



by Schneider Electric

DX8100 **IP** Made Easy

DX8100 Series and IP Camera Bit Rate Utilization

Perform the following steps to determine the number of IP cameras that can be added to a DX8100 Series DVR:

1. Select a DVR based on analog requirements (refer to Table A).
2. Determine the available Mbps of the selected model (refer to Table B).
3. Determine the IP camera bit rate requirements (refer to Table C).
4. Confirm which model will support the desired number of cameras (refer to Table A). Do not exceed the maximum analog and IP cameras (located in the third column of the table).

The DX8100 Resource Meter provides a real-time assessment of available system resources for the addition of IP cameras. Installers should be prepared to make adjustments and possible tradeoffs at a job site based on results shown by the DX8100 Resource Meter.

Table A. Analog and IP Camera Configurations

Model	Maximum Analog Cameras	Maximum Analog and IP Cameras
DX8108	8	24
DX8116	16	32
DX8124	24	32
DX8132	32	32

NOTE: The total number of IP cameras depends on analog and IP camera settings and DX8100 system resources. You can record the maximum number of analog and IP cameras when all cameras are set to record at CIF/1 ips.

Table B. Available IP Camera Bandwidth

Analog Camera Image Rate	Available Mbps IP Stream* for Each DX8100 Series	
	DX8108	DX8116
1 ips (Low)	13	11*
15 ips (Medium)	11	7
30 ips (High)	11	4
	DX8124	DX8132
1 ips (Low)	11	15
7 ips (Medium)	10	14
15 ips (High)	6	13

*Testing has determined that recording at CIF, 2CIF, and 4CIF resolutions produce only small differences in the available bandwidth.

Table C. IXS0 Series Sarix™ IP Camera Specifications

Resolution				MJPEG		H.264 Base Profile		MPEG-4	
MPx	Width	Height	Aspect Ratio	Maximum IPS	Recommended Bit Rate	Maximum IPS	Recommended Bit Rate	Maximum IPS	Recommended Bit Rate
0.5	800	600	4:3	30 ips	5.8 Mbps	25 ips	2.0 Mbps	N/A	N/A
0.3	640	480	4:3	30 ips	3.7 Mbps	30 ips	1.6 Mbps	30 ips	1.7 Mbps
0.1	320	240	4:3	30 ips	0.9 Mbps	30 ips	0.4 Mbps	30 ips	0.4 Mbps

Exercise Questions

Scenario: 25 analog cameras, all recording at CIF/7

- **Q1:** Which DX8100 channel model supports 25 analog cameras?
- **Q2:** What is the available bandwidth with all 25 analog cameras recording at CIF/7?
- **Q3:** How many IXS0 Series Sarix cameras recording at 0.1 MPx, 320 x 240, 15 ips can be supported with that available bandwidth?

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Exercise Answers

Scenario: 25 analog cameras, all recording at CIF/7

Note: DX8100 Series DVRs record cameras with Sarix technology at 4CIF/30 and CIF/25

- **A1:** DX8132
- **A2:** 14 Mbps
- **A3:** 7 Sarix cameras (14/0.4 = 35; 32–25 analog cameras = 7 available channels)