Hitachi Visualization Platform gateways scale from integrated, solid-state devices to high-end performance computing environments, allowing the platform to scale from single cameras to thousands of simultaneous streams.

Hitachi Visualization Platform: Gateways

Collect Vital Security Information With Intelligent Edge-Capture Devices

The Hitachi Visualization Platform (HVP) combined with Hitachi Visualization Suite (HVS) provides public safety agencies and smart cities with a comprehensive end-to-end solution for improved situational awareness.

HVP intelligent edge capture device and HVS integrated cloud-based software compose Hitachi Visualization, the overall public safety solution from Hitachi Data Systems. These products enable rapid deployment and management of robust communication networks across wide areas to address the needs of video surveillance, mobile and smart city communications.

Hitachi Visualization is available in public and on-premises (hybrid) and private, on-premises architecture and services distribution (see Figure 1).*

Key advantages of the HVP gateway within Hitachi Visualization include:

- Dynamic multistreaming balancing and high video quality based on available edge-processing power and network bandwidth.
- Secure Internet service bus that overcomes limitations of virtual private network connectivity.
- Ability to stream on local area networks.
- High-availability service based on MQTT protocol.
- Support for secure and reliable message exchange based on AMQP protocol.
- Integrated with reliable Microsoft® Azure™ cloud environment.
- Optimal video transcoding to normalize disparate video feeds.
- Agnostic event source retrievers and ingestors (REST, FTP, FS).
- Self-discovery and self-update feature.
- Certified integrations with top video management system (VMS) providers (including playback support).
- Powerful workflow to act on any sensor or alarm data.

At the low end, while keeping high quality, HDS offers an affordable gateway with compact form factor that is ideal for small private-entity integrations (see Figure 2). This unit comes with all solid-state...

* Private cloud may not be available at time of this document’s publication.
components and an Intel i7 processor at the core running Microsoft Windows® Embedded 8. It is has a fanless design with heat-sink and a solid-state hard drive (SSD) up to 500GB in size. The gateways are also offered in a ruggedized version, which is shock and vibration resistant, along with built-in 16 channel analog encoder. Lastly, a 1U rackmount compact form-factor version with quad-core processors is available for more demanding deployments (see Table 1).

**Streaming Capabilities**

HVP gateways can manage multiple video streams at the same time. For each gateway, the number of streams depends on the available resources. Once a request is routed to the video gateway, the device will take care of the task if the CPU, memory and the local bandwidth are able to support a new stream. Note that an i7 family CPU with 8GB RAM can manage about 16 cameras simultaneously (considering 720p source streams 10-20fps @300kbps). This limit can change depending on the specific camera resolution, frame rate and dynamic bitrate.

The gateways can be configured through the administration panel to interact with the available VMSs.

<table>
<thead>
<tr>
<th>Category or Model</th>
<th>HVP 100 Gateway</th>
<th>HVP 150 Gateway</th>
<th>HVP 300 Gateway</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU</strong></td>
<td>Intel Core i7</td>
<td>Intel i7-3517UE</td>
<td>Intel Xeon ES-2603 quad core</td>
</tr>
<tr>
<td><strong>Microsoft® Operating System</strong></td>
<td>Windows® 7/8 Embedded</td>
<td>Windows 8 Embedded</td>
<td>Windows Server® 2012</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>DDR3 1333 DIMM 8GB</td>
<td>DDR3 1333 DIMM 8GB</td>
<td>DDR3 1333 DIMM 16GB</td>
</tr>
<tr>
<td><strong>Hard Disk</strong></td>
<td>80GB 2.5” SSD</td>
<td>256GB 2.5” SSD, 64GB mSATA for operating system</td>
<td>2x300GB 10K SAS drives</td>
</tr>
<tr>
<td><strong>Graphics</strong></td>
<td>Intel HD4600 GPU</td>
<td>Intel HD4600 GPU and 16-channel analog video encoder</td>
<td>Intel HD4600 GPU</td>
</tr>
<tr>
<td><strong>Ethernet</strong></td>
<td>Intel 82574Lx2, WiFi 802.11n</td>
<td>Intel 82574Lx2, WiFi 802.11n</td>
<td>Dual-port GbE embedded adapter</td>
</tr>
<tr>
<td><strong>Dimensions</strong> (H x W x D)</td>
<td>10.80” x 2.61” x 7.57”</td>
<td>10.68” x 2.81” x 7.33”</td>
<td>1U Rack</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>7.26 lbs</td>
<td>9.9 lbs</td>
<td>39.7 lbs</td>
</tr>
</tbody>
</table>

The video stream load can be shared or divided among multiple gateways.

Features include:

- Local and cloud streaming.
- High-quality video streams (up to 720p).
- Configurable bitrates.
- RTMP and HLS live protocol support.
- Transcoding and stream routing.
- Stream playback from source archive.