Test the best!

In cooperation with Seetec, GIT SECURITY tests current and new video cameras under standardised conditions in the test laboratory of the SeeTec Hardware Competence Center. The Hardware Competence Center was set up because the data and performance specifications of network cameras as stated by manufacturers are often measured under different conditions and are not always reliable in practice. The results provided a sound basis for planning IP video projects and help to avoid unpleasant surprises. For the testing procedure, video sequences are produced under defined lighting scenarios and are then evaluated. Here, movements in the picture as well as night and backlight situations are taken into consideration.

In Focus: Panasonic WV SP105

Panasonic System Networks Europe (PSNE) have provided with the network fixed camera WV-SP105 an affordable i-Pro SmartHD camera for security networks that delivers VGA or 720p HD resolution with up to 30 images per second. The camera works with the Panasonic UniPhier LSI chip and H.264 High Profile Format and features comprehensive Panasonic functions such as the Adaptive Black Stretch technology for a wide dynamic range and Digital Noise Reduction. With this model, the aim of PSNE is to provide cost-conscious customers with a high-quality camera with first-class image quality to provide solutions in the widest possible variety of applications.

CAMERA TEST

Performance

Performance at 1000 Lux

Under good lighting conditions the camera provides a clear image with good contrast. The colours were reproduced naturally and without recognisable tint. The image definition is also good, under good lighting conditions moving objects are correctly reproduced and without smearing.

Performance at less than 1000 Lux

As lighting levels decrease, the image becomes overall somewhat darker, but still remains crisp. The image contrast still remains easily recognisable. A slight drop in the measured frame rate to approx. 20 images/second was detected. Around 5 lux, slight image noise was detectable, image definition worsened and smearing on moving objects was visible.

Performance in backlight situations

The camera reacts extremely quickly (approximately 2 seconds) when confronted with sudden backlight situations. The spill from the backlight source was clear, glaring effects were visible. No smearing was observed.

Performance in use: bandwidth measurement

The camera used a bandwidth of on average 3.56 MB/s in linear mode. As lighting conditions change, temporary variations were observed, although the camera attempted to maintain the bandwidth usage at a constant figure.

Summary

The fixed camera in its compact bullet housing is highly suitable thanks to its design and favourable cost/performance ratio to the surveillance of interior rooms of branch outlets with defined lighting levels, for example in retail shops. The camera provides several image streams in H.264 and MJPEG in HD resolution (720 p) and is powered via PoE. An onboard motion-detection function enables the mounting of simple trigger scenarios directly onto the camera.

Technical data for the camera test

Manufacturer	Panasonic
Model	WV SP105
Firmware version	1.01
Distance from test chart	0,4 m
Lens used	3,54 mm, 1:2.2 festes Objektiv
*Focal length set	3,54 mm
*Compression method	H.264
*Resolution	1280 x 720
*Compression	50%
I-frame interval:	1 Sekunde
Max. stream bandwidth	unbegrenzt
Measured frame rate	25 fps
Average bandwidth	3,56 Mbit/s

*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	1000 Lux	100 Lux	10 Lux	0,5 Lux	0 Lux + *BL1
Colours	2	2	2,5	3	–
Contrast	2	2	2	3	–
Sharpness	2	2	2,5	3	3
Motion blur	2	2,5	2,5	3	2,5
Image noise	2	2	2	3	3
Compensation time with backlight	–	–	–	–	2,5
Behaviour with backlight	–	–	–	–	3

Assessment was performed according to the rating system of 1 (very good) to 6 (unsatisfactory). By setting various parameters on the camera interface itself, it is possible to obtain an improved image quality.