

# Liberator

## Video Evidence Recorder

The Tecton Liberator is a high quality video recording system for analogue and IP CCTV cameras. Used alone, a Liberator can provide a small system with excellent quality recording and playback.

However, link multiple Liberators together, and you form a virtual matrix\* which provides a powerful system in which users can view and control any camera connected to any Liberator. Combine Liberators with Tecton ViMMo (virtual matrix monitor output) and Tecton VMS (video management system) and you can produce a world class enterprise grade security system.

Tecton's distributed disk storage system and custom designed operating system, provides a system with no single points of failure, no susceptibility to computer virus or other infections and extreme reliability.

- The ultimate in robust and reliable CCTV image recording and storage.
- Massive storage capacity; handles HD video with ease.
- Super fast download speeds to retrieve evidence.
- Designed to cater for systems large or small.
- Any camera connected to the system can be displayed anywhere (Virtual Matrix).
- Copy to Blu-ray, DVD, CD, HDD or USB connected media.
- Not a PC in a box, entirely Tecton designed hardware.
- Very Low Power, less than 43 Watts per recorder.
- Back up UPS not required.
- Records analogue and IP connected cameras.
- Designed and manufactured in the UK.

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Britain



Part of a 230 camera system. Note because power consumption is so low, a 1U air space between recorders is not required. All hard disks are removable from the front panel.



Part of a 400 camera system



Slim Liberators are 1.5U high, but still have 4 hard discs removable from the front panel. Saves rack space, and they are low powered.

**The Tecton Liberator recording system is so low powered that you could record 630 cameras in real time for one month with the power available from just one domestic 13amp mains socket. Low power means less heat, which improves reliability, lowers both direct and indirect costs (like requiring extra aircon), and lowers your carbon footprint.**



You can setup and operate the recorder over the network, you can also do this entirely from the front panel display. Useful if you have network problems. Disk status lights indicate the health of the hard disks fitted. Camera present lights indicate cameras that are being recorded, however connected (IP or direct).

Our remote maintenance program can monitor 1000 recorders and report/email/log this information centrally for your maintenance company.

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# Technical Background

When designing the Liberator, we set out to improve the performance of our previous product range. We had set the bar high with our previous products, so this wasn't an easy task. We knew that systems would be changing to IP, and we knew H264 compression was becoming the accepted standard, yet other products using H264 recording (in real-time or slower) had awful image quality, especially when the camera was showing lots of detail or at night. All the detail was lost. When the cameras were panned the images often pixelated.

We resolved this by not compressing the picture data very much, so less detail is lost. Typical systems compress to 1mbit per second, or less. With Liberator we chose to allow data rates up to 10mbits (less compression and hence more detail in the pictures recorded). This meant Liberator had to be designed to manage vast amounts of very fast data. Something which has proved vital with HD.

By doing this we improved picture quality and future-proofed Liberator against the changes in camera technology that were to come. Less compression leads to more data being stored, so it was vital that we made Liberator able to output data even faster than it received it.

Downloading days of video footage is something town centre systems do all of the time, and on most systems it takes a very long time. We increased the download speed from 10 Mega bits-per-second to an astonishing 400 Mega bits-per-second, dramatically reducing the download time. No other product can do this, as far as we are aware. We can do this because our products are completely hardware based, (there is no windows or Linux inside) and the network is designed into the heart of the product. It also makes them very reliable.

The firmware in the Liberator is actually the entire system, and it can be updated over a network from a central point, or from the front panel. This future proofs the product, taking care of the latest in IP camera fashions, as well as adapting to specific customer requirements.



## Disk Handling

Innovative design also applies to our hard disk management. Hard disks (where the video footage is stored) are located behind a removable ventilated cover. Each individual hard disk can be removed whilst the power is on, and while recording is taking place. [ Try this at the next product demonstration you go to!! ] You can even remove the hard disk that is being recorded to (the Liberator will use the next available disk and its internal memory).

Disks removed from the Liberator can be played back in another Liberator or on a PC, thereby offering bulk evidence recovery in seconds for extreme events.

Hard disk size is unlimited, as there is no operating system.

Compatible with 8TB disks. If you wish to record for a year or more, our Icebox disk array has a capacity of 80TB, and several can work together.

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