

In focus: Samsung SNV-7080-P

The SNV-7080P is a dome camera from Samsung's 3 Megapixel camera series that is fitted with a 1/3" CMOS sensor and the new Samsung WiseNet2 DSP chipset. The camera has an internal SD/SDHC card slot and a motorized vario-focal lens. The picture can be transmitted in various levels of resolution from CIF (320 x 240) through 16:9 1080p Full HD format up to full 3 megapixels (2048 x 1536) that can be sent simultaneously, which enables the most important data stream to be sent to the display or the recorder. The SNV-7080 P supports H.264 and JPEG codecs.



CAMERA TEST



Performance

Performance assessment when used with 1,000 Lux

In a perfect lighting situation the camera delivers a very natural picture. The colors are reproduced very clearly and realistically and impress with high contrast. At 20 fps motion clarity is faultless and without any smearing. There is no noise visible.

Performance assessment when used with less than 1,000 Lux

The clarity of the picture does not reduce even under sub-optimum lighting conditions. The camera continues to deliver absolutely sharp images, even under 10 Lux. Below 10 Lux however the color reproduction suffers significantly and thereby reduces the contrast. In spite of this, the motion clarity stays relatively constant with reducing light and even at 0.5 Lux shows accentuated colors and therefore a good result. A slight picture noise is visible quite early (below 100 Lux).

Performance assessment in backlight situations

On the whole the Samsung SNV 7080-P is also impressive under backlight conditions. With a switchover time of 3 seconds to a b/w picture under suddenly occurring backlight in a dark environment the camera reacts with an average speed and shows an above average high level of clarity. What disturbs however is the above average sized cone that blots out the object being viewed.

Performance assessment in use: Bandwidth measurement

The camera makes use of the available bandwidth and adapts very well to the ambient lighting conditions when in 'variable' mode. It manages to keep a constant motion clarity in light or dark areas. At 20 Lux the bandwidth usage rises briefly up to a maximum value of 17 MB/s, but returns afterwards to an average value of 7 MB/s.

Conclusion

As a 3 megapixel Full HD network camera the Samsung SNV 7080-P is impressive above all in its sharpness. No matter what the conditions, the camera delivers a sharp picture. There is already a slight image noise to be seen at 100 Lux that tends to increase as the light reduces, but this plays only a small role under such conditions. With a maximum transmission rate of 30 images/sec. the camera impresses with good motion clarity. In addition it has camera-based movement detection and video analysis functions such as face recognition, for example.

Technical data for the camera test

Manufacturer	Samsung
Model	SNV_7080-P
Firmware version	2.00_121004
Distance to test chart	0.3 m
Lens used	3 ~ 8.5mm (2.8x) Motorized vario-focal DC auto iris
*Focal length set	c. 6 mm
*Compression method	H.264
*Max. Resolution	2048 x 1536
*Compression	-
I-Frame-interval	1 second
Max. stream bandwidth	variable
Measured frame rate	20 fps
Average bandwidth	7.16 Mbit/s

* The camera was integrated into the test system using 'default' settings and 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	1.5	1.5	2.5	3.5	b/w
Contrast	2	2	2.5	3.5	3
Focus	1.5	1.5	1.5	2	2
Motion sharpness	2	2.5	2.5	2.5	2
Image noise	2	2	3	4	2
Recovery from backlight	-	-	-	-	3
Performance against backlight	-	-	-	-	3.5

Assessment according to the following grades: 1 (Excellent) 2 (good), 3 (average), 4 satisfactory), 5 (limited), 6 (poor). BL= Backlight *in the beam of a white light LED