc, 24 Vac, PoE (802.3af)       | 12/24 Vdc, 24 Vac, PoE (802.3af)       | 12/24 Vdc, 24 Vac, PoE (802.3af)                        | 12/24 Vdc, 24 Vac, PoE (802.3af)                        |
| -30 °C to +60 °C<br>-22 °F to +140 °F                              | -10 °C to +50 °C<br>14 °F to +122 °F                    | -30 °C to +50 °C<br>-22 °F to +122 °F  | -30 °C to +50 °C<br>-22 °F to +122 °F  | -40 °C to +75 °C<br>-40 °F to +167 °F  | -10 °C to +55 °C<br>14 °F to +130 °F                    | -10 °C to +50 °C<br>+14 °F to +122 °F                   |
| 70 x 60 x 145 mm<br>2.8 x 2.4 x 5.7 in                             | 76 x 52 x 152 mm<br>3.0 x 2.1 x 6.0 in                  | 64 x 64 x 150 mm<br>2.5 x 2.5 x 5.9 in | 64 x 64 x 150 mm<br>2.5 x 2.5 x 5.9 in | 74 x 64 x 148 mm<br>2.9 x 2.5 x 5.8 in | 81 x 53 x 184 mm<br>3.2 x 2.1 x 7.2 in                  | 80 x 52 x 183 mm<br>3.2 x 2.1 x 7.2 in                  |

# Surveillance cameras

## Bullet



| Model                      | BL1004F4-EI   | BL1004V1-EI-A   | BL1004M1-EI-A   | BL1004M1-EI   | BL820v2M1IR   |
|----------------------------|---|---|---|---|---|
| Image sensor               | 1/3" CMOS   | 1/3" CMOS   | 1/3" CMOS   | 1/3" CMOS   | 1/3" CMOS   |
| Lens                       | Fixed 4.0 mm, F2.0                                      | Varifocal 4.3x optical zoom 2.8 - 12 mm, F1.4           | Motorised 4.3x optical zoom 2.8 - 12 mm, F1.4           | Motorised 4.3x optical zoom 2.8 - 12 mm, F1.4           | Motorised 3x optical zoom 3.0 - 9.0 mm, F1.7            |
| Focus                      | Fixed focus   | Manual focus  | Push to focus   | Push to focus   | Push to focus   |
| Horizontal FOV             | 83.0°   | 112° - 33.8°  | 112° - 33.8°  | 112° - 33.8°  | 109° - 33°  |
| Day/night (ICR)            | ✓   | ✓   | ✓   | ✓   | ✓   |
| Supported encoding type    | H.264, H.264i, MJPEG                                    | H.264, H.264i, MJPEG                                    | H.264, H.264i, MJPEG                                    | H.264, H.264i, MJPEG                                    | H.264, MJPEG  |
| Multistreaming             | ✓   | ✓   | ✓   | ✓   | ✓   |
| Max resolution             | 2688x1520 @20 fps<br>1920x1080 @30 fps                  | 2688x1520 @20 fps<br>1920x1080 @30 fps                  | 2688x1520 @20 fps<br>1920x1080 @30 fps                  | 2688x1520 @20 fps<br>1920x1080 @30 fps                  | 2688x1512 @15 fps<br>1920x1080 @60 fps                  |
| Light sensitivity (30 IRE) | 0.1 lux colour<br>0.01 lux B/W<br>0 lux with IR         | 0.1 lux colour<br>0.01 lux B/W<br>0 lux with IR         | 0.1 lux colour<br>0.01 lux B/W<br>0 lux with IR         | 0.1 lux colour<br>0.01 lux B/W<br>0 lux with IR         | 0.04 lux colour<br>0.002 lux B/W<br>0 lux with IR       |
| IR illuminator             | 850 nm, 30 m  | 850 nm, 30 m  | 850 nm, 30 m  | 850 nm, 30 m  | 850 nm, 40 m  |
| Video enhancements         | 120 dB WDR, 3DNR  | 120 dB WDR, 3DNR  | 120 dB WDR, 3DNR  | 120 dB WDR, 3DNR  | 120 dB WDR, BLC, 3DNR                                   |
| Alarm inputs/outputs       | -   | -   | -   | 1/1   | 2/1   |
| Analog video output        | -   | PAL/NTSC  | PAL/NTSC  | PAL/NTSC  | PAL/NTSC  |
| Audio                      | -   | -   | -   | 2-way   | 2-way   |
| Integration protocols      | ONVIF Profile S+G, PSIA, CGI, ISAPI                     | ONVIF Profile S+G, PSIA, CGI, ISAPI                     | ONVIF Profile S+G, PSIA, CGI, ISAPI                     | ONVIF Profile S+G, PSIA, CGI, ISAPI                     | ONVIF Profile S, CGI                                    |
| PTZ range                  | -   | -   | -   | -   | -   |
| Auto tracking              | -   | -   | -   | -   | -   |
| Video analytics            | Basic   | Basic   | Basic   | Basic   | Basic   |
| Privacy masks              | 4   | 4   | 4   | 4   | 5   |
| Security                   | Password protected, HTTPS, 802.1X, IP address filtering | Password protected, HTTPS, 802.1X, IP address filtering | Password protected, HTTPS, 802.1X, IP address filtering | Password protected, HTTPS, 802.1X, IP address filtering | Password protected, HTTPS, 802.1X, IP address filtering |
| Micro SD support           | -   | 128 GB  | 128 GB  | 128 GB  | 64 GB   |
| SFP interface              | -   | -   | -   | -   | -   |
| Ingress protection         | IP66  | IP67  | IP67  | IP67  | IP67  |
| Vandal proof               | -   | -   | -   | -   | IK10  |
| UL/UR Listed               | ✓   | ✓   | ✓   | ✓   | -   |
| Power consumption          | 5 W   | 7.5 W   | 7.5 W   | 7.5 W   | 12.3 W  |
| Power                      | 12 Vdc, PoE (802.3af)                                   | 12 Vdc, PoE (802.3af)                                   | 12 Vdc, PoE (802.3af)                                   | 12 Vdc, PoE (802.3af)                                   | 12/24 Vdc, 24 Vac, PoE (802.3af)                        |
| Operating temperature      | -30 °C to +60 °C<br>-22 °F to +140 °F                   | -30 °C to +60 °C<br>-22 °F to +140 °F                   | -30 °C to +60 °C<br>-22 °F to +140 °F                   | -30 °C to +60 °C<br>-22 °F to +140 °F                   | -50 °C to +55 °C<br>-58 °F to +131 °F                   |
| Dimensions                 | Ø 70 x 174 mm<br>Ø 2.8 x 6.9 in                         | Ø 105 x 298 mm<br>Ø 4.1 x 11.7 in                       | Ø 105 x 298 mm<br>Ø 4.1 x 11.7 in                       | Ø 105 x 298 mm<br>Ø 4.1 x 11.7 in                       | Ø 90 x 270 mm<br>Ø 3.5 x 10.6 in                        |

## Ritz Carlton Hotel, Dubai

The Dubai Ritz Carlton Hotel puts up a challenging tender for a complete overhaul, upgrade and extension of its existing analog based CCTV system to monitor overall security inside and outside the hotel area.

Advanced access control and number plate recognition for entering and leaving the parking areas was also included in the tender. The security systems needed to be integrated into a single Security Management Software system.

## Other product groups



Explosion-proof cameras



Video over fiber



Video encoders



Network equipment



Video management



### Bullet

| BL822M1IR  | BL860M2IR  | BL860Z1IR  | BL1103M1-EI  | BL1102M2-EI-HSE  | BL880M1IR  |
|--|--|--|--|--|--|
| 1/2.8" CMOS  | 1/2.8" CMOS  | 1/2.8" CMOS  | 1/2.8" CMOS  | 1/1.8" CMOS  | 1/1.7" CMOS  |
| Motorised 2.4x optical zoom 3.3 - 8.0 mm, F1.5             | Motorised 2.4x optical zoom 9.0 - 22 mm, F1.6              | Motorised 3x optical zoom 3.0 - 9.0 mm, F1.7               | Motorised 4.3x optical zoom 2.8 - 12 mm, F1.4                            | Motorised 4x optical zoom 8.0 - 32 mm, F1.2                              | Motorised 2.3x optical zoom 3.5 - 8.0 mm, F1.4             |
| Push to focus  | Push to focus  | Autofocus  | Autofocus  | Autofocus  | Push to focus  |
| 115° - 56°   | 33° - 14°  | 107° - 38°   | 94.5° - 30.5°  | 31.0° - 10.0°  | 116° - 52°   |
| ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| H.264, MJPEG   | H.264, MJPEG   | H.264, MJPEG   | H.264, H.264i, MJPEG   | H.264, H.264i, MJPEG   | H.264, MJPEG   |
| ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| 1920x1080 @60 fps  | 2048x1536 @30 fps<br>1920x1080 @60 fps                     | 2048x1536 @30 fps<br>1920x1080 @60 fps                     | 2048x1536 @45 fps<br>1920x1080 @60 fps                                   | 1980x1080 @60 fps  | 3840x2160 @30 fps<br>1920x1080 @60 fps                     |
| 0.01 lux colour<br>0.001 lux B/W<br>0 lux with IR          | 0.08 lux colour<br>0.004 lux B/W<br>0 lux with IR          | 0.04 lux colour<br>0.002 lux B/W<br>0 lux with IR          | 0.05 lux colour,<br>0.005 lux B/W<br>0 lux with IR                       | 0.005 lux colour<br>0.002 lux B/W<br>0 lux with IR                       | 0.04 lux colour,<br>0.002 lux B/W<br>0 lux with IR         |
| 850 nm, 30 m   | 850 nm, 50 m   | 850 nm, 50 m   | 850 nm, 50 m   | 850 nm, 100 m  | 850 nm, 50 m   |
| 120 dB WDR, BLC, 3DNR, EIS                                 | 120 dB WDR, BLC, 3DNR                                      | 120 dB WDR, BLC, 3DNR                                      | 120 dB WDR, 3DNR, BLC,<br>HLC, ROI, Defog                                | 120 dB WDR, 3DNR, BLC,<br>ROI, Defog, EIS                                | 72 dB WDR, BLC, 3DNR                                       |
| 1/1  | 1/1  | 1/1  | 1/1  | 1/1  | 1/1  |
| PAL/NTSC   | PAL/NTSC   | PAL/NTSC   | PAL/NTSC   | PAL/NTSC   | PAL/NTSC   |
| 2-way  | 2-way  | 2-way  | 2-way  | 2-way  | 2-way  |
| ONVIF Profile S, CGI                                       | ONVIF Profile S, CGI                                       | ONVIF Profile S, CGI                                       | ONVIF Profile S+G, PSIA,<br>CGI, ISAPI                                   | ONVIF Profile S+G, PSIA,<br>CGI, ISAPI                                   | ONVIF Profile S, CGI                                       |
| -  | -  | -  | -  | -  | -  |
| -  | -  | -  | -  | -  | -  |
| Basic  | Basic  | Basic  | Intelligent  | Intelligent  | Basic  |
| 5  | 5  | 5  | 4  | 4  | 5  |
| Password protected, HTTPS,<br>802.1x, IP address filtering | Password protected, HTTPS,<br>802.1x, IP address filtering | Password protected, HTTPS,<br>802.1x, IP address filtering | Password protected, HTTPS,<br>802.1x, IP address filtering,<br>Watermark | Password protected, HTTPS,<br>802.1x, IP address filtering,<br>Watermark | Password protected, HTTPS,<br>802.1x, IP address filtering |
| 128 GB   | 128 GB   | 128 GB   | 128 GB   | 128 GB   | 128 GB   |
| -  | -  | -  | -  | -  | -  |
| IP66   | IP66   | IP66   | IP67   | IP67   | IP66   |
| IK10   | IK10   | IK10   | -  | -  | IK10   |
| -  | -  | -  | ✓  | -  | -  |
| 10 W   | 13.4 W   | 13.4 W   | 12 W   | 20.7 W   | 15.5 W   |
| 12/24 Vdc, 24 Vac,<br>PoE (802.3af)                        | 12/24 Vdc, 24 Vac,<br>PoE+ (802.3at)                       | 12/24 Vdc, 24 Vac,<br>PoE+ (802.3at)                       | 12 Vdc, PoE (802.3af)  | 12 Vdc, PoE+ (802.3at)   | 12/24 Vdc, 24 Vac,<br>PoE+ (802.3at)                       |
| -40 °C to +50 °C<br>-40 °F to +122 °F                      | -55 °C to +55 °C<br>-67 °F to +131 °F                      | -55 °C to +55 °C<br>-67 °F to +131 °F                      | -30 °C to +60 °C<br>-22 °F to +140 °F                                    | -30 °C to +60 °C<br>-22 °F to +140 °F                                    | -40 °C to +50 °C<br>-40 °F to +122 °F                      |
| Ø 95 x 274 mm<br>Ø 3.7 x 10.8 In                           | Ø 95 x 274 mm<br>Ø 3.7 x 10.8 In                           | Ø 95 x 274 mm<br>Ø 3.7 x 10.8 In                           | 100 x 104 x 312 mm<br>3.9 x 4.1 x 12.3 in                                | 100 x 104 x 312 mm<br>3.9 x 4.1 x 12.3 in                                | Ø 95 x 274 mm<br>Ø 3.7 x 10.8 In                           |

# Surveillance cameras

Compact dome | Fixed dome



|                            | Compact dome  |   |   |   |   |   |
|----------------------------|---|---|---|---|---|---|
| Model                      | CD1004F2-EI-A   | CD1004F2-EI   | FD1004V1-EI-A   | FD1004M1-EI-A   | FD1004M1-EI   | FD820v2M1IR   |
| Image sensor               | 1/3" CMOS   | 1/3" CMOS   | 1/3" CMOS   | 1/3" CMOS   | 1/3" CMOS   | 1/3" CMOS   |
| Lens                       | Fixed 2.8 mm, F2.0                                      | Fixed 2.8 mm, F2.0                                      | Varifocal 4.3x optical zoom 2.8 - 12 mm, F1.4           | Motorised 4.3x optical zoom 2.8 - 12 mm, F1.4           | Motorised 4.3x optical zoom 2.8 - 12 mm, F1.4           | Motorised 3.0x optical zoom 3.0 - 9.0 mm, F1.7          |
| Focus                      | Fixed focus   | Fixed focus   | Manual focus  | Push to focus   | Push to focus   | Push to focus   |
| Horizontal FOV             | 106°  | 106°  | 91.2° - 28.3°   | 91.2° - 28.3°   | 91.2° - 28.3°   | 109° - 33°  |
| Day/night (ICR)            | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |
| Supported encoding type    | H.264, H.264i, MJPEG                                    | H.264, H.264i, MJPEG                                    | H.264, H.264i, MJPEG                                    | H.264, H.264i, MJPEG                                    | H.264, H.264i, MJPEG                                    | H.264, MJPEG  |
| Multistreaming             | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |
| Max resolution             | 2688x1520 @20 fps<br>1920x1080 @30 fps                  | 2688x1520 @20 fps<br>1920x1080 @30 fps                  | 2688x1520 @20 fps<br>1920x1080 @30 fps                  | 2688x1520 @20 fps<br>1920x1080 @30 fps                  | 2688x1520 @20 fps<br>1920x1080 @30 fps                  | 2688x1512 @15 fps<br>1920x1080 @60 fps                  |
| Light sensitivity (30 IRE) | 0.3 lux colour<br>0.01 lux B/W<br>0 lux with IR         | 0.3 lux colour<br>0.01 lux B/W<br>0 lux with IR         | 0.1 lux colour<br>0.01 lux B/W<br>0 lux with IR         | 0.1 lux colour<br>0.01 lux B/W<br>0 lux with IR         | 0.1 lux colour<br>0.01 lux B/W<br>0 lux with IR         | 0.1 lux colour<br>0.01 lux B/W<br>0 lux with IR         |
| IR illuminator             | 850 nm, 10 m  | 850 nm, 10 m  | 850 nm, 30 m  | 850 nm, 30 m  | 850 nm, 30 m  | 850 nm, 40 m  |
| Video enhancements         | 120 dB WDR, BLC, 3DNR                                   | 120 dB WDR, 3DNR, BLC                                   | 120 dB WDR, 3DNR  | 120 dB WDR, 3DNR  | 120 dB WDR, 3DNR  | 120 dB WDR, BLC, 3DNR                                   |
| Alarm inputs/outputs       | -   | -   | -   | -   | 1/1   | 1/1   |
| Analog video output        | -   | -   | PAL/NTSC  | PAL/NTSC  | PAL/NTSC  | PAL/NTSC  |
| Audio                      | -   | 2-way   | -   | -   | 2-way   | 2-way   |
| Integration protocols      | ONVIF Profile S+G, PSIA, CGI, ISAPI                     | ONVIF Profile S+G, PSIA, CGI, ISAPI                     | ONVIF Profile S+G, PSIA, CGI, ISAPI                     | ONVIF Profile S+G, PSIA, CGI, ISAPI                     | ONVIF Profile S+G, PSIA, CGI, ISAPI                     | ONVIF Profile S, CGI                                    |
| PTZ range                  | -   | -   | -   | -   | -   | -   |
| Auto tracking              | -   | -   | -   | -   | -   | -   |
| Video analytics            | Basic   | Basic   | Basic   | Basic   | Basic   | Basic   |
| Privacy masks              | 4   | 4   | 4   | 4   | 4   | 5   |
| Security                   | Password protected, HTTPS, 802.1x, IP address filtering | Password protected, HTTPS, 802.1x, IP address filtering | Password protected, HTTPS, 802.1x, IP address filtering | Password protected, HTTPS, 802.1x, IP address filtering | Password protected, HTTPS, 802.1x, IP address filtering | Password protected, HTTPS, 802.1x, IP address filtering |
| Micro SD support           | 128 GB  | 128 GB  | 128 GB  | 128 GB  | 128 GB  | 64 GB   |
| SFP interface              | -   | -   | -   | -   | -   | -   |
| Ingress protection         | IP66  | IP66  | IP66  | IP66  | IP66  | IP66  |
| Vandal proof               | IK08  | IK08  | IK10  | IK10  | IK10  | IK10  |
| UL/UR Listed               | ✓   | ✓   | ✓   | ✓   | ✓   | -   |
| Power consumption          | 7 W   | 7 W   | 5.5 W   | 7.5 W   | 7.5 W   | 12.3 W  |
| Power                      | 12 Vdc, PoE (802.3af)                                   | 12 Vdc, PoE (802.3af)                                   | 12 Vdc, PoE (802.3af)                                   | 12 Vdc, PoE (802.3af)                                   | 12 Vdc, PoE (802.3af)                                   | 12/24 Vdc, 24 Vac, PoE (802.3af)                        |
| Operating temperature      | -30 °C to +60 °C<br>-22 °F to +140 °F                   | -30 °C to +60 °C<br>-22 °F to +140 °F                   | -30 °C to +60 °C<br>-22 °F to +140 °F                   | -30 °C to +60 °C<br>-22 °F to +140 °F                   | -30 °C to +60 °C<br>-22 °F to +140 °F                   | -50 °C to +50 °C<br>-58 °F to +122 °F                   |
| Dimensions                 | Ø 120 x 55 mm<br>Ø 4.7 x 2.2 in                         | Ø 120 x 55 mm<br>Ø 4.7 x 2.2 in                         | Ø 140 x 100 mm<br>Ø 5.5 x 3.9 in                        | Ø 140 x 100 mm<br>Ø 5.5 x 3.9 in                        | Ø 140 x 100 mm<br>Ø 5.5 x 3.9 in                        | Ø 134 x 117 mm<br>Ø 5.2 x 4.6 in                        |

For more information: [www.tkhsecurity.com](http://www.tkhsecurity.com)

## Ghelamco Stadium, Belgium

AA Gent have always been one of the mainstays of Belgian football. The Ghelamco Arena, with a seating capacity of 20,000. Thousands of people packed together and emotions running high, football stadiums call for the highest level of security. Implementing a well-balanced mix of surveillance hardware (Siquira IP cameras) has helped turn this modern venue into one of the safest of its kind, a place where both home and away, fans can enjoy a great day out.

## Other product groups



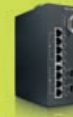
Explosion-proof cameras



Video over fiber



Video encoders



Network equipment



Video management



### Fixed dome

| IFD822V2IR  | IFD822Z1IR  | FD822V2IR   | FD822Z1IR   | FD860Z1IR   | FD1103M1-I   | FD1103M1-EI  | FD880M1IR   |
|---|---|---|---|---|--|--|---|
| 1/2.8" CMOS   | 1/2.8" CMOS   | 1/2.8" CMOS   | 1/2.8" CMOS   | 1/2.8" CMOS   | 1/2.8" CMOS  | 1/2.8" CMOS  | 1/1.7" CMOS   |
| Varifocal 4.3x optical zoom 2.8 - 12 mm, F1.4           | Motorised 3x optical zoom 3.0 - 9.0 mm, F1.2            | Varifocal 4.3x optical zoom 2.8 - 12 mm, F1.4           | Motorised 3x optical zoom 3.0 - 9.0 mm, F1.2            | Motorised 3x optical zoom 3 - 9 mm, F1.7                | Motorised 4.3x optical zoom 2.8 - 12 mm, F1.4                      | Motorised 4.3x optical zoom 2.8 - 12 mm, F1.4                      | Motorised 2.3x optical zoom 3.5 - 8 mm, F1.4            |
| Manual focus  | Autofocus   | Manual focus  | Autofocus   | Autofocus   | Autofocus  | Autofocus  | Push to focus   |
| 98° - 36°   | 113° - 36°  | 98° - 36°   | 113° - 36°  | 104° - 33°  | 94.5° - 30.5°  | 94.5° - 30.5°  | 116° - 52°  |
| ✓   | ✓   | ✓   | ✓   | ✓   | ✓  | ✓  | ✓   |
| H.264, MJPEG  | H.264, MJPEG  | H.264, MJPEG  | H.264, MJPEG  | H.264, MJPEG  | H.264, H.264i, MJPEG   | H.264, H.264i, MJPEG   | H.264, MJPEG  |
| ✓   | ✓   | ✓   | ✓   | ✓   | ✓  | ✓  | ✓   |
| 1920x1080 @60 fps                                       | 1920x1080 @60 fps                                       | 1920x1080 @60 fps                                       | 1920x1080 @60 fps                                       | 2048x1536 @30 fps<br>1920x1080 @60 fps                  | 2048x1536 @45 fps<br>1920x1080 @60 fps                             | 2048x1536 @45 fps<br>1920x1080 @60 fps                             | 3840x2160 @30 fps<br>1920x1080 @60 fps                  |
| 0.03 lux colour<br>0.003 lux B/W<br>0 lux with IR       | 0.01 lux colour<br>0.0005 lux B/W<br>0 lux with IR      | 0.03 lux colour<br>0.003 lux B/W<br>0 lux with IR       | 0.01 lux colour<br>0.0005 lux B/W<br>0 lux with IR      | 0.04 lux colour<br>0.002 lux B/W<br>0 lux with IR       | 0.07 lux colour<br>0.007 lux B/W<br>0 lux with IR                  | 0.07 lux colour<br>0.007 lux B/W<br>0 lux with IR                  | 0.04 lux colour<br>0.002 lux B/W<br>0 lux with IR       |
| 850 nm, 40 m  | 850 nm, 40 m  | 850 nm, 35 m  | 850 nm, 35 m  | 850 nm, 35 m  | 850 nm, 30 m   | 850 nm, 40 m   | 850 nm, 40 m  |
| 120 dB WDR, BLC, 3DNR, EIS                              | 120 dB WDR, BLC, 3DNR, EIS                              | 120 dB WDR, BLC, 3DNR, EIS                              | 120 dB WDR, BLC, 3DNR                                   | 120 dB WDR, BLC, 3DNR                                   | 120 dB WDR, 3DNR, BLC, HLC, ROI, Defog                             | 120 dB WDR, 3DNR, BLC, HLC, ROI, Defog                             | 72 dB WDR, BLC, 3DNR                                    |
| 1/1   | 1/1   | 1/1   | 1/1   | 1/1   | 1/1  | 1/1  | 1/1   |
| PAL/NTSC  | PAL/NTSC  | PAL/NTSC  | PAL/NTSC  | PAL/NTSC  | PAL/NTSC   | PAL/NTSC   | PAL/NTSC  |
| 2-way   | 2-way   | 2-way   | 2-way   | 2-way   | 2-way  | 2-way  | 2-way   |
| ONVIF Profile S, CGI                                    | ONVIF Profile S, CGI                                    | ONVIF Profile S, CGI                                    | ONVIF Profile S, CGI                                    | ONVIF Profile S, CGI                                    | ONVIF Profile S+G, PSIA, CGI, ISAPI                                | ONVIF Profile S+G, PSIA, CGI, ISAPI                                | ONVIF Profile S, CGI                                    |
| -   | -   | -   | -   | -   | -  | -  | -   |
| -   | -   | -   | -   | -   | -  | -  | -   |
| Basic   | Basic   | Basic   | Basic   | Basic   | Intelligent  | Intelligent  | Basic   |
| 5   | 5   | 5   | 5   | 5   | 4  | 4  | 5   |
| Password protected, HTTPS, 802.1x, IP address filtering | Password protected, HTTPS, 802.1x, IP address filtering | Password protected, HTTPS, 802.1x, IP address filtering | Password protected, HTTPS, 802.1x, IP address filtering | Password protected, HTTPS, 802.1x, IP address filtering | Password protected, HTTPS, 802.1x, IP address filtering, Watermark | Password protected, HTTPS, 802.1x, IP address filtering, Watermark | Password protected, HTTPS, 802.1x, IP address filtering |
| 128 GB  | 128 GB  | 128 GB  | 128 GB  | 128 GB  | 128 GB   | 128 GB   | 128 GB  |
| -   | -   | -   | -   | -   | -  | -  | -   |
| -   | -   | IP66  | IP66  | IP66  | -  | IP66   | IP66  |
| -   | -   | IK10  | IK10  | IK10  | IK10   | IK10   | IK10  |
| -   | -   | -   | -   | -   | ✓  | ✓  | -   |
| 11.9 W  | 13.1 W  | 13.4 W  | 14.7 W  | 13.4 W  | 9 W  | 12 W   | 13.4 W  |
| 12/24 Vdc, 24 Vac, PoE (802.3af)                        | 12/24 Vdc, 24 Vac, PoE+ (802.3at)                       | 12/24 Vdc, 24 Vac, PoE+ (802.3at)                       | 12/24 Vdc, 24 Vac, PoE+ (802.3at)                       | 12/24 Vdc, 24 Vac, PoE+ (802.3at)                       | 12 Vdc, PoE (802.3af)  | 12 Vdc, 24 Vac, PoE (802.3af)                                      | 12/24 Vdc, 24 Vac, PoE+ (802.3at)                       |
| -10 °C to +50 °C<br>14 °F to +122 °F                    | -10 °C to +50 °C<br>14 °F to +122 °F                    | -50 °C to +55 °C<br>-58 °F to +131 °F                   | -50 °C to +55 °C<br>-58 °F to +131 °F                   | -55 °C to +55 °C<br>-67 °F to +131 °F                   | -30 °C to +60 °C -22 °F<br>to +140 °F                              | -30 °C to +60 °C<br>-22 °F to +140 °F                              | -55 °C to +55 °C<br>-67 °F to +131 °F                   |
| Ø 117 x 90 mm<br>Ø 4.6 x 3.6 in                         | Ø 117 x 90 mm<br>Ø 4.6 x 3.6 in                         | Ø 134 x 117 mm<br>Ø 5.9 x 5.2 in                        | Ø 134 x 117 mm<br>Ø 5.9 x 5.2 in                        | Ø 134 x 117 mm<br>Ø 5.9 x 5.2 in                        | Ø 140 x 122 mm<br>Ø 5.5 x 4.8 in                                   | Ø 165 x 127 mm<br>Ø 6.5 x 5.0 in                                   | Ø 134 x 117 mm<br>Ø 5.9 x 5.2 in                        |

# Surveillance cameras

Fisheye | HD PTZ dome | Pressurised dome



|                            | Fisheye   |   | HD PTZ dome   |   |   |   | Pressurised dome  |
|----------------------------|---|---|---|---|---|---|---|
| Model                      | FD360IR-E   | FD360IR-E-12  | PD1022Z3-EI   | HSD820v2H3-E  | PD1103Z2-E  | PD1103Z2-EI   | HSD820H3PRH   |
| Image sensor               | 1/1.8" CMOS   | 1/1.7" CMOS   | 1/2.8" CMOS   | 1/2.8" CMOS   | 1/3" CMOS   | 1/3" CMOS   | 1/2.8" CMOS   |
| Lens                       | Fixed Fisheye<br>1.55 mm, F2.0                                | Fixed Fisheye<br>1.65 mm, F2.8                                | Motorised 20x<br>optical zoom<br>4.7 - 94 mm, F1.6                          | Motorised 30x<br>optical zoom<br>4.4 - 132 mm, F1.4           | Motorised 36x<br>optical zoom<br>4.5 - 162 mm, F1.6                         | Motorised 36x<br>optical zoom<br>4.5 - 162 mm, F1.6                         | Motorised 30x<br>optical zoom<br>4.3 - 129 mm, F1.6           |
| Focus                      | Fixed focus   | Fixed focus   | Autofocus   | Autofocus   | Autofocus   | Autofocus   | Autofocus   |
| Horizontal FOV             | 185°  | 190°  | 61.4° - 2.9°  | 60.5° - 2.3°  | 54.5° - 2.7°  | 54.5° - 2.7°  | 65.5° - 3.2°  |
| Day/night (ICR)            | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |
| Supported encoding type    | H.264, MJPEG  | H.264, MJPEG  | H.264, MJPEG  | H.264, MJPEG  | H.264, MJPEG  | H.264, MJPEG  | H.264, MJPEG  |
| Multistreaming             | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |
| Max resolution             | 3072x2048 @30 fps<br>1920x1080 @60 fps                        | 4000x3000 @20 fps<br>3840x2160 @30 fps<br>1920x1080 @60 fps   | 1920x1080 @60 fps   | 1920x1080 @60 fps   | 2048x1536 @30 fps   | 2048x1536 @30 fps   | 1920x1080 @60 fps   |
| Light sensitivity (30 IRE) | 0.04 lux colour<br>0.002 lux B/W<br>0 lux with IR             | 0.1 lux colour<br>0.01 lux B/W<br>0 lux with IR               | 0.05 lux colour<br>0.01 lux B/W<br>0 lux with IR                            | 0.02 lux colour<br>0.005 lux B/W                              | 0.05 lux colour<br>0.01 lux B/W   | 0.05 lux colour<br>0.01 lux B/W<br>0 lux with IR                            | 0.5 lux colour<br>0.1 lux B/W                                 |
| IR illuminator             | 850 nm, 5 m   | 850 nm, 5 m   | 850 nm, 50 m  | -   | -   | 850 nm, 200 m   | -   |
| Video enhancements         | 70 dB WDR,<br>3DNR, BLC                                       | 70 dB WDR,<br>3DNR, BLC                                       | 120 dB WDR, 3DNR,<br>BLC, HLC, ROI,<br>Defog, EIS                           | 120 dB WDR,<br>BLC, 3DNR                                      | 120 dB WDR,<br>3DNR, BLC, HLC,<br>ROI, Defog                                | 120 dB WDR,<br>3DNR, BLC, HLC,<br>ROI, Defog                                | 96 dB WDR, BLC,<br>3DNR                                       |
| Alarm inputs/outputs       | 1/1   | 1/1   | 2/2   | 4/2   | 7/2   | 7/2   | 1/0   |
| Analog video output        | -   | -   | PAL/NTSC  | PAL/NTSC  | PAL/NTSC  | PAL/NTSC  | PAL/NTSC  |
| Audio                      | 2-way   | 2-way   | 2-way   | 2-way   | 2-way   | 2-way   | -   |
| Integration protocols      | ONVIF Profile S   | ONVIF Profile S, CGI  | ONVIF Profile S,<br>PSIA, CGI, ISAPI  | ONVIF Profile S,<br>CGI, NTCIP                                | ONVIF Profile S+G,<br>PSIA, CGI, ISAPI,<br>NTCIP                            | ONVIF Profile S+G,<br>PSIA, CGI, ISAPI,<br>NTCIP                            | ONVIF Profile S,<br>OSA (HTTP API),<br>NTCIP                  |
| PTZ range                  | ePTZ  | ePTZ  | Pan: 360° continuous,<br>Tilt: -5° to 90°                                   | Pan: 360° continuous,<br>Tilt: -10° to 90°                    | Pan: 360° continuous,<br>Tilt: -20° to 90°                                  | Pan: 360° continuous,<br>Tilt: -20° to 90°                                  | Pan: 360° continuous,<br>Tilt: -10° to 90°                    |
| Auto tracking              | -   | -   | Yes   | -   | Yes   | Yes   | -   |
| Video analytics            | Basic   | Basic   | Basic   | Basic   | Intelligent   | Intelligent   | Basic   |
| Privacy masks              | 5   | 5   | 8   | 16  | 24  | 24  | 16  |
| Security                   | Password protected,<br>HTTPS, 802.1x,<br>IP address filtering | Password protected,<br>HTTPS, 802.1x,<br>IP address filtering | Password protected,<br>HTTPS, 802.1X,<br>IP address filtering,<br>Watermark | Password protected,<br>HTTPS, 802.1X,<br>IP address filtering | Password protected,<br>HTTPS, 802.1X,<br>IP address filtering,<br>Watermark | Password protected,<br>HTTPS, 802.1X,<br>IP address filtering,<br>Watermark | Password protected,<br>HTTPS, 802.1X,<br>IP address filtering |
| Micro SD support           | 64 GB   | 128 GB  | 128 GB  | 64 GB   | 128 GB  | 128 GB  | 64 GB   |
| SFP interface              | -   | -   | -   | Yes   | -   | -   | -   |
| Ingress protection         | IP66  | IP66  | IP66  | IP66  | IP66  | IP66  | IP67  |
| Vandal proof               | IK10  | IK10  | -   | IK10  | IK10  | IK10  | -   |
| UL/UR Listed               | -   | -   | -   | -   | ✓   | ✓   | ✓   |
| Power consumption          | 10.1 W  | 10.1 W  | 18 W  | 25 W / 57 W   | 60 W  | 60 W  | 75 W  |
| Power                      | 12/24 Vdc, 24 Vac,<br>PoE (802.3af)                           | 12/24 Vdc, 24 Vac,<br>PoE (802.3af)                           | 12 Vdc, PoE+<br>(802.3at)   | 28 to 48 Vdc,<br>24 Vac, Hi-PoE                               | 24 Vac, Hi-PoE  | 24 Vac, Hi-PoE  | 24 Vac  |
| Operating temperature      | -10 °C to +50 °C<br>+14 °F to +122 °F                         | -10 °C to +50 °C<br>+14 °F to +122 °F                         | -30 °C to +65 °C<br>-22 °F to +149 °F                                       | -40 °C to +50 °C<br>-40 °F to +122 °F                         | -40 °C to +65 °C<br>-40 °F to +149 °F                                       | -40 °C to +65 °C<br>-40 °F to +149 °F                                       | -45 °C to +60 °C<br>-49 °F to +140 °F                         |
| Dimensions                 | Ø 117 x 43 mm<br>Ø 4.6 x 1.7 in                               | Ø 117 x 43 mm<br>Ø 4.6 x 1.7 in                               | Ø 170 x 161 mm<br>Ø 6.7 x 6.3 in  | Ø 192 x 283 mm<br>Ø 7.6 x 11.1 in                             | Ø 260 x 331 mm<br>Ø 10.2 x 13.0 in  | Ø 266 x 365 mm<br>Ø 10.5 x 14.4 in  | Ø 290 x 340 mm<br>Ø 11.4 x 13.4 in                            |

## Siquira B.V.

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TKH Security Solutions offers a wide range of systems for access control, video surveillance, intrusion detection and video management.

