CAMERA TEST

In Focus: Arecont Vision AV1305DN

Arecont Vision, with headquarters in Glendale, California, develops and produces a wide variety of modern, real-time multi-megapixel video surveillance systems. The AV1305 1.3 megapixel network camera is a high-sensitivity day/night camera with multi-streaming capability, equipped with Arecont Progressive Scan technology. It has a special zoom lens with which, at the same time as the full image, any image section can be zoomed, displayed and archived as a separate data stream from the camera.

Performance

Performance assessment when used with 1,000 Lux
In comparison with the reference image, with the resolution set to maximum, the Arecont Vision AV1305DN shows a slightly cloudy image, but with very good sharpness. In addition, the AV1305DN has an acceptable contrast ratio.

Performance assessment when used with less than 1,000 Lux
At a Lux value below 100, minimal unsharpness was detected for moving objects in the lower half of the sequence. This did not deteriorate significantly down to 2.5 Lux and resulted in loss of recognition of moving objects below 0.5 Lux. Slight image noise only occurred at 0.5 Lux.

Performance assessment in backlight situations
The compensation time with backlight is approx. 3 seconds and shows good dynamic characteristics. The size of the cone of illumination extends to just beyond the edge of the backlight, and in a backlight situation, slight to severe traces of blooming can be detected.-

Performance assessment in use: Bandwidth measurement
On closer examination of the characteristic curve, the compensation behaviour of the H.264 codec becomes clearly apparent. Depending on the lighting conditions and the movement in the image, a slight to large increase or decrease was detected. This leads to the conclusion that a constant compression process is used, which always attempts to produce good quality with limited transmission capacity.
With comparable quality, an MPEG stream provides a measured average data rate of approx. 20 Mbps, which corresponds to a reduction in bandwidth of approx. 78 % in comparison to the measured 4.47 Mbps of the H.264 stream.

Technical data for the camera test

Manufacturer	Arecont Vision
Model	AV1305DN
Firmware version	65130
Distance from test chart	0.60 m
Objective used	1/2" Varifocus 4–12 mm; F1.4 (Tamron M11)
*Focal length set	approx. 6 mm
* Compression method	H.264
*Resolution	1,280 x 1,024
*Compression	50 %
I-frame interval:	1 second
Max. stream bandwidth	unlimited
Measured frame rate	30 fps
Average bandwidth	4.47 Mbit/s

Comments:
– At 1,000 Lux a 50Hz hum can be detected, which is evident from a transverse bar in the image.
– The illumination was set to „Mix" in order to emphasise the colours

*The camera was integrated into the test system with the „default" settings. The settings were modified according to the test criteria listed above.

Assessment for various lighting conditions

Criteria | Lux values	1,000 Lux	100 Lux	10 Lux	0,5 Lux	0 Lux + BL*1
Colours	3,5	3,5	3,5	s/w	s/w
Contrast	2,5	2,5	2,5	s/w	s/w
Sharpness	2,5	2	2	3	3
Motion sharpness	2	3	2,5	4	3
Image noise	2,5	2,5	2,5	3	3
Compensation time for backlight	–	–	–	–	3
Backlight characteristics	–	–	–	–	4

Assessment according to the following grades: 1 (excellent), 2 (good), 3 (average), 4 (satisfactory), 5 (limited), 6 (poor)

Conclusion

The Arecont Vision AV1305DN is a camera with multi-streaming capability, which supports the parallel output of up to eight image streams (H.264 and MJPEG) with a maximum resolution of 1.3 megapixel. The Arecont H.264 series offers an average of up to ten-fold better utilisation of bandwidth and reduction for archiving than MJPEG.
The camera is suitable for indoor and outdoor use. For outdoor use it should be noted that in backlight situations, noticeable dazzle and blooming effects can occur.

Test the best!

GIT SECURITY Camera Test in cooperation with SeeTec

In Focus: Axis P1344

With the P1344 network camera, Axis has a fixed installation day and night camera in its range, which should offer excellent H.264 performance and features a robust design. It provides HDTV video quality with progressive scanning into several individual H.264 video streams and Motion JPEG video streams. Installation is simplified with the use of the focus assistant, remote control of the image size and the pixel counter.

TEST

CAMERA TEST

Performance

Performance assessment when used with 1,000 Lux
In comparison with the reference image, at the maximum resolution tested, the Axis P1344 showed a brilliant colour range and very good sharpness. In addition, the device showed a very good contrast ratio.

Performance assessment when used with less than 1,000 Lux
At a Lux value of 100, unsharpness was detected for moving objects in the lower half of the sequence. This did not deteriorate significantly down to 10 Lux and resulted in a slight loss of recognition of moving objects at approx. 5 Lux. At 0.5 Lux there is slight image noise, although this is only noticeable after switchover from day to night mode.

Performance assessment in backlight situations
The compensation time with backlight is approx. 2 seconds and shows good dynamic characteristics. The size of the cone of illumination extends from the edge of the backlight to over the entire object and shows slight traces of blooming.

Performance assessment in use: Bandwidth measurement
On closer examination of the characteristic curve, the H.264 codec becomes clearly apparent. Depending on the lighting conditions and the movement in the image, a slight to large increase or decrease was detected. From this it can be deduced that a variable bit rate is used, which provides a higher quality with overall less memory capacity. With comparable quality, an MPEG stream provides a measured average data rate of approx. *21 Mbps, which corresponds to a reduction in bandwidth for the transmitted data of approx. 90 % in comparison to the measured 2.08 Mbps of the H.264 stream.

Conclusion

The Axis P1344 is a network camera for fixed installation, which offers excellent H.264 performance and features a robust design. It provides HDTV video quality with progressive scanning into several individual H.264 and Motion JPEG video streams. Installation is simplified with the use of the focus assistant, remote control of the image size and the pixel counter.
With the aid of the remotely controlled zoom function the optimum angle of view and the required resolution for the environment can be set during installation. The Axis P1344 provides high performance video surveillance both indoors and outdoors. It is a good solution for the surveillance of retail shops, airports, stations, schools and universities, as well as government and industrial buildings.

Technical data for the camera test

Manufacturer	Axis
Model	P1344
Firmware version	5.06
*Distance from test chart	1.20 m
Objective used	3 – 8 mm; F1.2
*Focal length set	Approx. 6 mm
*Compression method	H.264
*Resolution	1,280 x 800 (16:10)
Compression	30 %
I-frame interval:	1 second
*Set stream bandwidth	unlimited
Measured frame rate	29 fps
Average bandwidth measurement	2.08 Mbit/s

Day/night switchover was carried out manually at 2 Lux

The camera was integrated into the test system with the „default" settings. The settings were modified according to the test criteria listed above

Assessment for various lighting conditions

Criteria	Lux values	1,000 Lux	100 Lux	10 Lux	0,5 Lux	0 Lux + BL*1
Colours	2	3	3	s/w	s/w
Contrast	2	2,5	3	s/w	s/w
Sharpness	2,5	2,5	3	4	3
Motion sharpness	2	2,5	3	3,5	3
Image noise	2	2,5	2,5	2,5	3,5
Compensation time for backlight	–	–	–	–	3
Backlight characteristics	–	–	–	–	4,5

Assessment according to the following grades: 1 (excellent), 2 (good), 3 (average), 4 (satisfactory), 5 (limited), 6 (poor)