

# Loea



*As video camera technology transitions from analog to IP, video surveillance networks are being adopted to ensure the safety and security of homes, business and other sites. These networks require high-bandwidth and transmission security.*

## Applications

- Full-Stream Video Surveillance
- Video Storage Networks
- Temporary Video Solutions (construction sites, special events)
- Video Camera Cluster Transmission

## Benefits

- High bandwidth up to and exceeding 1Gbps
- Rapid installation and deployment
- Enterprise-wide video access
- Safe, secure environments

## Application Brief

### The Problem

The need for video surveillance has increased significantly over the past several years. Whether to track remote locations, monitor suspicious activity or scan for possible terrorist threats, the use of video technology has been a key to ensuring the safety and security of homes, businesses and other sites.

Several areas where video surveillance is often used include the monitoring of:

- Building access and entryways
- Remote areas such as parking lots, walkways
- Temporary camera network locations such as construction sites or off-site events
- Mass transportation (highways, streets, railways, airports)
- Warehouses or storage facilities
- Shipping ports, harbors, docks

Today's video technology has transitioned from analog to IP, and the network requirements – especially in terms of bandwidth and transmission security – have changed considerably.

Video cameras are being deployed on many internal corporate LANs, but the bandwidth-intensive nature of video files often requires a separate LAN specifically for surveillance. And, although several cameras and transmission use compression schemes, real-time video feeds cannot be affected by latency delays associated with compression. Networks must also be secure to ensure that sensitive data and images are not easily intercepted.

Wireless is an option, but the traditional unlicensed RF wireless technologies used today provide sub-optimal performance (maximum 104Mbps half duplex data rates) and are highly suspect from a security standpoint.

The need for a high-bandwidth, high-availability, highly-secure yet highly-cost effective network communications solution becomes apparent.

## Video Surveillance Solutions

### The Loea Solution

Loea's millimeter wave radio products are the ideal solution for transporting and accessing video surveillance images.

Instead of using traditional leased lines or low-bandwidth radio frequency solutions to connect remote camera locations to a centralized monitoring center, companies can now link via a high-capacity wireless point-to-point solution.

With data throughput of 1.25Gbps, Loea's solutions are more than capable of handling bandwidth-intensive video feeds either real-time or batched. Files that would typically take several minutes to transmit can now be transferred in a couple of seconds.

Based on proven millimeter wave technology used by the military, Loea's products are also highly secure and unaffected by most weather occurrences such as fog.

Transmission is at the upper radio frequencies (70/80GHz) – bands recently approved for commercial use. A simple, web-based licensing process reduces the potential for interference and spectrum saturation issues facing lower, unlicensed frequencies. And, a very narrow beamwidth (0.4 degrees) ensures that data transmission cannot be easily intercepted.

From a cost savings standpoint, Loea's solutions are one of the most cost-effective wireless solutions today. Installation can take place in the matter of a few hours – a significant reduction compared to fiber trenching. Costly monthly leased lines (approaching several thousands of dollars per month depending on location) are virtually eliminated. And since the technology is wireless, networks can be easily redeployed to new locations.

# Loea App Brief

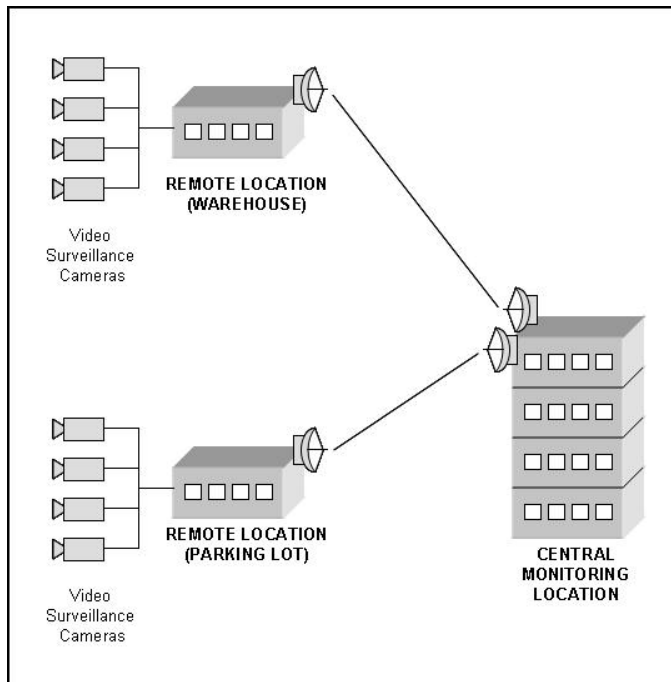
Video  
Surveillance  
Solutions

## Benefits

Loea's millimeter wave wireless solutions are helping keep homes and businesses safe and secure. Benefits include:

- Rapid Installation – can be installed in hours.
- Reduced Costs – avoids monthly leased line fees and replaces need for expensive fiber trenching.
- Expanded Reach – easy deployment to locations where environmental or geographical obstacles make fiber runs or leased lines unavailable.
- Redundancy – acts as back-up or failover to ensure network availability.
- Improved Network Performance – removes throughput constraints and interference issues facing licensed microwave and unlicensed RF.
- Greater Control – eliminates dependency on leased lines for connectivity.
- Enhanced Bandwidth – increases network capacity with Gigabit speeds.
- Minimal Weather Impact – works in environments where FSO technology is impacted (fog).

## Configuration Example



## Loea Products

Loea products have been used as a vital communication link for some of the world's leading Enterprise, Carrier and Government customers.

Based on 70/80GHz millimeter wave technology (also referred to as E-Band), Loea offers the highest-performing, highest-availability wireless solutions available on the market today.

And by leading the successful petitioning of the FCC for commercial use of these frequencies and spectral bandwidth, Loea products will be able to reach up to 10Gbps throughput in the very near future.

Loea solutions are ideal for point-to-point connectivity between buildings, campuses and remote locations – eliminating the need for time-consuming and cumbersome fiber runs.

Unlike other wireless technologies that have performance limitations due to bandwidth, weather and distance, Loea's products provide full-duplex 1.25 Gbps throughput with 99.999% availability at link distances exceeding 1km. And Loea's use of upper radio frequencies coupled with its narrow beam width (0.4 degrees) make it one of the most secure forms of wireless transmission today. No other wireless technology can make such a claim.

All Loea millimeter wave solutions include:

- 2 Radios
- 2 Antennas (2-foot diameter for maximum range)
- 2 Radio Mounts and Steering Mechanisms
- Installation and rooftop hardware are not included

## About Loea

Loea Corporation is the pioneer of the 70/80 GHz wireless domain and the product, quality and technology leader.

Loea was the first company to release and deploy successful product in the 71-76 and 81-86 GHz bands and has been on the leading edge of technology creation in this space for over 10 years. Loea successfully petitioned the FCC to gain access to this spectrum for commercial use in 2001 and was first to receive commercial FCC approval in July 2005.

Loea is headquartered in Honolulu, Hawaii. R&D and manufacturing locations are located in Kahului, Maui, Hawaii and West Hatfield, Massachusetts.



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