# Selecting The Right Data Storage For Your Fleet Video Recording System

Fleet management software continues to grow in popularity and necessity. According to a market research report by Markets and Markets, the global fleet management market is expected to grow from $20.6 billion in 2021 to $33.9 billion by 2026, growing at a compound annual growth rate of 10.5%.

It's been proven cameras on your vehicles reduce accidents, increase driver awareness, decrease downtime and exonerate your drivers/your company. But if you're new to fleet management or don't know much about DVR solutions, figuring out the storage option or combination you need for your fleet can be overwhelming.

Let's look at the types of video recording storage options, the pros and cons of each, and which one is best suited to cover your fleet.

## Types of Storage

There are three options for video data storage:

**Hard disk drive (HDD):** More commonly known as a hard drive, this option stores and retrieves data using magnetic storage and one or more rapidly rotating disks, similar to how a vinyl record player works.

**Solid-state drive (SSD):** Nonmechanical device that stores and retrieves information on flash memory, which consists of individual memory cells.

**SD card:** Short for Secure Digital card, a removable memory card that acts like a solid-state drive but is much smaller.

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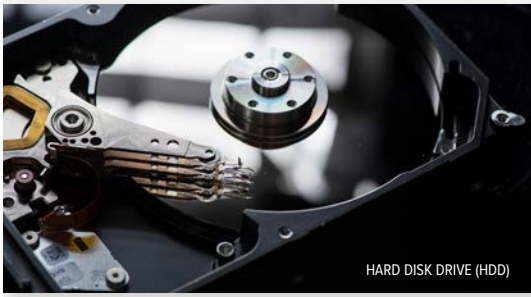
HARD DISK DRIVE (HDD)

SOLID-STATE DRIVE (SSD)


SD CARD

## Your Data For However Long You Need It

## Pros and Cons

Now that you have a basic idea of what video data storage options there are, let's dive into the benefits and limitations of each option.

| | HDD | SDD | SD Card |
|---|---|---|---|
| Cost | Lowest cost per gigabyte (GB) | Highest cost overall | Lowest cost overall |
| Capacity | Largest | Large | Limited to 1 TB |
| Size | Large | Smaller than HDDs | Smallest overall |
| Read/Write Speeds | Slow | Fastest | Slowest |
| Moving Parts? | Yes | No | No |
| Easily Removable? | No | No | Yes |

If you plan on having your DVR installed in your vehicle, you'll probably want to go with an SSD, since they are nonmechanical and can handle bumpy roads. The cost is much higher up front, but if you opt to go with HDDs, you run the risk of having to constantly replace them, as they are not suited for harsh environments.

SD cards are convenient because they can be easily removed for uploading video files, but their storage capacities are limited.

## How Much Storage Do You Need?

Now that you have a basic idea of what video data storage options there are, let's dive into the benefits and limitations of each option. To answer that question, we will have to answer some other questions first, including:

### How many days or weeks of footage do you need to be stored on the device before it is deleted?

A 256 GB SD card has more than enough room to capture a week's worth of video footage before the DVR begins writing over previously recorded video. But if you need to keep recordings from the last month or longer, you may want to upgrade to a 500 GB or 1 terabyte SSD.

For example, if you manage a fleet of public buses, you will be recording for most of the day, and you may need to keep that footage for up to a month after it happened. Complaints from passengers may not be reported immediately, so it's important to have the footage to determine if the complaint is warranted.

For commercial fleets, property damage claims happen regularly, and having continuous recordings could exonerate a driver or company from baseless claims.

### Do you only need video in the event of an accident?

If so, a 64 or 128 GB SD card is the best choice between affordability and reliability for all vehicles running fewer than four cameras with this need.

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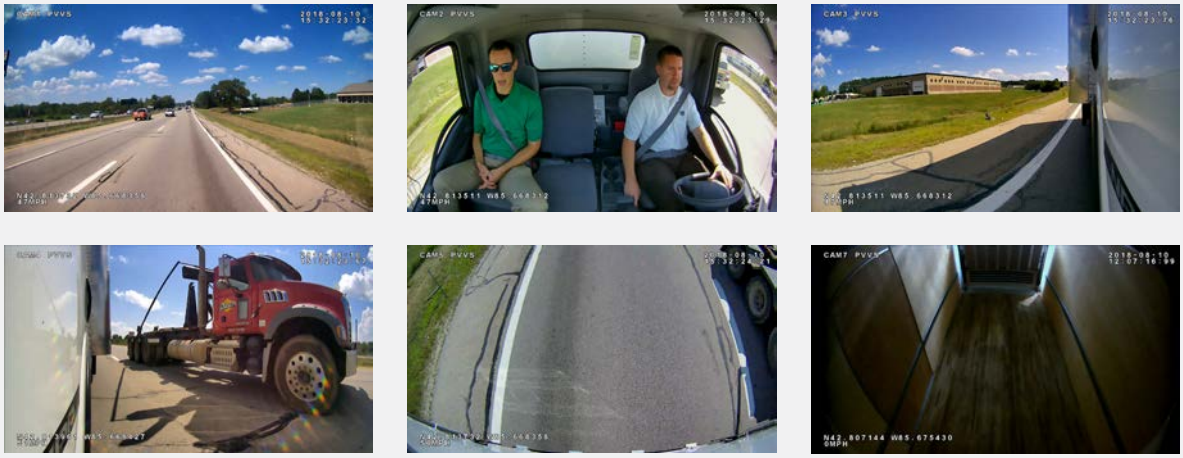
However, as we'll discuss later, continuous recording could be helpful in several scenarios.

### How many hours per day and days per week are the vehicles in operation?

Many vehicles vary on how many hours per day and days per week they are in operation on the road. Specifically, we're talking about hours per day the vehicle ignition is on. Some industries like utility services are solely using the vehicles to go to and from job sites, so the vehicles are only on a fraction of the day, making a small storage device last many more days before reaching capacity.



### How many cameras do you want to record on each vehicle?

While some vehicles run only a single dashcam, others run four or more cameras, essentially filling up the storage device four times quicker or more. The simple formula is more cameras will require more storage.

Below are two charts of the average minimum record time for a vehicle outfitted with three and four cameras at a bit rate (the amount of video transferred over a period of time) of 2,000 Kbps recording on a Pro-Vision DVR for eight hours a day for five days per week.

**Three Cameras**

| Storage Space | Minimum record time |
|---|---|
| 32GB SD | 1 day, 3 hours |
| 64GB SD | 2 days, 7 hours |
| 128GB SD | 1 week, 7 hours |
| 256GB SDXC | 2 weeks, 1 day, 6 hours |
| 1TB SSD | 9 weeks, 2 days, 4 hours |
| 2TB SSD | 18 weeks, 1 day, 6 hours |

**Four Cameras**

| Storage Space | Minimum record time |
|---|---|
| 32GB SD | 1 day |
| 64GB SD | 2 days, 1 hour |
| 128GB SD | 4 days, 3 hours |
| 256GB SDXC | 1 week, 3 days, 7 hours |
| 1TB SSD | 6 weeks, 4 days, 5 hours |
| 2TB SSD | 13 weeks, 4 days, 3 hours |

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Remember, this is the minimum record time; you're most likely going to get more recording time in a real-world scenario. Of course, these numbers will change when you increase or decrease the hours and days per week you record.

### Would you like to record from ignition until vehicle turnoff or just around specific events?

Some DVRs offer event-based recording, which means events such as a hard start, stop or turn will be recorded automatically and will not be recorded over when the DVR runs out of space. This saves you from having to continuously record and take up unnecessary space on your DVR, although you won't have video footage of events that aren't automatically recorded or flagged manually with an event button in the cab.

Commercial vehicles, for example, are heavy-duty vehicles that can accidentally sideswipe car mirrors, doors, mailboxes and more. The G-force impact of these accidents would not be enough to automatically trigger a recording, so if you need to prove the accident wasn't your driver's fault, you won't have that evidence without continuous recording. A general rule of thumb is it's better to have too much video evidence than not enough.

### Do you want to record video after the vehicle has turned off?

Pro-Vision's system allows up to 24 hours of run time after the vehicle is turned off. Outside of vandalism and security situations, anywhere from 5 to 15 minutes is the recommended setting. If this setting is used, then consider how many times per day and week the vehicle will be turned on and off. A delivery truck, for example, may turn on and off multiple times per day. Recording after ignition could determine if a delivery was made or if cargo was stolen from the truck.

Recording after vehicle turnoff also can be helpful in verifying whether a pre- or post-trip inspection happened on the vehicle.

### Let Pro-Vision Protect Your Fleet

Looking to improve safety, reduce liability and improve efficiency across your fleet of vehicles? Contact us today to see how you can solve those problems with a Pro-Vision HD DVR Video System.

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