



# IT Departments

- What IT needs to know
  - Troubleshooting
- Recommendations, best practices

v1.0

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## Background

Products and services from Surveillance247 and 247Security have requirements for networking and computers. This document is designed to assist the school district's IT professionals to properly configure their networks and technology.

## TOPICS

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## Software

Latest versions of the video editing software – *DVRViewer Pro* – are available for a free download through My247, our customer resource portal.

<https://my247.247securityinc.com/>

Access is controlled, so please use a school district email address that we recognize; or contact the sales team to discuss your access.

## Computer requirements for DVRViewer software

Like any other technology, the faster the processor and the more RAM available impacts the performance of the software.

PC only (Apple products are not supported for video editing at this time)

- Windows 10, Windows 11 recommended
- Processor: i5 or Ryzen 5 minimum, coupled with adequate RAM
- 16GB minimum
- Internet access (necessary to link video with GPS and map display)

## Hardware: storage cartridges / "hard drives"

### "INFINITY" or DHD (DUAL-STAGE HYBRID DRIVE) MEDIA

Dual Hybrid Drives contain 2 storage media. This can be either 2 SSDs, or 1 SSD and 1 HDD. Models:

- DHD2-INFINITY-2 (Latest)
- DHD2-INFINITY-1 REV. A through D

The INFINITY Drive (same as DHD or DHD2) is patent-applied-for technology designed by 247Security to accommodate the rigors of the road that vehicles experience. Regular mechanical drives are prone to vibration and bumps (potholes), and SSD drives develop corruption with frequent read/write routines. The DVR and INFINITY media address these issues. Here's a brief description of how it works.

Inside the enclosure are two disks: a 128GB/256GB SSD (solid state drive) and a 2TB/4TB SSD or HDD. The smaller SSD is formatted in FAT32, and the larger SSD or HDD is formatted in NTFS or EXT3.

#### DHD Recording Process

The cameras are only recorded on to the smaller SSD in the INFINITY Drive; once the vehicle is parked and the ignition turned off, the contents are copied to the second stage, the larger SSD or HDD. Note that the POWER light must be off before removing the storage cartridge. Also, during configuration, the Enable DHD Recording field must be checked, otherwise Zeus TITAN will record straight to the SSD part of the DHD storage.

At the boot up stage

When the system boots up, Zeus TITAN will do a Power-On-Self-Test to make sure all systems are operational. If DHD recording is enabled, the SSD will be selected as recording disk and the HDD will be powered off. The SSD is freshly formatted (FAT32), erasing all data for the new bus run.

Shutdown

When the vehicle ignition is turned off, the DVR stays on and the files recorded to the SSD will copy to the HDD. Should something interrupt this transfer, and the files from the SSD are not completely copied to the HDD.

If the media is removed from the DVR before the file transfer completes (i.e., If the POWER or REC LEDs are on), or if Live View or Play Archive is accessed, the file copy from SSD to HDD is paused. After Live View or Play Archive is disconnected, the file copy from SSD to HDD will resume.

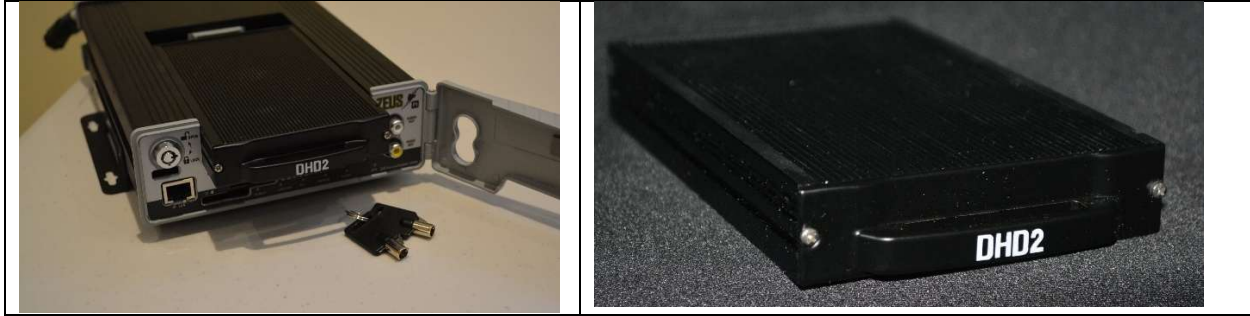
If you are set up with TouchDown, Zeus TITAN will start uploading requested video and data from the HDD to your TouchDown server. Note that this feature can be enabled/disabled on the setup page.

## Drive (storage) Types

| DRIVE MODEL                               | IDENTIFICATION                                                                                                                                                                       | DVR COMPATIBILITY                                                                    | DETAILS                                                                                                                                            |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| DHD2 (current)                            | <ul style="list-style-type: none"> <li>"DHD2" printed on front handle, "DHD" on label on rear of the enclosure, 2 USB ports and 25-pin port at rear of enclosure</li> </ul>          | Zeus TITAN, Zeus PT, Zeus HD                                                         | "Dual Hybrid Drive" 2 <sup>nd</sup> generation<br>2TB HDD mechanical drive with 120GB SSD solid state drive<br>Interchangeable with INFINITY drive |
| INFINITY                                  | <ul style="list-style-type: none"> <li>Infinity symbol "∞" printed on front handle, "DHD" on label on rear of enclosure, 2 USB ports and 25-pin port at rear of enclosure</li> </ul> | Zeus TITAN, Zeus PT, Zeus HD                                                         | 2TB HDD mechanical drive with 120GB SSD solid state drive<br>Interchangeable with DHD2 drive                                                       |
| DHD (discontinued)                        | <ul style="list-style-type: none"> <li>"DHD" printed on front handle, "DHD" on label at the rear of the enclosure, 2 USB ports and 25-pin port at rear of enclosure</li> </ul>       | Zeus 3, Zeus 5 configured for DHD, Zeus HD when configured for "DHD1000" in settings | "Dual Hybrid Drive" 1 <sup>st</sup> generation<br>320GB, 500GB or 1000GB mechanical HDD with 16GB, 32GB or 64GB SSD                                |
| SSD (special order only, not recommended) | <ul style="list-style-type: none"> <li>"SSD" on label on back of enclosure, one USB port located to one end of the enclosure</li> </ul>                                              | Limited use, ZEUS 3, 5 AND HD, not offered as standard equipment                     | 250GB, 500GB                                                                                                                                       |
| HDD (discontinued)                        | <ul style="list-style-type: none"> <li>"HDD" on label on back of enclosure, one USB port located to one end of the enclosure</li> </ul>                                              | 514 series, Zeus series configured for HDD and has spring-mounted base plate         | Mechanical drive (not solid state), 160, 250, 320, 500 GIGABYTE STORAGE                                                                            |

## Drive Model Images

### DHD2



### Infinity Drive



### DHD



SSD format: Fat32

HDD format: EXT3 or NTFS (ZEUS Titan Week 11 2023 and newer only)

## EXT2 driver

Until 2025, most versions of DHD storage cartridges have a EXT2-formatted drive.

When *DVRViewer* software is installed, an EXT2 driver is installed that allows Windows to read the drive.

Avoid installing multiple versions of the EXT2 driver. If installing multiple versions of *DVRViewer*, such as “legacy” and “DVRViewer Pro 2”, uncheck the EXT2 option on the second page of the installer program.

### Verifying EXT2 driver

1. Go to services.msc (Windows Start button, type “services”)

## Network

### Ports

The following ports (TCP and/or UDP) must be open on the network (not just on the workstation):

- 80
- 443
- 3306
- 15111-15114
- 40510-40512
- 40520, 40521
- 45500
- 46500

### Domains

- tdc.my247now.com
- tdc2.my247now.com, tdc3.my247now.com, etc. (all “tdc” iterations of my247now.com)

## Anti-Virus settings

### Disk scanning

#### Turn off disk scanning.

Anti-virus software may be configured to scan storage when connected, which makes the disk unavailable for use until it finishes. This can make it appear that the storage cartridge is not connected, and no video will be available. If reconnected in the same computer session, it may appear as intermittent.

The storage cartridge can have a 2TB or 4TB drive with several months of video. This may take up to several hours to scan.