



Surveillance in Logistics Environments

“In 2020, €172 million worth of merchandise was stolen from EMEA supply chains.”

Source: TAPA EMEA, Cargo Theft Annual Report*

Modern supply chain operations have been able to maintain peak performance levels and run with maximum efficiency. They are complex, fast-moving environments which can be very challenging to manage effectively. The scales involved are often huge too - with the world's largest order fulfilment centre covering over 330,000m².

Having state-of-the-art surveillance systems, along with superior data storage capabilities, means various issues impacting on profitability or threatening employee safety can be fully addressed.

According to estimates made by the Transported Asset Protection Association, EMEA, merchandise worth €172 million was lost from EMEA supply chains during 2020 through theft - this equates to almost €500,000 each day. It is believed that the actual figures are even higher though, as many incidents of theft are not actually reported. In addition to stealing, the loss or damage of items can reduce profit margins, as well as harming a supplier's reputation if orders are not met on time. Measures must therefore be taken to provide logistics operatives with complete visibility 24/7.



Preventing theft – Warehouse/supplier theft is rising. This can take the form of employee theft (which is becoming increasingly common) or intruders stealing items. The acquisition of video footage and its subsequent analysis can be used to not only get convictions, but also decide on how security procedures can be improved. In addition, AI-based analysis tools can compare real-time video with footage of previous incidents. If the system thus notices something which seems suspicious, it can alert the management so that pre-emptive action may be taken.

Tracking shipments/recovering lost assets – The constant influx of inventory in/out of storage depots can lead to items being difficult to find. This can slow down operations and impinge on the overall efficiency. There is the prospect of items being permanently mislaid (which like theft will once again result in financial losses being accrued). Real-time tracking of object movements and object counting via video cameras means that items' locations can be continuously updated - thereby speeding up order completion and mitigating the risk of items being lost.

Maintaining staff safety – There are a number of functions that surveillance systems can provide in relation to this. These include alerting security guards of the presence of trespassers who could pose a threat, and making sure that operatives do not accidentally wander into unauthorised areas (where there are forklifts or other types of potentially dangerous materials handling equipment in use). It can also help to ensure that protective clothing and headgear are always worn on the site.



HDD Recommendations

Merging advanced technology with unrivalled application knowledge, Toshiba has developed elevated-performance data storage solutions that are ideally suited to surveillance in logistics environments. Toshiba's HDDs can be used in surveillance systems supporting object detection, counting and tracking functions, as well as more sophisticated AI-driven activities - like situation awareness and facial recognition. Key options are the S300 AI series HDDs, with up to 24 TB

capacity, which can manage video feeds from up to 64 cameras while delivering real-time AI analytics on 32 simultaneous streams. Integrated OptiFrame™ technology is purpose-built to protect recording continuity by intelligently managing AI-driven workloads. These HDDs are designed to handle 550 TB/year workload levels for 24/7 big data analytics and come with a 5-year warranty.



Model	S300 AI
Capacity	24 22 20 18 16 14 TB
Form factor	3.5"
Interface	SATA
Workloads	550 TB/year
Rotational speed	7,200 rpm
24 x 7 operation	Yes
AI Streams supported	Yes
Buffer	1024 MB
Limited warranty (years)	5
Use for	- AI Video Analytics Server and Storage Systems - Centralized Surveillance Data Storage Systems - Video Archive and Data Recovery Systems - Multi-Bay-RAID Storage for Surveillance Data

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