

Total Cost of Ownership

When purchasing decisions are made, businesses should look at the total cost of ownership, not just the initial purchase price. Total Cost of Ownership (TCO) is a calculation designed to help managers make more informed financial decisions. Rather than just looking at the purchase price, TCO looks at the complete cost from purchase to disposal. It adds to the initial purchase price other expenses expected to be incurred during the life of the product. When TCO is used in evaluating the purchase of a camera system, it usually includes purchase, installation, maintenance, repairs, upgrades, and support.

To get a full picture of the Total Cost of Ownership, both the initial installation cost and the ongoing maintenance cost need to be taken into account, which in many cases are higher than the price of the camera. When viewed over a 10- to 15-year life span, the TCO of a camera system is a significant business consideration.

Factors Leading to Higher TCO

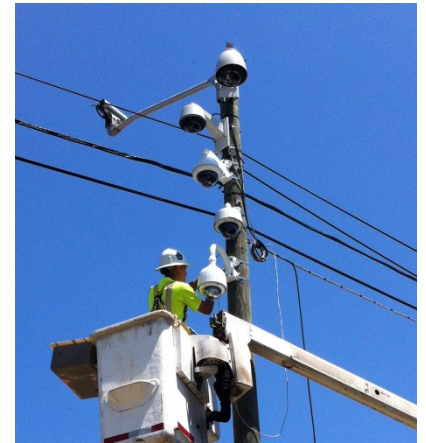
Outdoor cameras are often installed in locations difficult to access, such as bridges, tunnels, highways, ports, petrochemical factories, and mines. The cost of replacing or repairing cameras in such locations is extremely high. Often, boom trucks, crews, lane closings, presence of police or security, and working at night are necessary to do the work.

All outdoor cameras face environmental challenges. In the extreme environments where many video systems are used, the cameras are exposed to smoke and gases from vehicles, rain, snow, salty air, strong winds, heat, cold and high humidity. Vibration is another common threat to the camera life expectancy. These conditions can cause premature failures of the camera system. Reliability and low maintenance become key factors in determining which camera to use.

CohuHD's Solution

Distinctions that set CohuHD cameras apart from other cameras on the market are their highly reliable design and low maintenance requirements. The following design features help to decrease life cycle cost and increase lifespan typically up to 10-15 years:

- Sealed and pressurized enclosures to protect lenses and electronics inside the enclosure
- Factory installed cables to prevent faults
- Optional wipers to clean the outside window glass
- Robust, waterproof, IP67 rated enclosures to protect from environmental hazards
- Use of long lasting components rated for continuous operation without failure
- Intensive in-house testing
- Certifications by independent lab
- Conformity to NEMA TS2 specifications: temperature, vibration, shock, power, and power transients
- The ability of outdoor camera systems to withstand winds of 120 mph with 25% gust without permanent damage to the mechanical or electrical equipment



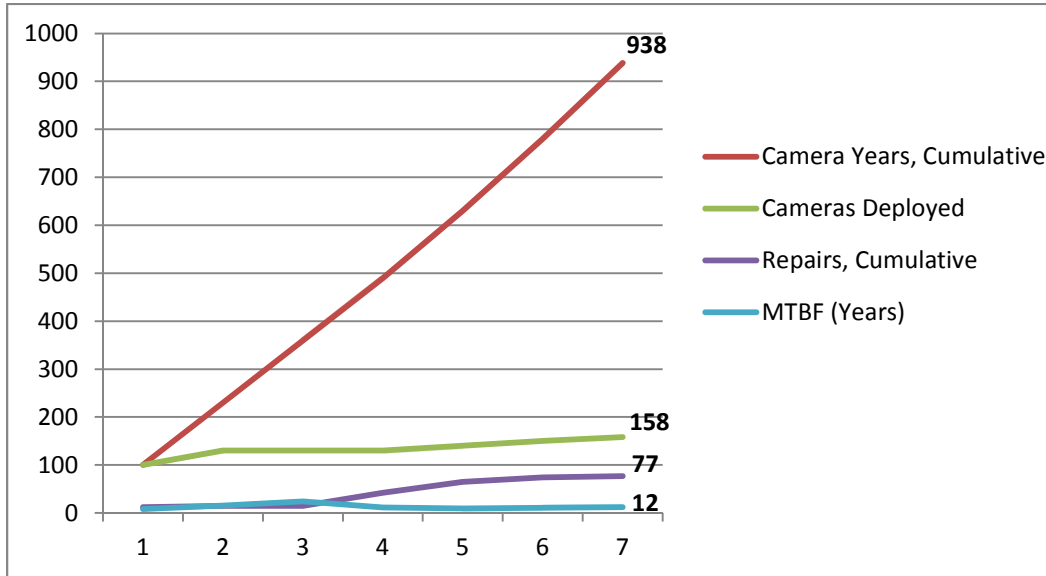
Which camera to purchase?

When making a financial comparison among several choices, smart managers look at the total cost of ownership (TCO), not just the purchase price.

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Statistics at a Glance

(from a COHU customer, 2006-2012)



The above camera features result in longer lasting cameras with minimal servicing needs. CohuHD camera systems require fewer site visits, bringing maintenance costs down.

The Low TCO of CohuHD Cameras:

- **158** CohuHD cameras deployed over **7** years
- Used **24/7** for a total of **938** camera years, or **8.2** million hours of operation
- Only **77** total repairs during **7** years of deployment
- **12** year MTBF (Mean Time Between Failures) – the average number of camera years between failures
- **\$23** - Repair cost per year per camera

The region where these CohuHD cameras were installed has a diverse climate with heavy snowfalls, hurricanes, tropical storms, humidity, thunderstorms, and temperatures ranging between -30°F and +110°F.

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Customer Feedback

“Cohu cameras are always our first choice to purchase. Cameras withstand cold, heat, and humidity. They serve for a long time and are backward compatible – a firmware upgrade can easily be accomplished to keep a camera up to date. Cameras are configurable – many optional features can be added to meet customers’ needs. They are very reliable and ruggedized. Several cameras were bought two years ago from [CohuHD] and have not needed any visits to the sites. During the same period other cameras we have purchased have required service visits within six months. The life cycle cost is where the real savings is realized with COHU.”

Don Correll, Manager, Sustaining Engineering and Cost Estimation

*Transportation North America, Telvent USA Corporation
Don Correll has 30 years of business relationships with CohuHD*

Traffic Systems & Technology started to buy cameras from CohuHD eight years ago. They purchase approximately 100 cameras per year and have deployed almost 1000 CohuHD cameras in Virginia. Most of these cameras are installed on poles, with a few used on bridges. Cameras are exposed to heat, cold, humidity, salty air, wind and vibration. All camera locations are difficult to access.

“We buy cameras from Cohu because they are very easy to install, very reliable, and rugged. Over eight years only a few cameras have needed repairs. Cohu Electronics always provides very good customer service.”

Jon J. Bondanella, P.E., VP Engineering & Sales Traffic Systems & Technology

Conclusion: Better in the Long Run

Most surveillance cameras are required to work 24 hours a day, 7 days a week, outdoors in harsh environments - often in locations that are difficult or expensive to access. High reliability of the camera system and low TCO with easy maintenance become major factors to consider when choosing a system to purchase. CohuHD’s camera systems are designed to protect your surveillance investment and ensure long-term reliability. More robust cameras, while at a slightly higher initial cost, result in many years of low-maintenance operation. This brings overall savings and lowers TCO. For more information on CohuHD products, please go to <http://www.cohu-cameras.com>.

About CohuHD

CohuHD is a leading manufacturer of high-definition video systems designed to satisfy the demanding performance requirements of critical infrastructure applications. CohuHD solutions integrate the latest high-definition video imaging and compression technologies into our ruggedized camera products. CohuHD is a high-value solutions provider for monitoring in the most critical, sensitive environments. We focus on providing the most reliable, rugged, outdoor PTZ cameras on the market. For more than 50 years, we have manufactured in the U.S.A. the most reliable, rugged video cameras available.

For more information on CohuHD’s products, please visit www.cohuHD.com. Follow us on [youtube.com/cohuhd](https://www.youtube.com/cohuhd), twitter.com/cohuhd, [linkedin/company/cohuhd](https://www.linkedin.com/company/cohuhd), and [facebook.com/cohuhd](https://www.facebook.com/cohuhd).