

# Guidelines for using high camera count (>32) TVN recorders

P/N 1073416-EN • REV C • ISS 21Feb2024

## Introduction

When working with a large number (>32) of cameras per recorder, specific guidelines are advised for hard drives, network settings, and event linking features to ensure optimal performance of the TruVision recorder. Not following these guidelines may result in loss of frames.

This document describes these guidelines.

They apply to TVN 2264P and TVN 70/71.

## Hard drive configuration

The hard drives that we use in our recorders are especially designed for video surveillance purposes and/or enterprise class installations.

Every hard drive however has specific limitations.

Due to the read/write speed limitations of the hard drive, the maximum advised number of cameras per hard drive is 32 cameras with a maximum bit rate of 4Mbps/camera or a total bit rate of 128Mbps.

The number of cameras will decrease if the camera resolution requires a higher bit rate.

Going above these limitations may result in sporadic video recording gaps.

We advise to use HDD Group Mode for non-RAID configurations or RAID 5 or 6 for RAID configurations.

### A. For non-RAID configurations

The TVN 22P and TVN 70/71 have a feature called **HDD Group Mode**.

Use the HDD Group Mode and use at least four hard drives in a TVN 70/71 or at least two hard drives in a TVN 2264P.

When there are more than 32 cameras on the recorder, we advise to assign not more than 32 cameras per group. Every camera can only be part of one group.

## B. For RAID configurations

The TVN 22P and TVN 70/71 support different RAID levels but with high camera numbers (>32), we recommend to use RAID 5 or 6 only.

Using RAID 5 or 6 will distribute the recording load over the different hard drives.

Use at least three (RAID 5) or four (RAID 6) hard drives in a recorder when using RAID 5 or 6.

See the User Manual of the recorder for more information about how to configure HDD grouping or RAID.

## Network configuration

It is essential that a stable network environment is used.

A poor quality network will result in data loss, offline cameras, and will equally impact the recorder's performance.

A qualitative network will increase the recording stability and viewing performance of the recorder.

We recommend the following settings:

- Connect two network ports (TVN 22P, TVN 70) or more (TVN 71). Make sure the ports on the switches are 1 Gigabit ports.
- In the *Network* settings of the recorder, choose the working mode **Load Balance** or **Multi-Address**
- For TVN 22P and TVN 71  
Set the network working mode to Load Balance and connect all the network ports to the same switch.  
Also the ports of the switch need to be configured in load balance mode.
- For the TVN 70  
The TVN 70 does not support load balance mode. For the TVN 70 it is recommended to use multi address mode and distribute the cameras load over LAN1 and LAN2. Connect the network cables to separate, isolated switches.

For the connection between cameras and the recorder it is better to spread the cameras over multiple switches as well.

It is also important to ensure the use of qualitative non-blocking switches, such as those available within the Interlogix IFS product range.

## Event recording triggers

The process of activating event or alarm recording requires intelligence from the recorder. When triggering a high number of alarm/event recordings simultaneously, the recorder's performance can be impacted.

We advise to limit the maximum number of extra cameras that will be recorded for a camera event to four. This will minimize the risk of impacting the recorder's performance.