NEW SERIES:

# Test the best!

## Two Impressive Dome Cameras – a Comparison

**Together with Seetec, GIT SICHERHEIT has tested both current and new video cameras in the test lab of the Hardware Competence Centers of Seetec under controlled conditions. The Hardware Competence Center was formed because manufacturer's own data and the features of network cameras were often established under different conditions and were not reliable facts when put into practice. These results provide a valid basis for the planning of IP video projectors and help to prevent unpleasant surprises. Video sequences are created for the tests under various defined light situations and then evaluated. Both movement in the picture and night or backlight situations are taken into account.**

### Performance

**Performance at 1000 Lux**
Under good lighting conditions the camera provides a generally balanced image. The colors were reproduced neutrally and without any tint, although the saturation was sometimes too low. The contrast is good, but there are some weaknesses in the focus. Details in the background can be blurred and compression effects can be seen in moving objects in the form of blocks (pixelation). Moving objects are shown without any smearing.

**Performance at less than 1000 Lux**
The camera reacts quickly to changes in light, it delivers a largely good contrast image and color quality and focus do not change significantly by sinking light levels down to around 10 Lux. The image rate remains fluid, moving objects are correctly reproduced and mostly without any smearing. At 2 Lux and below the image sharpness reduces once more and there is an obvious loss of detail, also with moving objects. There is however no image noise. The camera has an automatic day/night switchover, but still delivers color information with acceptable contrast also under weak lighting.

**Performance in backlight situations**
The camera provides a stable image after about 2.5 seconds when confronted with sudden backlight in a dark environment. Background details are still visible even under poor general illumination. There is no smearing effect but significant reflections can be seen. The spill from a backlight source is comparatively small and under good lighting conditions is limited to the area of the light source.

**Performance in use: bandwidth measurement**
The camera was tested under H.264 with maximum resolution. The bandwidth usage lies on average at 1.73 MB/s. The reducing sharpness under 2 Lux can be explained by a much lower data rate in this range. A maximum of 2.58 MB/s is reached against a backlight source.

## In Focus: Ganz ZN-DWNT 350VPE

A member of the GANZ IP range of H.264 IP Mini domes, the ZN-DWNT350VPE Wide Dynamic Range camera is available throughout Europe through CBC. The range includes Vandal resistant dome cameras in colour, true day/night and Wide dynamic range options. Built to IP67 standards using a robust metal housing or polycarbonate on the internal options, the camera offers resistance to weather and vandalism. The cameras feature a combination of high-resolution video images and a low data rate. They are equipped with a sensitive 1/3" CCD sensor providing 550TVL. In addition, the variable lenses of the day/night versions are infrared compensated to minimize focusing errors when used under IR light. Optional onboard Video Analytics is available on the entire range.

CAMERA TEST


**Technical data for the camera test**

| | |
|---|---|
| Manufacturer | Ganz |
| Model | ZN-DWNT 350VPE |
| Firmware version | 1.02.03 |
| *Distance from test chart | 0.6 m |
| Objective used | 2.8 mm – 10.5 mm F1.2 DC auto Iris |
| *Set focal length | c. 7 mm |
| *Compression method | H.264 |
| *Resolution | 704 x 576 |
| Compression | ca. 50 % |
| *Set stream bandwidth | unlimited |
| Measured frame rate | 24 fps |
| Average measured bandwidth | 1.73 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 | 3.5 | b/w |
| Contrast | 2.5 | 2.5 | 2.5 | 3.5 | – |
| Sharpness | 3 | 3 | 3 | 3.5 | 3.5 |
| Motion sharpness | 2 | 2 | 2.5 | 3 | 3 |
| Image noise | 2 | 2 | 2.5 | 3 | 3 |
| Compensation time for backlight | – | – | – | – | 2.5 |
| Backlight characteristics | – | – | – | – | 3 |

Assessment according to the following grades: 1 (excellent), 2 (good), 3 (average), 4 (satisfactory), 5 (limited), 6 (poor)
*It is possible to achieve improved picture quality by adjusting various parameters on the camera itself.

**Summary**
The dust and splashproof PoE dome camera with day/night switchover was impressive during the test with its good recovery and clear presentation of moving objects. It has an I/O port and an audio input/output. The camera supports video analysis functions from twist protection to the recognition of deposited or removed objects (optional). The camera corresponds to the ONVIF specification.