Latest Advances in Megapixel Surveillance

Date: 2009.06.29

Outline

- IP surveillance: The Market Trend
- Megapixel as a Key Driver
- Challenges to Megapixel Technology
- VIVOTEK's Solutions for Megapixel Surveillance
- Conclusion
- Soon-to-be-launched Megapixel Cameras

IP surveillance: The Market Trend

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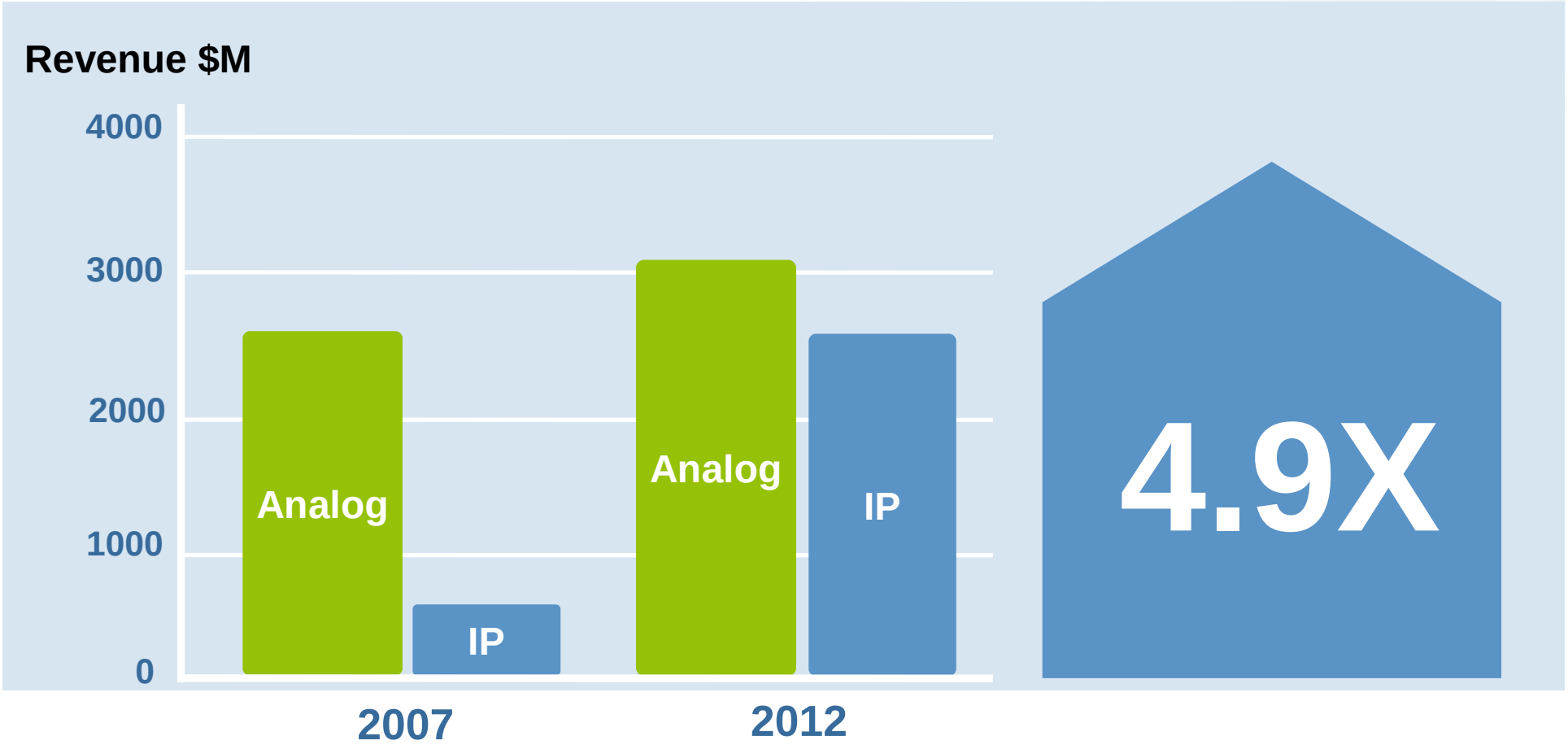
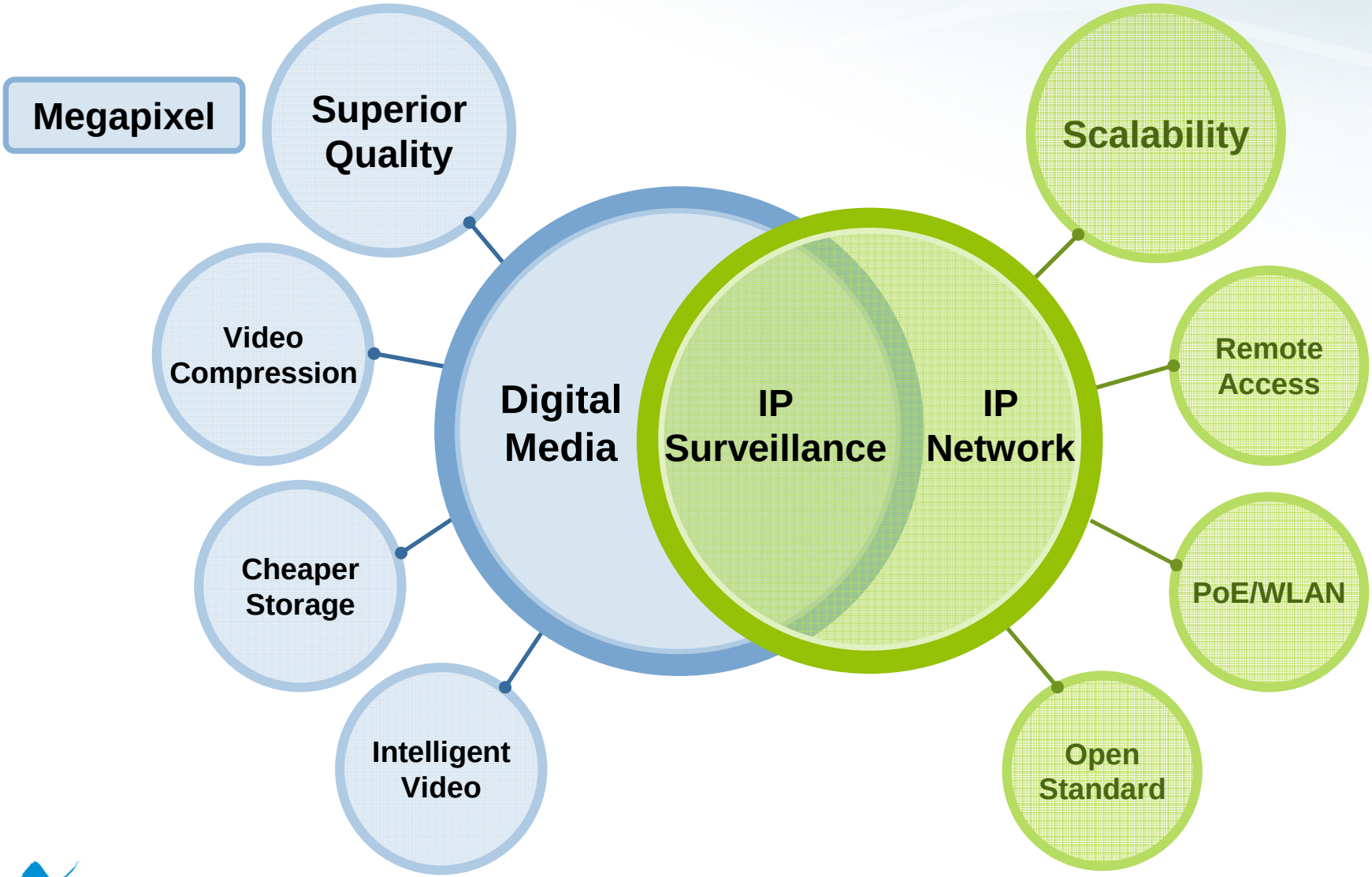
IP Surveillance Shows Strong Growth



IMS Research, 2008

Benefits of IP Surveillance



- IP surveillance: The Market Trend

Megapixel as a Key Driver

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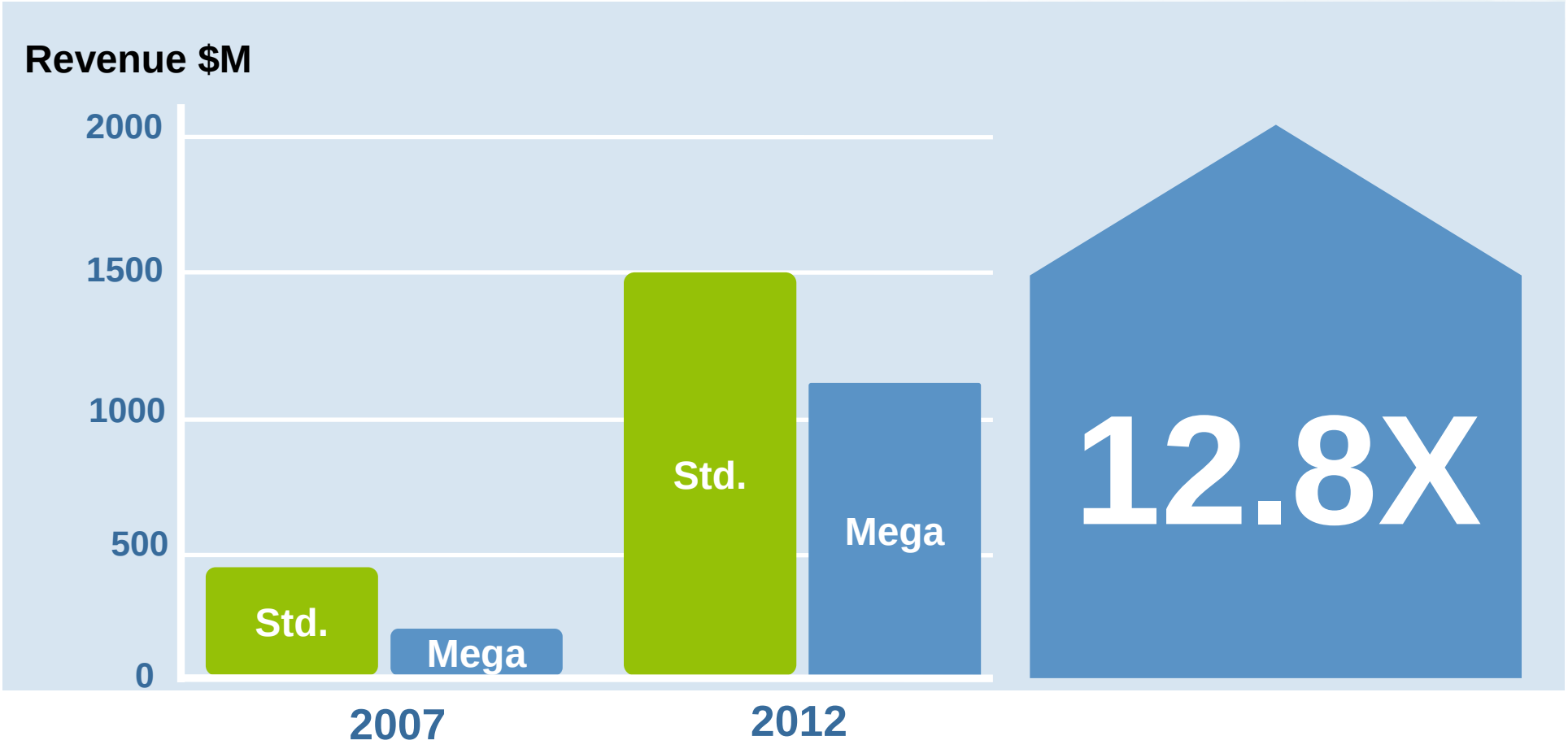
Growing Demand for Megapixel Resolution



IMS Research, 2008

Wider Coverage

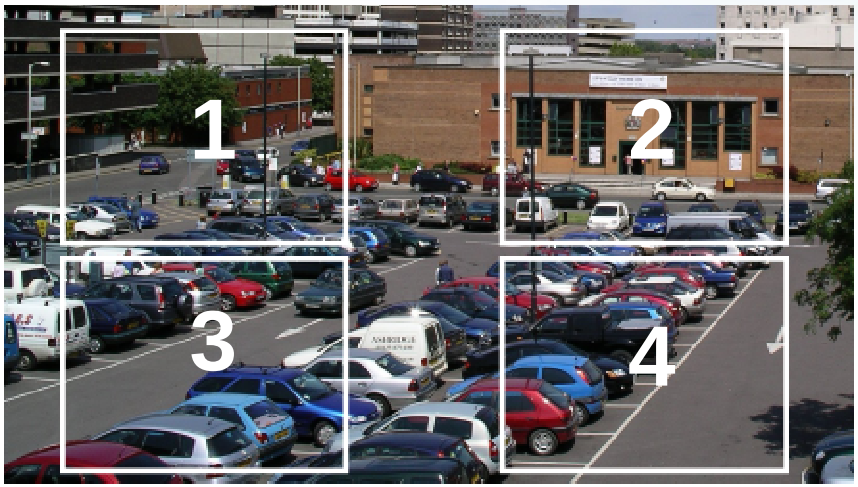
640 x 480

1

2

3

4



1920 x 1080

6 x VGA Cameras

1 x 2MP Camera

Exceptional Details

- Improved identification
- Superior image quality
- ePTZ & multiple streams

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Megapixel Challenges

Higher

Bandwidth

Larger

Storage

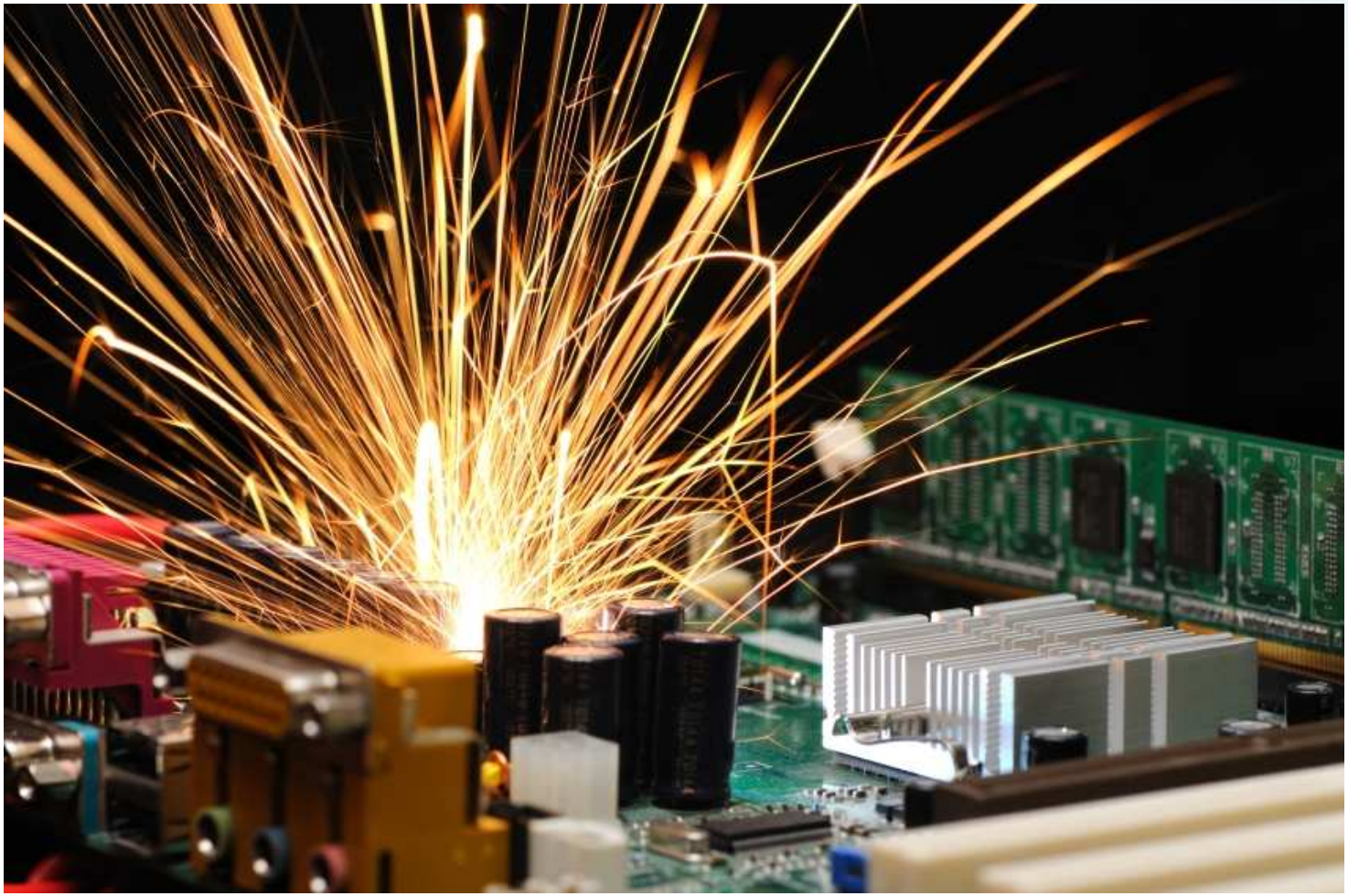
Higher

CPU

- Consumes higher ***bandwidth*** and larger ***storage***
- Introduce higher ***CPU loading*** on live viewing clients

Bandwidth Management

CPU Loading Management



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Overview of IP Surveillance System

Internet

Viewing

Record

Storage

Front End

Back End

Capture

Encode

Stream

Decode

Scale

Display

Cropping

ePTZ

H.264

Activity Adaptive Streaming

Multiple Stream

Record

On-board Storage

Cropping

- Removing unnecessary information from being transmitted

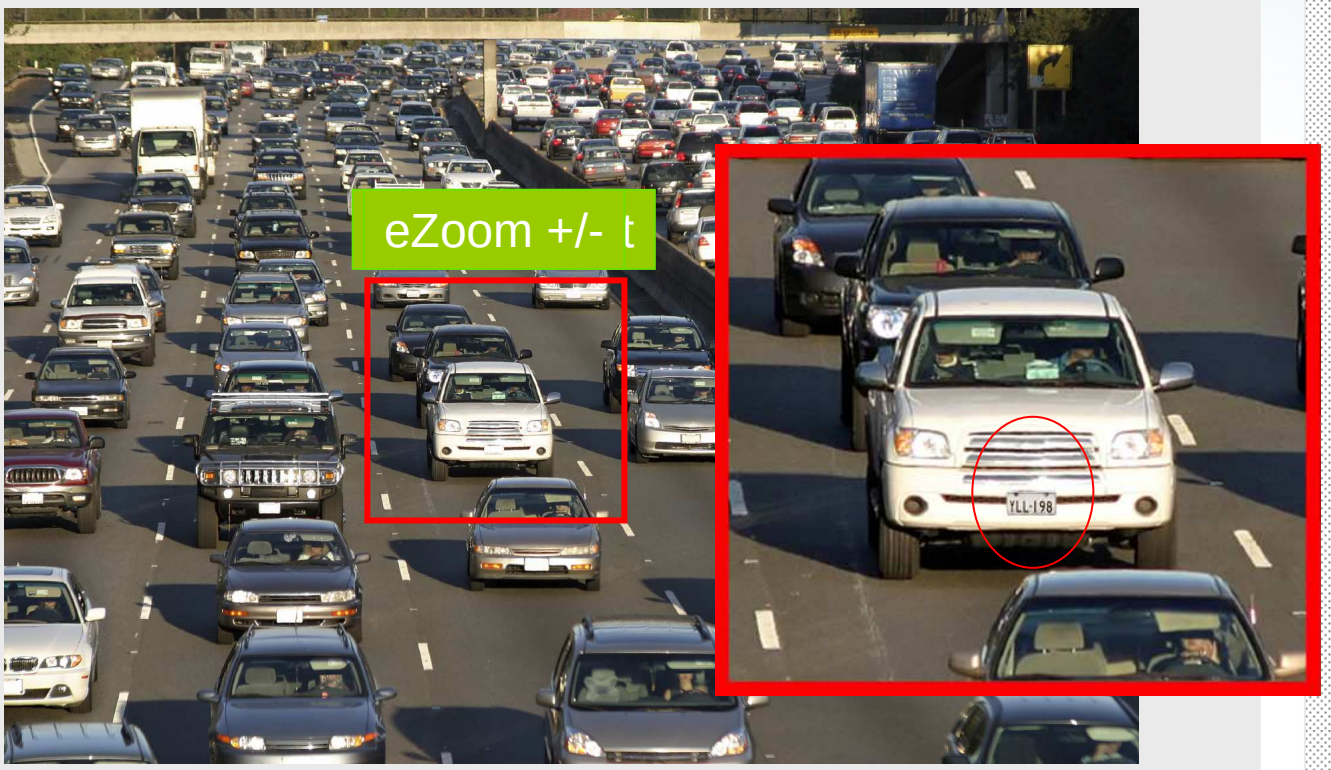
Cropping Image

Megapixel Camera

Transmitting

Viewing & Storage

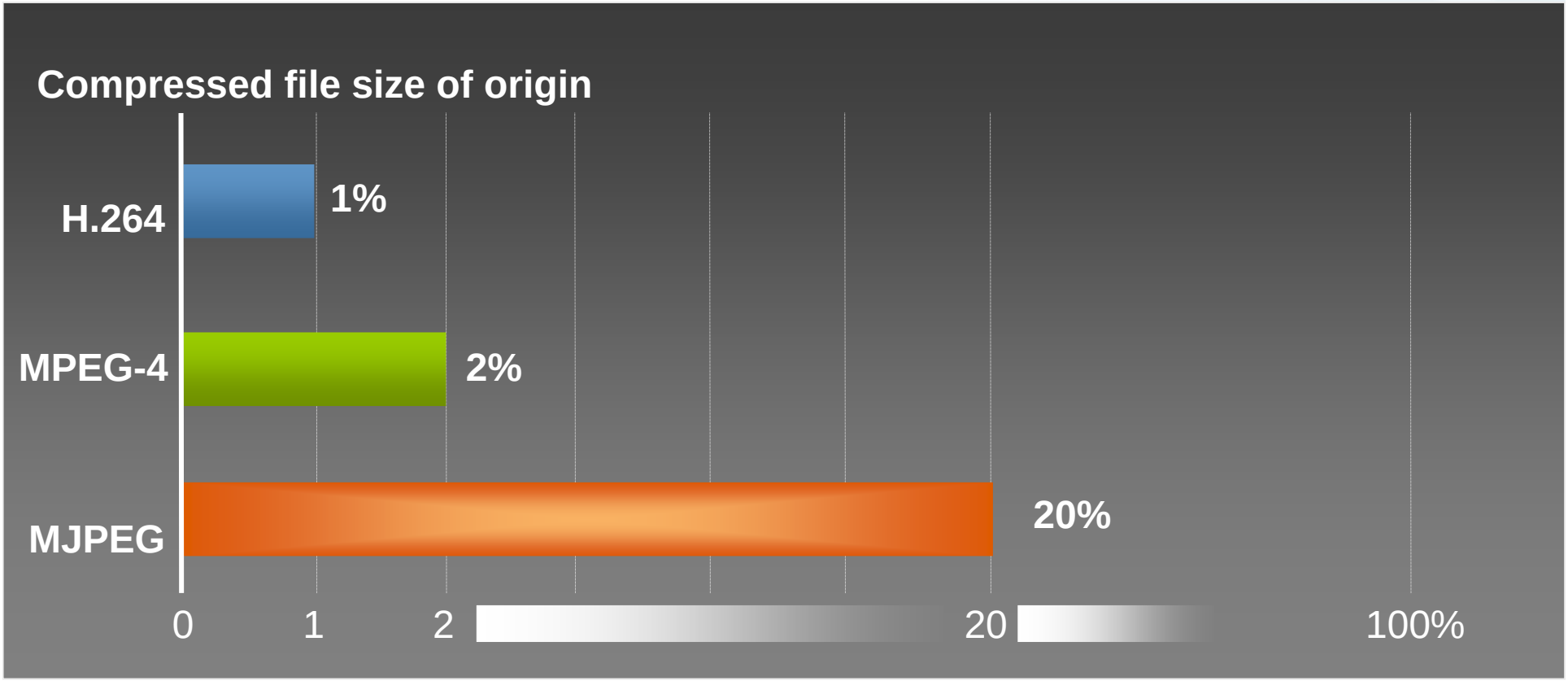
ePTZ



Video Clip

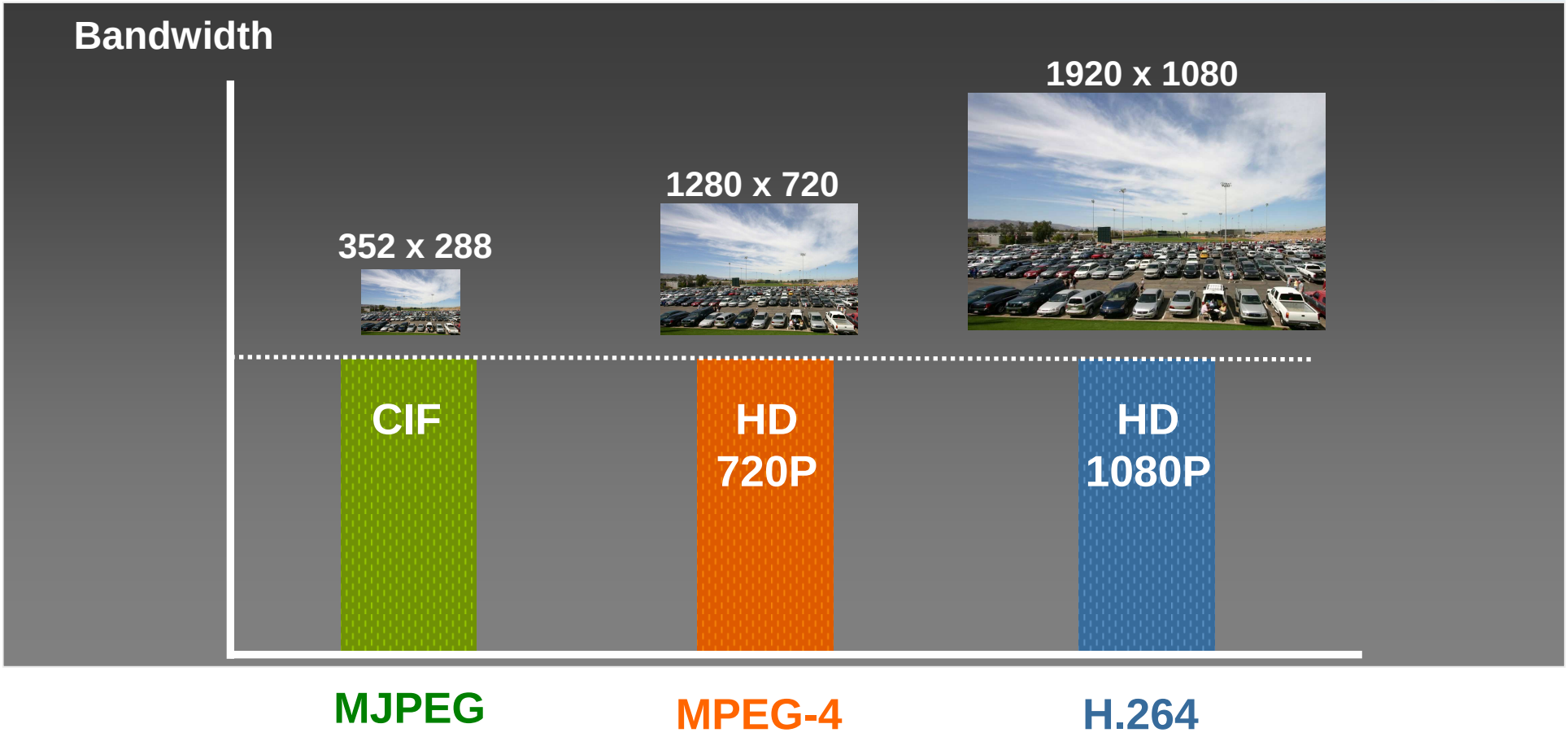
- Megapixel resolution over VGA bandwidth

H.264 Compression by File Size



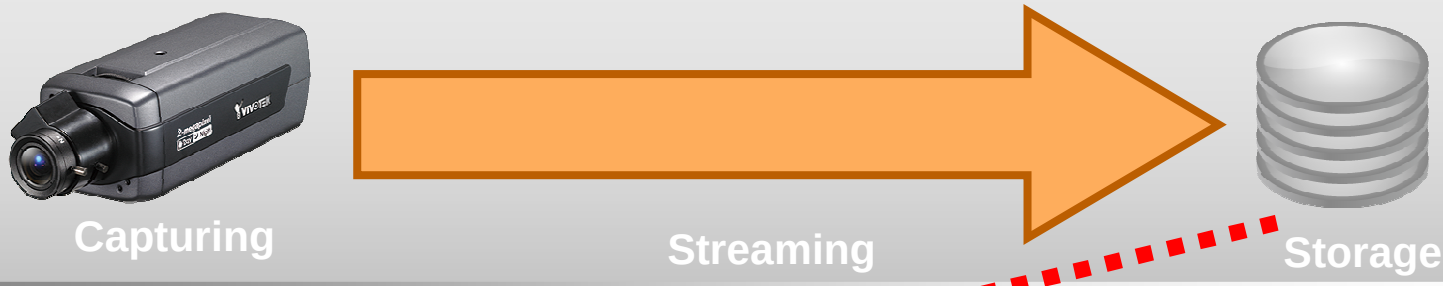
- H.264 provides with smaller bandwidth at the same quality

H.264 Compression by Bandwidth

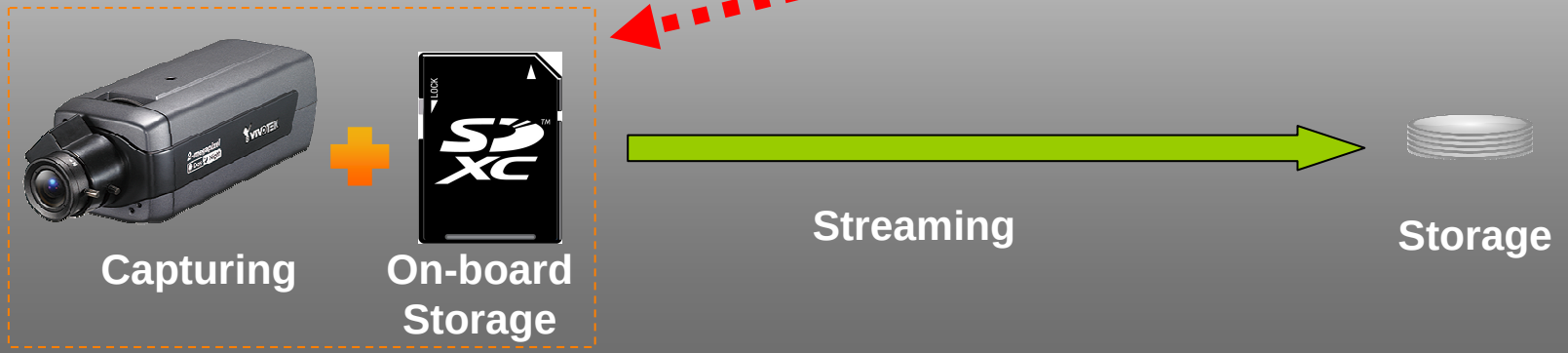


On-board Storage

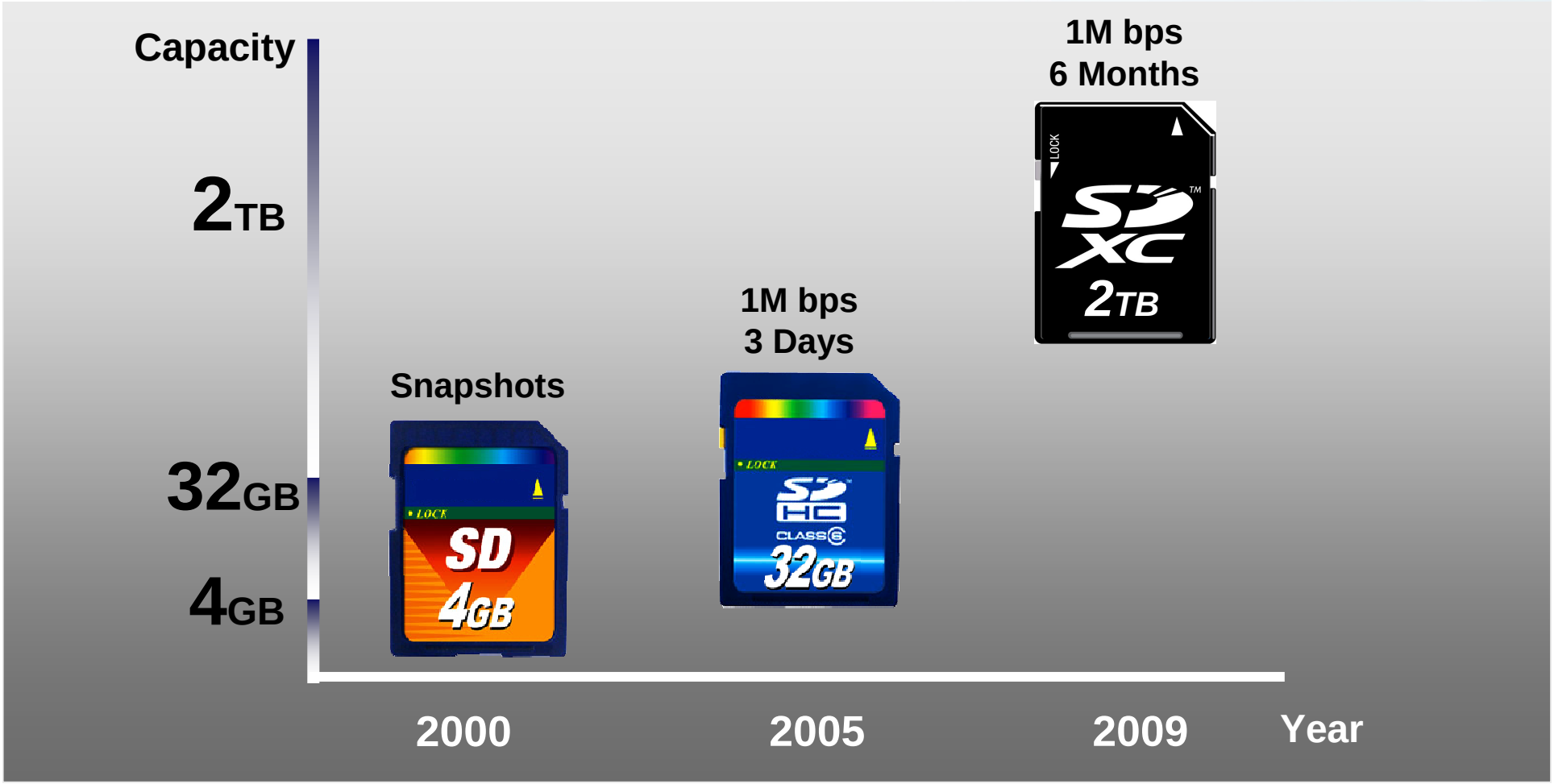
Generic scenario with remote storage



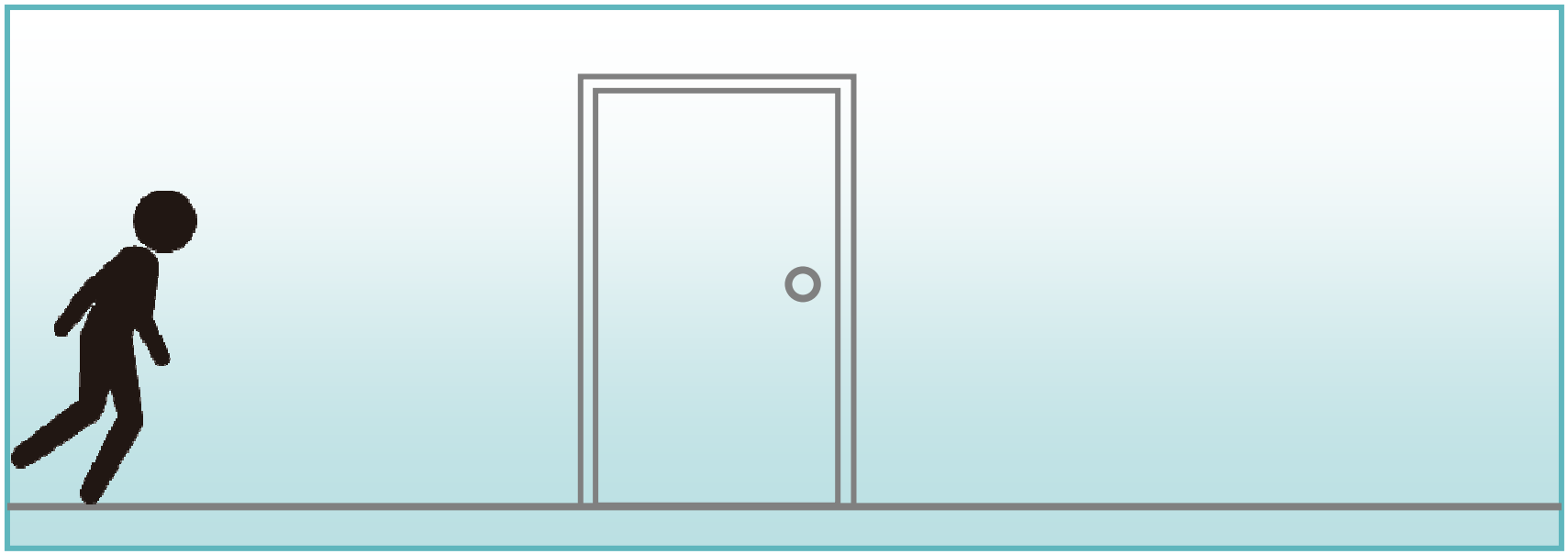
Advanced scenario with on-board storage



On-board Storage

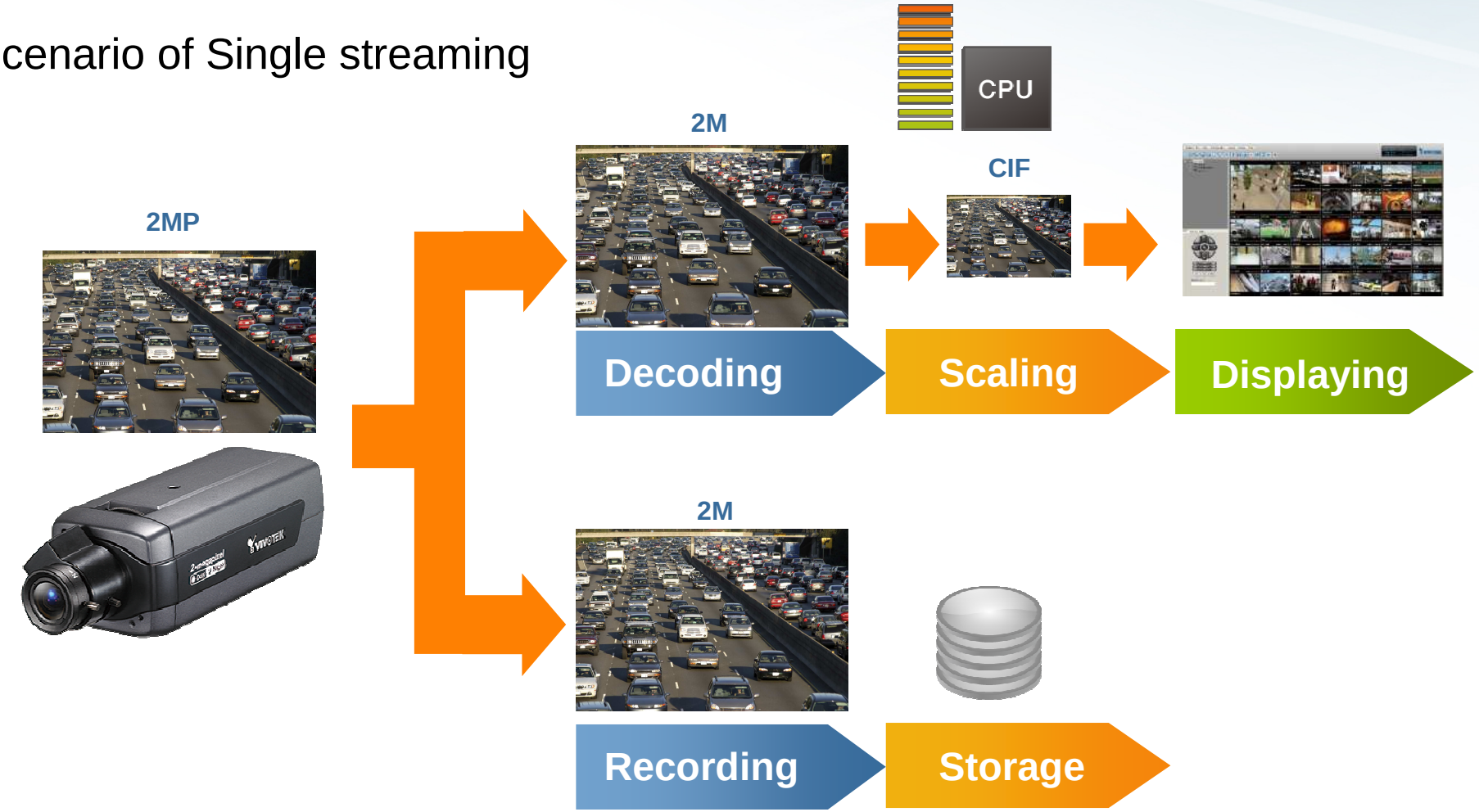


Activity Adaptive Streaming

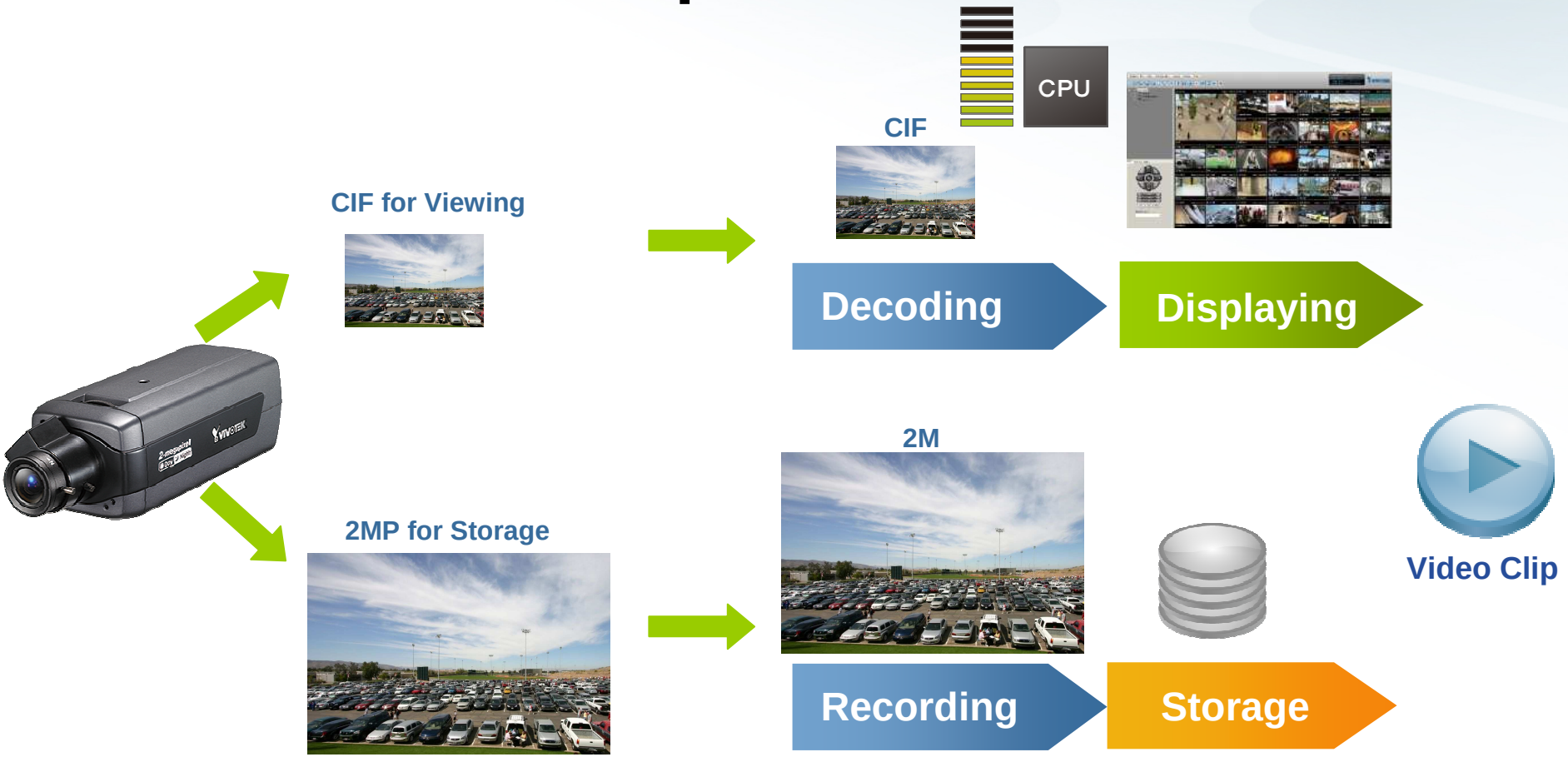


Single Stream Problem

Scenario of Single streaming



Multiple Streams



- Decreasing your CPU loading
- Flexibility in viewing with small images and storing with large images

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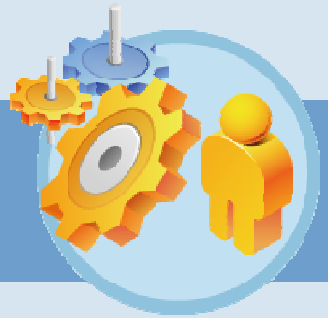

- **Conclusion**
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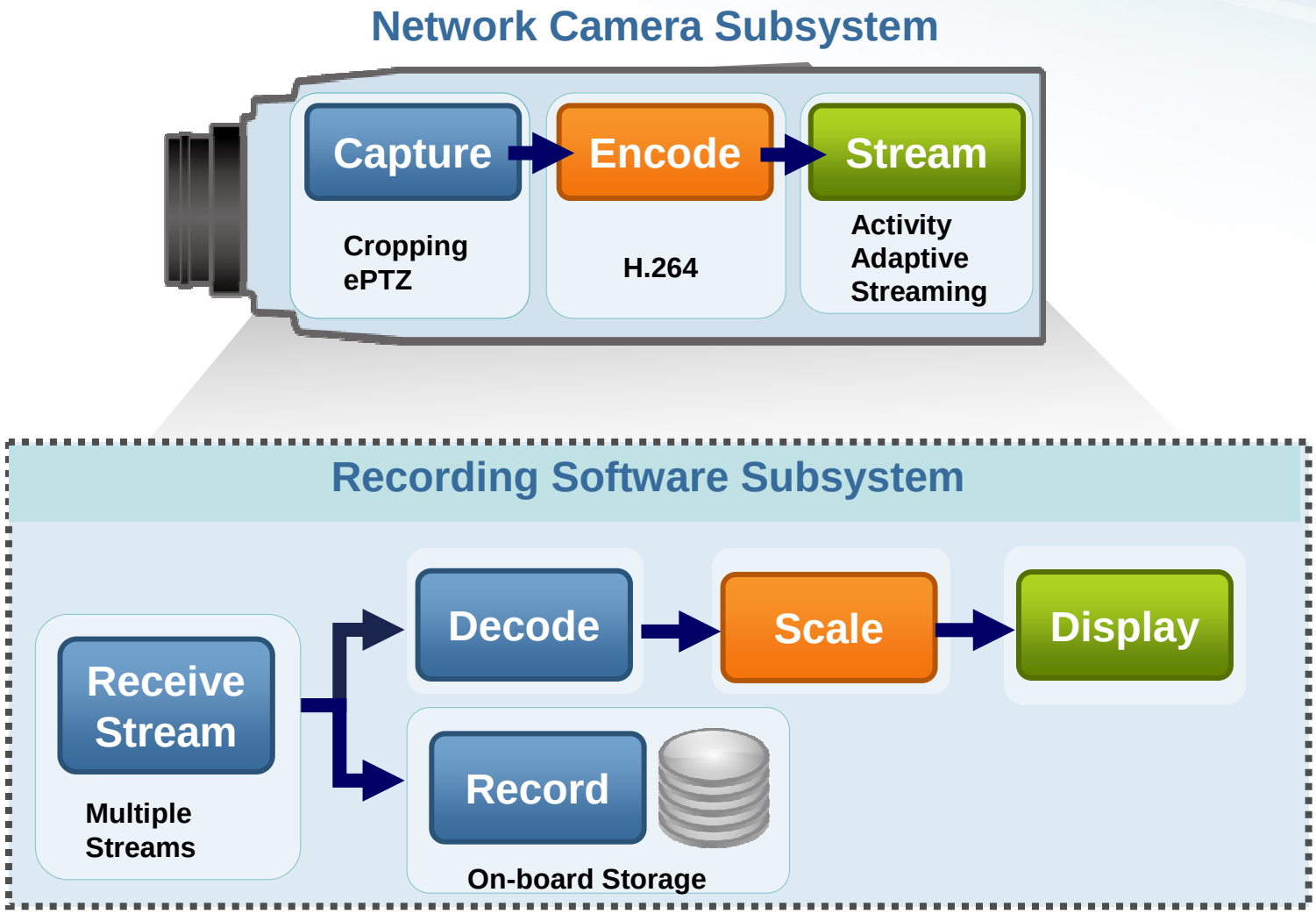
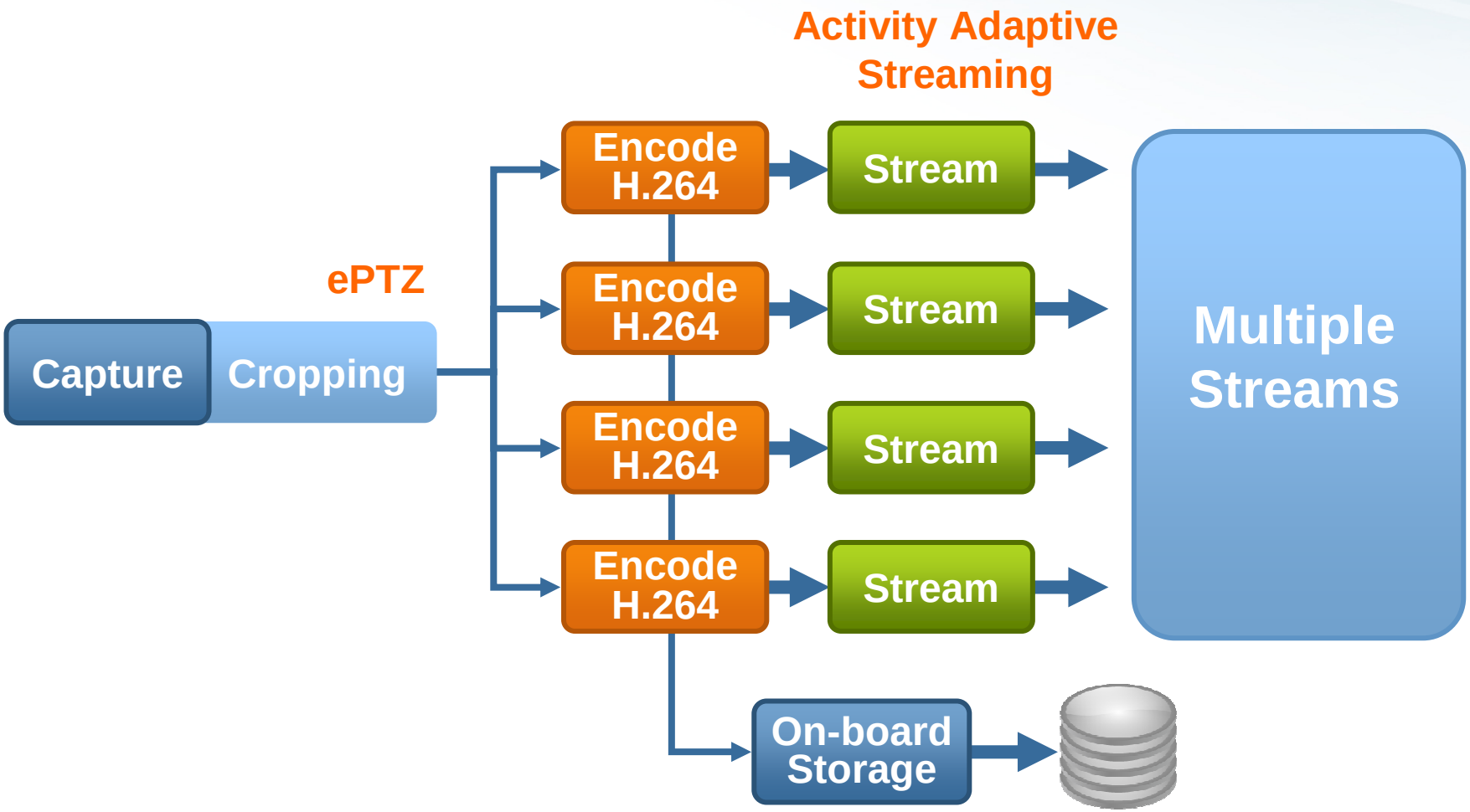
IP Surveillance System



The Result of Network Camera System



Conclusion

- **IP surveillance** gains momentum in the market
- **Megapixel** is one of the major driving force
- Challenges exist in megapixel surveillance systems
- VIVOTEK is addressing these challenges in a systematic approach
- A total solution is provided in system level

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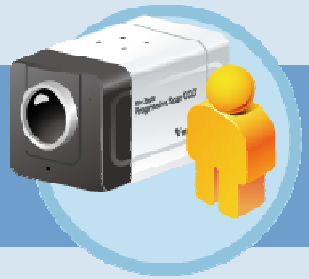
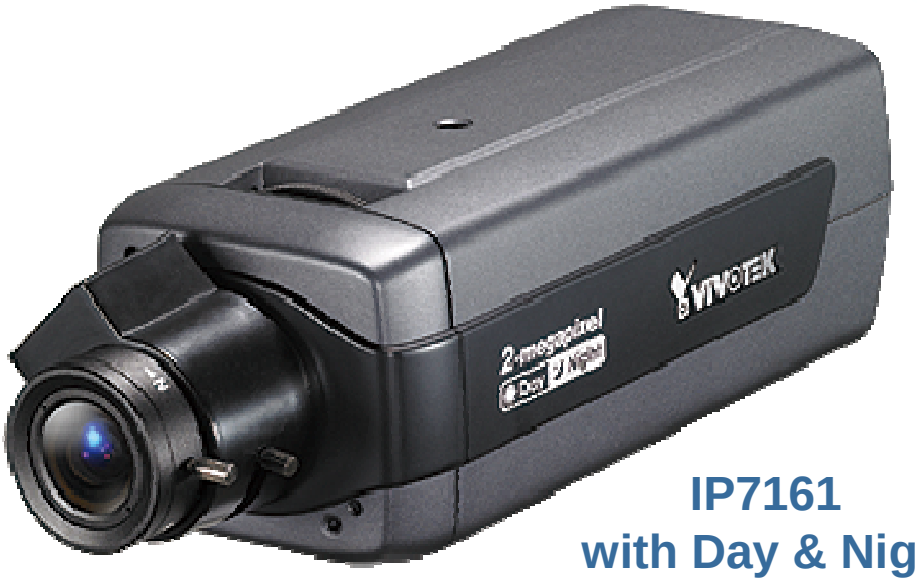


Soon-to-be-launched Megapixel Cameras

Soon-to-be-launched Megapixel Cameras

IP7160



IP7161
with Day & Night