

Is Bandwidth Making You Miss the Big Picture?

Determine What Frame Rate is Required for Your Application

Often times you will hear that video needs to be recorded at 30 frames-per-second (fps), does it? Whether you are considering installing your own video system or working with an end-user client on specifying theirs, determining the appropriate fps for viewing and recording will ensure you satisfy the requirement and remain in budget.

In order to establish what frame rate is right, you first have to decide what image quality you want (General Surveillance, Forensic Detail or High Detail) and what type of camera you are going to install (i.e. 1MP, 2MP, 3MP, 5MP).

With these two factors you can now identify how many images you will capture of the subject at each recording rate. The table below illustrates this concept:

Example:

You need Forensic Detail quality images (40 pixels/foot) of subjects travelling at up to 40MPH.

Solution:

With a 2 megapixel IQeye camera, and only 10fps, you can capture six images of your subject with Forensic Detail resolution. That's six opportunities to identify a bank robber, capture a license plate number or recognize a shoplifter.

THE RESULT

Identifying which frame rate is the right one not only ensures the security needs are met, but it can reduce bandwidth and storage directly relating to overall system costs.

FORENSIC DETAIL CHART

Subject Speed		Images Captured @ 10 fps					Images Captured @ 5 fps					Images Captured @ 2 fps				
MPH	Feet/Second	VGA	1MP	2MP	3MP	5MP	VGA	1MP	2MP	3MP	5MP	VGA	1MP	2MP	3MP	5MP
10	14.7	10	21	27	34	43	5	10	13	17	21	2	4	5	6	8
20	29.3	5	10	13	17	21	2	5	6	8	10	1	2	2	3	4
30	44.0	3	7	9	11	14	1	3	4	5	7	0	1	1	2	2
40	58.7	2	5	6	8	10	1	2	3	4	5	0	1	1	1	2
50	73.3	2	4	5	6	8	1	2	2	3	4	0	0	1	1	1

Calculations are based on 40 pixels per foot (forensic detail). New calculations are required for high detail or general surveillance. Distance covered is calculated by camera horizontal resolution/pf.