**Key Features**

- **720p HD images up to 30 fps**
- **Approximate 1/3 inches, high sensitivity MOS image sensor**
- **Multiple H.264 (High profile) streams (max. 4 streams)** and JPEG streams ensure simultaneous real time monitoring and high resolution recording.
- **Wide Dynamic Range and ABS (Adaptive Black Stretch) technologies deliver wider dynamic range compared with conventional cameras.**
- **Smart coding Technology** : Group of Pictures (GOP) control function removes unnecessary information from the frame for realizing efficient encoding.
- **Auto VIQS** (Variable Image Quality on Specified area) function recognizes the no movement area in a video automatically and lowering the resolution of it to reduce the data size.
- **High sensitivity with Day/Night (ICR*) function**:
  - 0.02 lx (Color), 0.006 lx (B/W) at F1.6
  - *ICR: IR Cut filter Removal*
- **IR LED** equipped : The equipped infrared LED makes it possible to take pictures at zero lx.
- **IR LED** is controlled to match the environment, thereby the camera provides clear images of human faces without white blur.
- **ABF (Auto Back Focus)** ensures easy installation.
- **Newly developed lens with aperture control function realizes the best focus in any environment.**
- **VIQS (Variable Image Quality on Specified area) technology allows the designated eight areas to retain higher image quality while the excluded area will have a decreased image quality, which enables to use lower image file size and bit rate.**
- **Cropping function enables to provide whole image and the part image simultaneously,**
  - Up to 4 image capture areas can be specified, and it is also possible to control the sequence.
- **Face Wide Dynamic Range technology ensures clear face image.**
- **Lens distortion compensation for the distorted images can be adjusted 256 steps.**
- **Electronic sensitivity enhancement** : Auto (Up to 16/30s) / OFF
- **Selectable light control modes** :
  - Outdoor scene, Indoor scene (60 Hz) / Indoor scene (60 Hz), Fix shutter
  - Flicker caused by fluorescent lightning will be automatically compensated.
- **2x, 4x digital zoom controlled by browser**
- **VMD (Video Motion Detection) with 4 programmable detection areas,**
  - 15 steps sensitivity level and 10 steps detection size.
- **Privacy Zone can mask up to 8 private areas, such as house windows and entrances/exits.**
- **Camera title display** : Up to 20 alphanumeric characters on the browser.
- **JPEG Image compression ratio can be changed by alarm so that higher quality image can be provided.**
- **Prioritized stream control** : One of the video streams can be prioritized when multiple recorders or client PCs are accessing the camera so that the recorder or the client PC can maintain the frame rate.
- **SDXCV/SDHC/SD Memory card slot** for manual recording (H.264 / JPEG), alarm recording (H.264 / JPEG) and backup upon network failure (H.264 / JPEG). Realize long-term recording and auto backup function.
- **Face detection function detects the position of human face and the information is sent by XML or video stream.** (Extension Software)
- **Can be added new intelligent extension software in addition to built-in VMD (Video Motion Detection), alarm function.**
- **Fog compensation function** equipped as standard.
- **HLC (High Light Compensation)** technology reduces strong light sources such as vehicle headlights to prevent camera being blinded.
- **SCC (Super Chroma Compensation)** function realizes a better color reproducibility even in low illumination.
- **H.264 max. bit rate/client and Total bit rate control allows flexible network traffic management. Frame rate priority mode controls bit rate and compression ratio to provide the specified frame rate.**
- **Internet mode** : H.264 images can be transmitted over HTTP protocol.
- **Multi-language** : English / Italian / French / German / Spanish / Portuguese / Russian / Chinese / Japanese
- **IPv4/IPv6 protocol supported**
- **Still images (JPEG) can be viewed on mobile phones via Internet.**
- **ONVIF compliant model**
- **IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard, Type 4X(UL50), NEMA 4X compliant.**
### Specifications

**Camera**
- **Image Sensor**: Approx. 7/3 type MOS image sensor
- **Image Stabilization**: Off
- **Image Compression**: MJPEG
- **Image Size**: Approx. 70 (1,072 x 720) at 30 fps, Approx. 40 (1,416 x 1,000) at 25 fps
- **Minimum Illumination**:
  - Color: 0.01 lux (F1.2, 1/100 s, Gain: Auto/Max.), 0.01 lux (F1.2, 1/100 s, Gain: Off)
  - Monochrome: 0.0003 lux (F1.2, 1/100 s, Gain: Auto/Max.), 0.0003 lux (F1.2, 1/100 s, Gain: Off)
- **Ambient Operating Humidity**: 10 to 90 % (no condensation)
- **Ambient Operating Temperature**: 0 to 40 °C
- **EMS**: Type 4X (UL50), NEMA 4X compliant

**Lens**
- **Aperture**: F1.6 to F2.2
- **Focus**: 0.3 m - ∞
- **Minimum Focus Distance**: 30 cm

**Network**
- **Network Interface**: Ethernet (10/100BASE-TX, 10/100BASE-T, 100/1000BASE-T), 802.11n
- **Power Source**: 120 V (50 Hz) (AC120V) / 220 V to 240 V (-5% to +10%)(50 Hz / 60 Hz) (AC220V), 10 to 18 V (-20% to +15%) (DC12V)
- **Power Consumption**: 15 W (max.)

**Trademarked and Registered Trademarks**
- Intel® Core™, Intel® Core™ i7, Intel® Core™ i5
- i-PRO SmartHD™, i-PRO SmartHD+
- ONVIF
- Android
- iOS
- iPad, iPhone, iPod touch
- JPEG, H.264
- SD, SDHC, SDXC
- HDMI
- IEEE 802.11
- IPv4, IPv6
- SNMP, ONVIF
- DC12V

**Safety Precaution**
- Panasonic cannot be responsible for the performance of the network and/or other manufacturers' products used on the network.

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### Important

**Part Names and Functions**

* Masses and dimensions are approximate.
* Specifications subject to change without notice.

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**Network**

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTTPS, HTTP, RTSP, RTP/RTCP, FTP, SMTP, DHCPv6</td>
<td>Supports standard protocols defined by the Internet Engineering Task Force (IETF).</td>
</tr>
<tr>
<td>IPv4, IPv6, ONVIF, SNMP, ONVIF</td>
<td>Supports ONVIF compliant protocols.</td>
</tr>
</tbody>
</table>

**Alarm**

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarm</td>
<td>Triggered by motion detection, VMD, access permission, or scheduled recording.</td>
</tr>
<tr>
<td>Alarm Mode</td>
<td>Manual, Smart, Schedule</td>
</tr>
<tr>
<td>Alarm Memory</td>
<td>Up to 5000 logs for each SD memory card</td>
</tr>
</tbody>
</table>

**Input/Output**

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor</td>
<td>Functional on Microsoft Windows 7 or higher</td>
</tr>
<tr>
<td>Camera Title</td>
<td>Supported for up to 4,000 (SDXC/SDHC/SD memory card) labels</td>
</tr>
<tr>
<td>Video Compression</td>
<td>JPEG image, AVI based on the H.264/AVC standard</td>
</tr>
</tbody>
</table>

**Image Resolution**

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPEG</td>
<td>640 x 480, 720 x 576, 1280 x 720, 1920 x 1080</td>
</tr>
<tr>
<td>H.264</td>
<td>1280 x 720, 1920 x 1080</td>
</tr>
</tbody>
</table>

**Importance**

- ONVIF and the ONVIF logo are trademarks of ONVIF Inc.
- “i-PRO SmartHD” logo is trademark or registered trademark of Panasonic Corporation.
- Android is a trademark of Google Inc.
- iPad, iPhone, iPod touch are registered trademarks of Apple Inc.

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