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The Viseum IMC Compared to Megapixel Cameras

Viseum UK's intelligent moving camera (Viseum IMC) is commonly known as a **virtual guard,** a **virtual CCTV operator** and a **virtual gigapixel camera**. In around 10 years time advanced megapixel cameras may match the ability to cover such large wide areas and at similar distance as the Viseum IMC. However the ability to present the right amount of video data when required will always be prohibitive for megapixel cameras to be used for general security applications, due to the inability of using video content analysis (VCA), the extended time required to search for events with the human eye, as well as the large storage and transmission bandwidth requirements.

The technical performance and reliability of the Viseum IMC gives the most effective easily set up and used CCTV security available. It uses industry leading CCD camera optics because the use of today's leading megapixel CMOS cameras would compromise the Viseum IMC's key benefits of effective day-and-night coverage, low or no transmission bandwidth, and low or no remote storage capacity requirements.

Coverage

This table compares the Viseum IMC cameras using the 36x optical zoom PTZ with the industry's latest 20 megapixel cameras.

Coverage (degrees)	Visual Identification Distance (m)	
	Megapixel	Viseum
360	14	61
180	28	61

It shows that it would require 10 x 180 degree megapixel camera arrays to cover the same area as just 1 360 degree Viseum IMC.

Technical

The coverage of all types of leading megapixel camera is reduced even further in low light conditions. Light passing through the camera deteriorates because of the limited pixel size, and coverage reduces further when pixels are merged as an attempt to compensate. For examples of the performance of Viseum cameras in low light please visit:

> Visit our website for low light examples <

Transmission bandwidth & video storage

Coverage (degrees)	Bandwidth (Mbps)		Storage for 30 days (TB)	
	Megapixel	Viseum	Megapixel	Viseum
180	76	6.4	12	1.0

This table shows that megapixel cameras would require 678% more bandwidth and 667% more storage to cover the same area as just 1 x 360 degree Viseum IMC.

Note:

360 panoramic megapixel cameras are rarely ever used for large open space, due to the further excessive number of units required for effective coverage, as well as the increased bandwidth and storage required.

Typical deployment example e.g. car park

Coverage 46,750 sq m	180 Degree Megapixel	360 Degree Viseum IMC
	Number of camera installations	
	40 (1)	4
All cameras transmitted	Transmission Bandwidth (Mbps)	
	304	45 (2)
Storage period 30 days	Storage Required (TB)	
	48	7.2 (3)

Notes:

1. Significantly more megapixel cameras would be required if 360 degree models are used.
2. This is worst case as typically only the PTZ image is transmitted and the Viseum reference camera images are stored locally.
3. This is worst case using Viseum local storage which comes as standard with all Viseum camera installations; if only central storage is used then the required capacity would be only 0.23 TB.

Legal Statement

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