

Test the Best!

Seetec and GIT SECURITY test video cameras in the test lab of the Hardware Competence Center at SeeTec under standardized conditions. The results provide a solid basis for the planning of IP video projects and help to avoid embarrassing surprises. For the test procedure video sequences are created under various different fixed lighting conditions and subsequently evaluated. Movement in the picture as well as night and backlight conditions are also included.

Performance

Performance assessment when used with 1,000 Lux

With good illumination of the scenery the camera delivers a clear, contrast rich picture. The color reproduction is good, although a slight red tint is visible. Static objects are shown sharp; smearing effects on moving objects hardly appear at all.

Performance assessment when used with less than 1,000 Lux

Very little difference to the image quality is noticeable when the light level sinks down to 10 Lux. The camera image remains clear and full of contrast, although a slight increase in image noise and slightly more noticeable smearing of moving objects can be seen. The picture quality reduces noticeably in particular under 5 Lux, and particularly the sharpness and color reproduction (reducing intensity) worsen. At 0.5 Lux the camera finally switches over to b/w mode. There is a noticeable noise level here and the differentiation of the contrast values reduces (light gray/color tones are just shown as white).

Performance assessment in backlight situations

The time taken for the camera to adjust under suddenly occurring backlight in dark surroundings is acceptable – a stable image is provided after about three seconds. A short time later the camera also switches to color mode. Details in the image background (test chart) are visible, whereby the backlight source is noticeably burnt. Moving objects are shown without any significant smearing.

Performance assessment in use: Bandwidth measurement

The camera was tested at a fixed bit rate of 4 MBit. The bandwidth used was in general very linear at 4.3 MBit, the higher average value of 7.1 MBit can be explained by the significant peaks in the bandwidth used of up to 15.3 MBit in low light level operation at 0.5 Lux as well as during backlight.

Conclusion

The day/night fixed camera delivers good images particularly under good illumination of the scenery. It is powered via PoE, supports multi-streaming and is ONVIF compatible. In addition it also has camera-based movement recognition and permits the masking of restricted zones directly on the device.

In Focus: Panasonic WV SP508

The WV-SP508 network camera from Panasonic is equipped for day/night operation with automatic back focus and a 3.1 megapixel sensor. The newly-developed MOS sensor delivers high-quality Full HD images in separate H.264 and JPEG streams. The Mega Super Dynamic technology enables the camera to attain a 128-times dynamic range. With its large range of functions, the SP508 is the most intelligent camera from Panasonic to date. The camera adjusts the focus automatically through face recognition so that a person can be recognized within the viewing area, and can raise an alarm by passing with XML data to a compatible recorder. Installation is simplified by the Auto Back Focus feature and VIQS (Variable Image Quality on Specified Area) is the innovation in the Smart HD product range that permits the definition of specific areas of the image to be adjusted and thereby to reduce the amount of bandwidth required.



CAMERA TEST



Technical data for the camera test

Manufacturer	Panasonic
Model	WV SP50
Firmware version	1.05
Distance to test chart	0.7 m
Lens used	Fujinon DC MP 1/2.7" 2,8-8mm F1.3
* Focal length set	6 mm
*Compression method	H.264
*Resolution	1920 x 1080
*Compression	–
I-Frame-interval	1 second
Max. stream bandwidth	4,096 kbit/s
Measured frame rate	30 fps
Average bandwidth	7.1 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.

Assesment with differing illumination conditions

Criteria Lux values	1000 Lux	100 Lux	10 Lux	0,5 Lux	0 Lux + *BL1
Colours	1.5	1.5	2	b/w	2.5
Contrast	1.5	1.5	1.5	3.5	2.5
Focus	2	2	2	3	2.5
Motion sharpness	2	2	2.5	2.5	2
Image noise	1.5	1.5	2	4	2.5
Recovery from backlight	–	–	–	–	3
Performance against backlight	–	–	–	–	2.5

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. BL= Backlight *in the beam of a white light LED