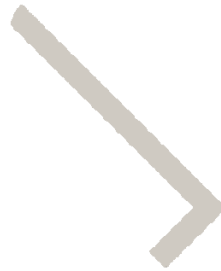




Wireless Broadband Infrastructure For Video Surveillance

FREQUENTLY ASKED QUESTIONS



Q. How reliable are wireless solutions for video surveillance?

A. Video surveillance networks with Motorola wireless broadband infrastructure can be designed to provide high levels of reliability. Today, there are millions of Motorola wireless broadband modules operating in thousands of networks in more than 120 countries. These modules are operating in high crime urban areas, rugged mountain tops, and scorching desert conditions. In addition, Motorola and our partners can offer services to help in the design, installation and provisioning of video surveillance networks to make sure that your network operates correctly from the start.

Q. What are the cost benefits of wireless broadband solutions?

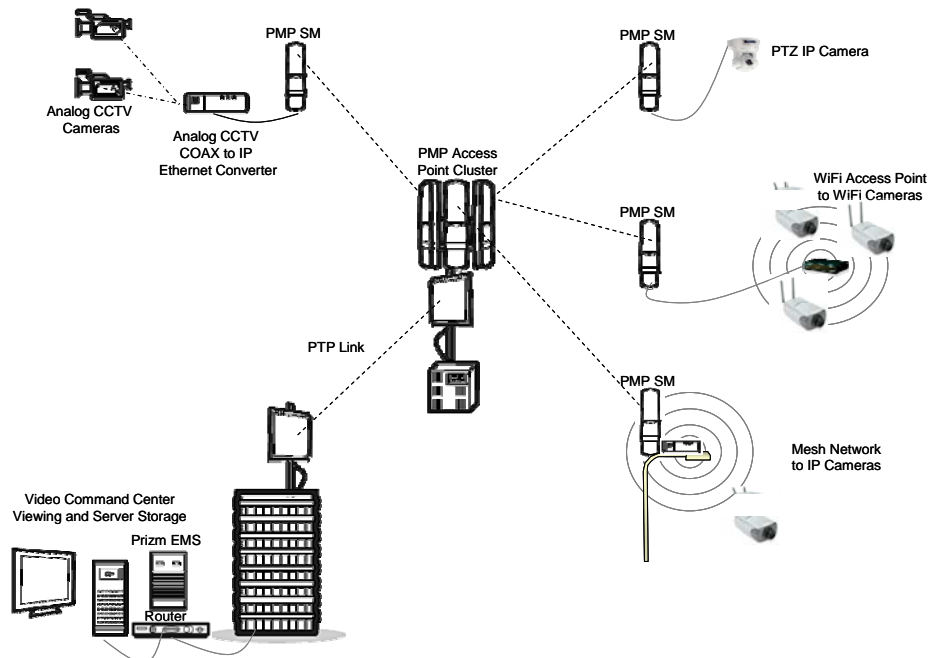
A. Wireless solutions enable network operators to install video surveillance systems faster and at a substantially lower cost than wire based solutions. Wireless solutions can often be installed in one day rather than the weeks that are commonly associated with the time for planning, trenching and installing wire line systems. The cost of wireless infrastructure is also very economical, with systems providing a payback, often in terms of a few months.

Wireless solutions can be designed with “bandwidth to spare” so that the network operator can leverage the wireless infrastructure to provide connectivity not only for video surveillance systems, but also to provide data connectivity for T1/E1 connectivity for data transfer, SCADA, or VoIP applications.

Q. Can wireless broadband solutions be integrated into an existing COAX based video surveillance structure?

A. Yes. Motorola wireless video surveillance solutions can be deployed as a stand alone system, or complement an existing video surveillance network. Because the wireless video solutions are IP based, the video collected is ready for viewing and storage at the video command center using the existing procedures and personnel.

Networks can be extended using Point to Point (PTP) links, Point to Multipoint (PMP) access networks, or Mesh based access networks. The diagram below provides a view of how these connections are made.



Q. How secure are wireless solutions?

A. Motorola wireless broadband solutions include products with 128-bit AES encryption that are FIPS-197 certified for secure transmissions. In addition, Motorola has element management capabilities that ensure each element is positively authenticated before it can communicate on the network. These multiple layers of security maximize the availability of the video surveillance network.

Q. Where have these systems been deployed?

A. Motorola wireless video surveillance solutions have been deployed in the following scenarios:

- Major cities for public safety and traffic monitoring
- International sports events (PanAm games, Super Bowl)
- Political conventions
- Airports
- Departments of Transportation for Intercity motorways

Q. How many cameras can a wireless infrastructure support?

A. The number depends on the video image requirement. In general, higher resolution and higher picture quality will require more bandwidth to the camera location. Bandwidth requirements can range from 300 kbps to provide effective security surveillance, to 7 Mbps to provide high zoom and DVD quality images on the surveillance screen. For example, 50 Mbps of bandwidth, configured to have 80% of the bandwidth allocated upstream to collect images and 20% of the bandwidth allocated downstream for camera control would support from one to 228 cameras configured for 640x480 resolution depending on the frames per second (FPS) and image format.

	FPS (Frames per Second)					
	5	10	15	20	25	30
JPEG	33	16	8	4	2	1
MPEG 4	114	57	28	14	7	3
H.264	228	114	57	28	14	7

Motorola wireless broadband solutions range from cost effective systems supporting a few cameras to point to point links that provide 300 Mbps of connectivity for video network infrastructure.