### IP Rapid Dome and PTZ Cameras

**Model Name**

<table>
<thead>
<tr>
<th>Model Name</th>
<th>SNC-P5</th>
<th>SNC-RZ25N/P</th>
<th>SNC-RX530N/P</th>
<th>SNC-RX550N/P</th>
<th>SNC-RS44N/P</th>
<th>SNC-RS46N/P</th>
<th>SNC-RS84N/P</th>
<th>SNC-RS86N/P</th>
<th>SNC-RH124</th>
<th>SNC-RH164</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Compression Format</td>
<td>JPEG/MPEG-4</td>
<td>JPEG/MPEG-4</td>
<td>JPEG/MPEG-4</td>
<td>JPEG/MPEG-4</td>
<td>JPEG/MPEG-4</td>
<td>JPEG/MPEG-4</td>
<td>JPEG/MPEG-4</td>
<td>JPEG/MPEG-4</td>
<td>JPEG/MPEG-4</td>
<td>JPEG/MPEG-4</td>
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<tr>
<td>Codec Streaming Capability</td>
<td>Single Streaming (JPEG/MPEG4 selectable)</td>
<td>Dual Streaming (JPEG and MPEG-4 combination only)</td>
<td>Triple Streaming (Any combination with JPEG/MPEG-4/MPEG-4/264, including multiple streams of the same format)</td>
<td>Dual Streaming (Any combination with JPEG/MPEG-4/264, including multiple streams of the same format)</td>
<td></td>
<td></td>
<td></td>
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</table>

**HD/Megapixel**

<table>
<thead>
<tr>
<th>Model Name</th>
<th>SNC-P5</th>
<th>SNC-RZ25N/P</th>
<th>SNC-RX530N/P</th>
<th>SNC-RX550N/P</th>
<th>SNC-RS44N/P</th>
<th>SNC-RS46N/P</th>
<th>SNC-RS84N/P</th>
<th>SNC-RS86N/P</th>
<th>SNC-RH124</th>
<th>SNC-RH164</th>
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<tbody>
<tr>
<td>Ingress Protection</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Vandal Resistant</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<td>No</td>
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<tr>
<td>Optical zoom range</td>
<td>3x Optical zoom</td>
<td>18x Optical zoom</td>
<td>26x Optical zoom</td>
<td>18x Optical zoom</td>
<td>26x Optical zoom</td>
<td>36x Optical zoom</td>
<td>18x Optical zoom</td>
<td>36x Optical zoom</td>
<td>18x Optical zoom</td>
<td>10x Optical zoom</td>
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<td>Imager</td>
<td>1/4-type Progressive Scan CCD</td>
<td>1/4-type Exwave HAD CCD</td>
<td>1/4-type Super HAD CCD</td>
<td>1/4-type Exwave HAD CCD</td>
<td>1/4-type Exwave HAD CCD</td>
<td>1/4-type Exwave HAD CCD</td>
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<td>1/4-type Exwave HAD CCD</td>
<td>1/4-type Exwave HAD CCD</td>
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<td>Minimum Illumination</td>
<td>3.5 lx (30IRE, AGC ON)</td>
<td>0.7 lx (30IRE, F1.4, AGC ON)</td>
<td>0.7 lx (30IRE, F1.6, AGC ON)</td>
<td>0.7 lx (30IRE, F1.4, AGC ON)</td>
<td>0.7 lx (30IRE, F1.6, AGC ON)</td>
<td>0.7 lx (30IRE, F1.4, AGC ON)</td>
<td>0.7 lx (30IRE, F1.6, AGC ON)</td>
<td>0.7 lx (30IRE, F1.4, AGC ON)</td>
<td>0.7 lx (30IRE, F1.6, AGC ON)</td>
<td>0.7 lx (30IRE, F1.4, AGC ON)</td>
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<tr>
<td>Maximum Frame Rate</td>
<td>18 fps JPEG or 15 fps MPEG-4 at VGA resolution, 30 fps JPEG or MPEG-4 of QVGA resolution</td>
<td>30 fps JPEG or MPEG-4 at QVGA resolution, 704x567/704x576 resolution</td>
<td>10/8 fps H.264 at 704x567/704x576 resolution</td>
<td>10/8 fps H.264 at 704x567/704x576 resolution</td>
<td>10/8 fps H.264 at 704x567/704x576 resolution</td>
<td>10/8 fps H.264 at 704x567/704x576 resolution</td>
<td>10/8 fps H.264 at 704x567/704x576 resolution</td>
<td>10/8 fps H.264 at 704x567/704x576 resolution</td>
<td>10/8 fps H.264 at 704x567/704x576 resolution</td>
<td>10/8 fps H.264 at 704x567/704x576 resolution</td>
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<tr>
<td>Maximum Resolution</td>
<td>640 x 480</td>
<td>480 x 320</td>
<td>704 x 567</td>
<td>704 x 567</td>
<td>704 x 567</td>
<td>704 x 567</td>
<td>704 x 567</td>
<td>704 x 567</td>
<td>704 x 567</td>
<td>704 x 567</td>
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<tr>
<td>Wide-D Visibility Enhancer (VE)</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes (option)</td>
<td>Yes (option)</td>
<td>Yes (option)</td>
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<td>Noise Reduction</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes (option)</td>
<td>Yes (option)</td>
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<tr>
<td>Card slot(s)</td>
<td>CF card x1</td>
<td>CF card x1</td>
<td>CF card x1</td>
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<tr>
<td>Wireless capability</td>
<td>Yes (option)</td>
<td>Yes (option)</td>
<td>Yes (option)</td>
<td>Yes (option)</td>
<td>Yes (option)</td>
<td>Yes (option)</td>
<td>Yes (option)</td>
<td>Yes (option)</td>
<td>Yes (option)</td>
<td>Yes (option)</td>
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<tr>
<td>DEPA Analytics (Intelligence)</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>ONVIF Software</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<td>No</td>
<td>No</td>
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<tr>
<td>&quot;Rapid dome&quot; or &quot;PTZ&quot; Pan angle</td>
<td>-60° to +60°</td>
<td>-170° to +170°</td>
<td>-170° to +170°</td>
<td>-170° to +170°</td>
<td>-170° to +170°</td>
<td>-170° to +170°</td>
<td>-170° to +170°</td>
<td>-170° to +170°</td>
<td>-170° to +170°</td>
<td>-170° to +170°</td>
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<td>Tilt angle</td>
<td>-65° to +120°</td>
<td>0° to +115°</td>
<td>0° to +115°</td>
<td>0° to +115°</td>
<td>0° to +115°</td>
<td>0° to +115°</td>
<td>0° to +115°</td>
<td>0° to +115°</td>
<td>0° to +115°</td>
<td>0° to +115°</td>
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<tr>
<td>&quot;Quick Release&quot; mechanism</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Power Requirement</td>
<td>DC 12V</td>
<td>DC 12V</td>
<td>DC 12V</td>
<td>DC 12V</td>
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<td>DC 12V</td>
<td>DC 12V</td>
<td>DC 12V</td>
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<td>DC 12V</td>
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<tr>
<td>Dimensions</td>
<td>154 x 226 mm</td>
<td>154 x 226 mm</td>
<td>238 x 344 mm</td>
<td>238 x 344 mm</td>
<td>238 x 344 mm</td>
<td>238 x 344 mm</td>
<td>238 x 344 mm</td>
<td>238 x 344 mm</td>
<td>238 x 344 mm</td>
<td>238 x 344 mm</td>
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</tbody>
</table>

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(*1) When the model name includes "/" (slash) such as "SNC-RX330/P" in this table, please read as "SNC-RX330N" (NTSC model) and "SNC-RX330P" (PAL model).  
(*2) Definition of HD: More than 720p with H.264 streaming capability at more than 30/25 fps  
(*3) When the frame rate includes "I" such as "30I/25I" in this table, please read as "30I" (NTSC) and "25I" (PAL). In the same manner, "704x480/704x576" means "704x480 (NTSC) and 704x576 (PAL).  
(*4) When the maximum resolution includes "I" such as "704x480/704x576" in this table, please read as "704x480 (NTSC) and 704x576 (PAL).  
(*5) DEPA Intelligent Object Detection is included in this model.  
(*6) hPoE is available from the firmware version 1.2.
### IP Mini Dome Cameras

#### Model name (*1)
<table>
<thead>
<tr>
<th>SNC-DF50N/P</th>
<th>SNC-DF50N/P</th>
<th>SNC-DS10</th>
<th>SNC-DS560</th>
<th>SNC-DM110</th>
<th>SNC-DM1600</th>
<th>SNC-DH120</th>
<th>SNC-DH140</th>
<th>SNC-DH140T</th>
<th>SNC-DH240T</th>
<th>SNC-DH160</th>
<th>SNC-DH180T</th>
</tr>
</thead>
</table>

#### Video compression format
- JPEG/MPEG-4/H.264

#### Codec Streaming Capability
- Dual streaming (JPEG and MPEG-4 combination only)
- Dual streaming (JPEG and MPEG-4/H.264 combination only)
- Dual streaming (Any combination with JPEG/MPEG-4/H.264, including multiple streams of the same format)

#### HD/Megapixel (*2)
- SD
- 1 Megapixel
- 2 Megapixels
- 3 Megapixels
- 4 Megapixels

#### Ingress Protection
- IP66
- IK10

#### Vandal Resistant
- SNC-DF50N/P
- SNC-DH120

#### IR Illumination
- 3 x optical zoom
- 4 x optical zoom
- 5 x optical zoom
- 6 x optical zoom

#### Optical zoom ratio
- 3.6x optical zoom
- 5.1x optical zoom

#### Minimum illumination
- 0.1 lux
- 0.01 lux
- 0.001 lux

#### Maximum frame rate
- 10/8 fps
- 15/10 fps
- 20/14 fps
- 30/20 fps

#### Maximum resolution
- 704 x 480
- 704 x 576
- 1280 x 1024
- 1920 x 1440

#### IR Illuminators
- No
- Yes

#### IP66
- Yes
- No

#### Card slot(s)
- No
- Yes

#### DEPA Analytics (Intelligent Object Detection)
- Yes
- No

#### DWDR (Day/Wide Dynamic Range)
- Day/Night

#### ONVIF Software
- Yes
- No

#### Power requirement
- 12V, PoE
- AC 24V

#### Dimensions
- 7 x 5/8 inches (ø126 x 140.5 mm)
- 7 x 5/8 inches (ø127.5 x 141.5 mm)
- 5.5/8 x 4 3/4 inches (ø140 x 118 mm)
- 5.5/8 x 4 3/4 inches (ø140 x 118 mm)

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(*1) When the model name includes "/" (slash) such as "SNC-DF50N/P" in this table, please read as "SNC-DF50N" (NTSC model) and "SNC-DF50P" (PAL model).

(*2) Definition of HD: More than 720p with H.264 streaming capability at more than 30/25 fps.

(*3) When the frame rate includes "/" such as "30/25 fps" in this table, please read as "30 fps (NTSC) and 25 fps (PAL)." In the same manner, "704x480/704x576" means "704x480 (NTSC)" and "704x576 (PAL)."

(*4) When the Maximum resolution includes "/" such as "704x480/704x576" in this table, please read as "704x480 (NTSC)" and "704x576 (PAL)."

(*5) DEPA Intelligent Object Detection is included in this model.
## Quick Reference

**IP Fixed Cameras**

<table>
<thead>
<tr>
<th>Model name (*1)</th>
<th>SNC-P1</th>
<th>SNC-CS10</th>
<th>SNC-CS11</th>
<th>SNC-CS20</th>
<th>SNC-CS50N/P</th>
<th>SNC-CM120</th>
<th>SNC-CH120</th>
<th>SNC-CH140</th>
<th>SNC-CH240</th>
<th>SNC-CH160</th>
<th>SNC-CH180</th>
<th>SNC-CH280</th>
<th>SNC-CH210</th>
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</thead>
<tbody>
<tr>
<td><strong>Video compression format</strong></td>
<td>JPEG/MPEG-4</td>
<td>JPEG/MPEG-4</td>
<td>JPEG/MPEG-4</td>
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<td>JPEG/MPEG-4</td>
<td>JPEG/MPEG-4</td>
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<tr>
<td><strong>Code Stream Capability</strong></td>
<td>Single streaming (JPEG/MPEG-4 selectable)</td>
<td>Dual streaming (JPEG/MPEG-4 and H.264 combination only)</td>
<td>Dual streaming (Any combination with JPEG/MPEG-4/H.264, including multiple streams of the same format)</td>
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### HD/Megapixel (*2)

<table>
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<tr>
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<th>No</th>
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</thead>
<tbody>
<tr>
<td>Optical zoom ratio</td>
<td>Fixed focal lens (f=3.8 mm)</td>
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<td>No</td>
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<td>Lens mount</td>
<td>Built-in</td>
<td>CS mount</td>
<td>CS mount</td>
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<td>C5 mount</td>
<td>C5 mount</td>
<td>Built-in</td>
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<tr>
<td>Imager</td>
<td>1/4-type Progressive Scan or Exmor CMOS progressive scan</td>
<td>1/4-type Progressive Scan or Exmor CMOS progressive scan</td>
<td>2/3-type Progressive Scan or Exmor CMOS progressive scan</td>
<td>1/3-type Progressive Scan or Exmor CMOS progressive scan</td>
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<tr>
<td>Minimum illumination</td>
<td>1.2 lx (50IRE, F1.0, AGC ON)</td>
<td>1.7 lx (50IRE, F1.0, AGC ON)</td>
<td>1.7 lx (50IRE, F1.0, AGC ON)</td>
<td>Color: 0.2 lx, B/W: 0.01 lx (SOBRE, F0.95, AGC ON)</td>
<td>Color: 0.4 lx, B/W: 0.04 lx (50IRE, F0.95, AGC ON)</td>
<td>Color: 0.8 lx, B/W: 0.07 lx (SOBRE, F1.3, AGC ON)</td>
<td>Color: 0.8 lx, B/W: 0.07 lx (SOBRE, F1.3, AGC ON)</td>
<td>Color: 0.2 lx, B/W: 0.1 lx (F1.2), View-Off (Light Funnel ON, SOBRE, F1.3, AGC ON)</td>
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<tr>
<td>Dynamic frame rate (*3)</td>
<td>18 fps JPEG at 704 x 480/704 x 576 resolution</td>
<td>18 fps JPEG at 704 x 480/704 x 576 resolution</td>
<td>25 fps JPEG at 704 x 576 resolution</td>
<td>15 fps JPEG at 704 x 576 resolution</td>
<td>15 fps JPEG at 704 x 576 resolution</td>
<td>15 fps JPEG at 704 x 576 resolution</td>
<td>15 fps JPEG at 704 x 576 resolution</td>
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<td>Maximum resolution (*4)</td>
<td>640 x 480</td>
<td>640 x 480</td>
<td>640 x 480</td>
<td>768 x 576</td>
<td>768 x 576</td>
<td>768 x 576</td>
<td>1280 x 960</td>
<td>1920 x 1080</td>
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<tr>
<td>Day/Night</td>
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<tr>
<td>Wide-D</td>
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<td>No</td>
<td>Yes (option)</td>
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<td>Yes</td>
<td>Yes</td>
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</tr>
<tr>
<td>DEPA Analytics (Intelligence)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>ONVIF</td>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes (option)</td>
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<tr>
<td>Power requirement</td>
<td>DC 12 V</td>
<td>AC 24, DC 12 V</td>
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<td>AC 24, DC 12 V</td>
<td>AC 24, DC 12 V</td>
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</tr>
<tr>
<td>Dimensions</td>
<td>Camera: 4 x 1/16 inches (102 x 36 x 139 mm)</td>
<td>2/7 x 2/14 inches (70 x 57 x 165 mm)</td>
<td>2/7 x 2/14 inches (70 x 57 x 165 mm)</td>
<td>3/1 x 2/12 inches (62.5 x 63 x 176.5 mm)</td>
<td>3/1 x 2/12 inches (62.5 x 63 x 176.5 mm)</td>
<td>3/1 x 2/12 inches (62.5 x 63 x 187.5 mm)</td>
<td>3/1 x 2/12 inches (62.5 x 63 x 197 mm)</td>
<td>3/1 x 2/12 inches (62.5 x 63 x 197 mm)</td>
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</table>

(*1) When the model name includes "10" (slash) such as "SNC-CS50N10" in this table, read as "SNC-CS50N" (NTSC model) and "SNC-CS50P10" (PAL model).

(*2) Definition of HD: More than 720p with H.264 streaming capability at more than 30/25 fps.

(*3) When the frame rate includes "r" such as "30/25fps" in this table, please read as "30 fps" (NTSC model) and "25 fps" (PAL model).

(*4) When the Maximum resolution includes "r" such as "704x480/704x576" in this table, please read as "704x480 (NTS) and 704x576 (PAL)."

(*5) DEPA Intelligent Object Detection is included in this model.
Glossary

IP66
The “IP” of IP66 stands for Ingress Protection, and its two-digit number shows the durability rating of equipment for outdoor use. The first digit of IP66 relates to the ingress protection against dust, and “6” means “dust tight”. The second digit of IP66 relates to the ingress protection against water, and “6” means protected against “heavy jet sprays,” such as conditions that can be encountered in hurricanes.

Day/Night
A day/night camera has two modes of operation: a day mode and a night mode. The camera switches from day mode (Color) to night mode (B/W) by replacing its infrared-cut filter with a clear filter. In night mode, the camera becomes sensitive to near-IR light and is capable of reproducing images even when the scene is not visible to the naked eye.

Wide-D
State-of-the-art technologies to expand the video dynamic range of the camera to improve the visibility of images even in extremely high-contrast environments. Wide-D is a powerful feature to compensate for scenes with extremely poor contrast.

DynaView Technology
DynaView™ is one of Sony’s Wide-D technologies. With DynaView technology, the camera captures two images for each frame using an electronic shutter -- the first image is taken with a ‘standard’ exposure time and the second image is taken with a very short exposure time. The dark areas in the scene are clearly reproduced in the first image and the bright areas are reproduced without being ‘washed out’ in the second image. The two images are then combined into one by using an advanced DSP LSI, to reproduce high-contrast images.

View-DR Technology
View-DR™ technology is Sony’s latest technology to produce images with an extremely wide dynamic range. View-DR technology is a combination of Sony’s full-capture Wide-D technology, the high-speed Exmor CMOS sensor, and Visibility Enhancer (VE). The full-capture Wide-D technology used in View-DR technology uses an electronic shutter to capture multiple images, to reproduce each frame. One image is taken using a ‘standard’ exposure time and either one or three images are taken using very short exposure times depending on the camera type. With the newly developed View-DR technology algorithm, all of the electrons converted from the captured light is fully used by the imager, which is quite different from DynaView and some other Wide-D technologies in the industry that discard approximately ½ of the electrons. As a result, View-DR nearly doubles the sensitivity compared to conventional Wide-D technologies. To capture multiple HD resolution images at a very high speed, the Exmor CMOS sensor was adopted because of its high-speed readout characteristics. During the process of combining multiple images, the Visibility Enhancer (VE) is employed to provide a high level of chrominance and luminance. With View-DR technology, the monitored images become very visible -- sometimes even more than when viewed with our naked eyes.

Visibility Enhancer (VE)
VE is one of Sony’s new technologies that optimizes contrast and makes a scene more visible. It is ideal for scenes where objects are hard to recognize due to severe backlight or shadows. VE optimizes the brightness and color reproduction of an image dynamically on a pixel-by-pixel basis while continuously adapting to the scene. Technically, VE stretches the contrast in both the backlight portions and the shadows within the given dynamic range, which is different from Wide-D. VE also contributes to the high sensitivity of the camera. By combining VE with XDNR, the camera can reproduce clear and bright images in very low-light conditions, while keeping noise at a minimal level.

XDNR Technology (eXcellent Dynamic Noise Reduction)
XDNR™ technology is Sony’s latest technology for noise reduction in IP security cameras. XDNR technology utilizes 2D and 3D noise reduction methods adaptively to scenes. Under low-light conditions, XDNR technology provides clear images for both moving objects and still portions of the image, using 2DNR and 3DNR, respectively. This method provides clear images while minimizing motion blur which is a challenge in any outdoor surveillance monitoring applications, such as in parking lots.

DEPA System
With a Sony DEPA™ system, DEPA-enabled cameras send not only video images but also related metadata, including object data (size and position) to the DEPA-enabled recorder. Since part of the image processing is done on the camera side, the load to the recorder can be reduced enabling camera expansion. Conventional video analytic systems, on the other hand, process images solely on the recorder side often causing CPU overload.

DEPA Advanced
DEPA Advanced is an enhanced DEPA technology. Unlike DEPA, a camera incorporating DEPA Advanced completes the entire DEPA analysis such as intrusion detection with a virtual borderline on the camera side, and sends only an alarm to the recorder. Enhancements also include a tamper alarm, shadow cancellation, a beam intrusion detector, and audio analysis. Since the analytic processing is completed in the camera, end users can benefit from DEPA Advanced because it can be easily integrated with a variety of recorders and/or video management solutions.

ONVIF Software
ONVIF software defines a common protocol for the exchange of information between different network video devices regardless of manufacturer, and achieves greater interoperability in multi-vendor network video systems.

PoE (Power-over-Ethernet, IEEE 802.3af)
PoE enables networked devices to receive power up to 13.95W from PoE-enabled equipment through the same Ethernet cable that transports data. It may provide substantial savings in installation costs and can simplify the installation process.

hPoE (High PoE, IEEE 802.3at)
hPoE enables networked devices to receive power up to 25W from hPoE-enabled equipment through the same Ethernet cable that transports data. hPoE is useful especially for PTZ/Rapid Dome cameras that require motor control.