NEW SERIES:

Test the best!

Der GIT SECURITY Camera Test in cooperation with SeeTec

In collaboration with Seetec, GIT SECURITY tests the latest video cameras using the test laboratory facilities located at SeeTec's Hardware Competence Center, under standardised conditions. The Hardware Competence Center came into being because the performance specifications published by manufacturers for network cameras are often calculated under non-standardised conditions and in practice, are not always reliable. The results provided by the Hardware Competence Center can be used as a valid basis for planning IP video projects and help to avoid unpleasant surprises. The test process consists of creating video sequences under strictly defined lighting scenarios, with a subsequent evaluation of these sequences. The evaluation takes into account image movements as well as nighttime and backlight situations.

Performance

Performance at 1000 Lux
When tested, the camera produces a clear image although the colours are rendered somewhat pale and sometimes are slightly foggy. Image quality is good, although a slight fuzziness can be detected on moving images. The presence of image noise and compression artefacts is negligible.

Performance at less than 1000 Lux
With decreasing light conditions, the camera provides an easily recognisable image without significant noise down to approximately 10 Lux. Colour reproduction remains constant, with only a slight deterioration of contrast. Below 10 Lux, image noise increases. Although the camera has a nighttime mode, this mode did not activate during the seven-second test sequence at 0.5 Lux. However, the overall result is still an easily recognisable colour image, although considerable image noise is present.

Performance in backlight situations
When backlight situations suddenly occur after a period of complete darkness, the camera requires more than 3.5 seconds - a comparatively long time - before delivering a b/w image. Moreover, the camera switches over to daytime mode so that a continuously stable image is only recorded after approximately 6 seconds. However, the picture quality is acceptable, with the background showing colour differences and detail. The backlight source is clearly scattered, although smearing or reflection/blend effects are not significant.

Performance in use: bandwidth measurement
As light levels decrease, the camera's bandwidth usage increases sharply and at approximately 0.5 Lux reaches its maximum value of 27.4 MB/s. Average usage hovers around 6.83 MB/s.

In Focus: Samsung SND 5080

The SND 5080 is part of the new HD network camera series from Samsung and provides images in various CIF formats up to 16:9 HD with 1.3 megapixels. Like the Samsung SNB-5000 model (box camera), the SND-5080 also conforms to ONVIF standards, which guarantee interoperability between IP systems regardless of manufacturer. The model uses the newly-developed WiseNet transceiver, which enables the parallel output of multiple image streams (H.264, MPEG-4 and MJPEG). The SND 5080 surface-mount dome camera is a day/night camera that also supports the recording of images on an SD memory card. The camera is available in various designs.

CAMERA TEST

Technical data for the camera test

Manufacturer	Samsung
Model	SND 5080
Firmware version	1.10_100720
*Distance from test chart	0.7 m
Objective used	F1.2 2.8 – 10 mm
*Set focal length	Approx. 6 mm
*Compression method	H.264
*Resolution	1280 x 720
Compression	–
I-Frame spacing	1 second
*Set stream bandwidth	Unlimited
Measured frame rate	24 fps
Average measured bandwidth	6.83 Mbit/s

The camera was integrated into the test system with the "default" settings and correspondingly modified with the test criteria listed above

Assessment with differing illumination conditions

Criteria | Lux values	1000 Lux	100 Lux	10 Lux	0,5 Lux	0 Lux + *BL1
Colours	3	3	3	3	4
Contrast	2.5	2.5	3	3	4
Sharpness	2	2.5	2.5	2.5	2.5
Motion sharpness	2.5	2.5	2.5	4	3
Image noise	2	2	2	4	2
Compensation time for backlight	–	–	–	–	5
Backlight characteristics	–	–	–	–	4.5

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

*Average value.

Conclusion
The SND 5080 fixed dome camera is suitable for indoor use and provides resolutions up to 1.3 megapixels and can receive power over a network cable (PoE). The recording of image data on an SD card and the parallel output of multiple image streams are standard. Different designs are available on request, thus in addition to the basic version there is also a version for in-ceiling installation as well as a vandal-proof version.