



MOBOTIX

CASE STUDY

Network Video: No Risks And Side Effects in the Warehouse

Just in Time at the Customer's

"Just in time" is one of the most important standards used to evaluate logistics services. Raw materials have to be at the production location, products have to leave the production halls, and the goods have to be delivered to the customer, right on time. The requirements can only be met by the most modern logistics and warehousing systems, which also have to guarantee maximum availability.



Leading Supplier

With more than 700 reference facilities throughout the world,

MAN Logistics is among the leading suppliers in warehousing and materials handling technology. Approximately 160 employees of the company based in Heilbronn, Germany, make sure that their customers get the ideal solutions to all their logistics needs (www.manlogistics.de).

Here is just one example: MAN Logistics engineered a high-rack warehouse with 6 aisles and approx. 20,000 storing positions for chemical, euro and industrial pallets for the multinational company Aventis Pharma in Frankfurt. Two of the 6-rack aisles include cooling. The heart of the

high-rack system is the materials handling equipment with a total of some 200 drive trains and the six 31m-high automatic rack feeders, each of which manages approximately 25 double movements, i.e. combined loading and unloading processes, in the around 100m-long aisles.

For Aventis Pharma Deutschland GmbH, a leading pharmaceutical company in the German market with 9,000 employees and sales amounting to approximately EUR 2.9 billion, this technology is the ideal prerequisite for the successful operation of a high-rack system in the distribution warehouse.

Optimum Availability

The high-tech equipment also includes MOBOTIX camera technology, which can be ideally integrated into industrial plants and production machinery. Two cameras are installed on each of the rack feeders. They make managing possible malfunctions significantly easier, thus optimizing the availability of the high-rack warehouse.

Security Vision Systems





Fully automatic single MAN rack feeders perform approximately 25 loading and unloading operations per hour.

96m long, 28m wide and 32m high: the high-rack warehouse MAN Logistics constructed for Aventis Pharma Deutschland.

Live Photos from the High-Rack Warehouse

Time is Money

The ability to deliver quickly and reliably is extremely important, particularly in the pharmaceutical industry. A service and distribution warehouse for medicine must guarantee extremely high operational availability. That is why, when managing possible malfunctions, the following principle always applies: time is money. With camera systems mounted on the rack-feeders, the warehouse operators are able to analyze a malfunction on the basis of the video recording and to initiate corrective action rapidly.

Documented History

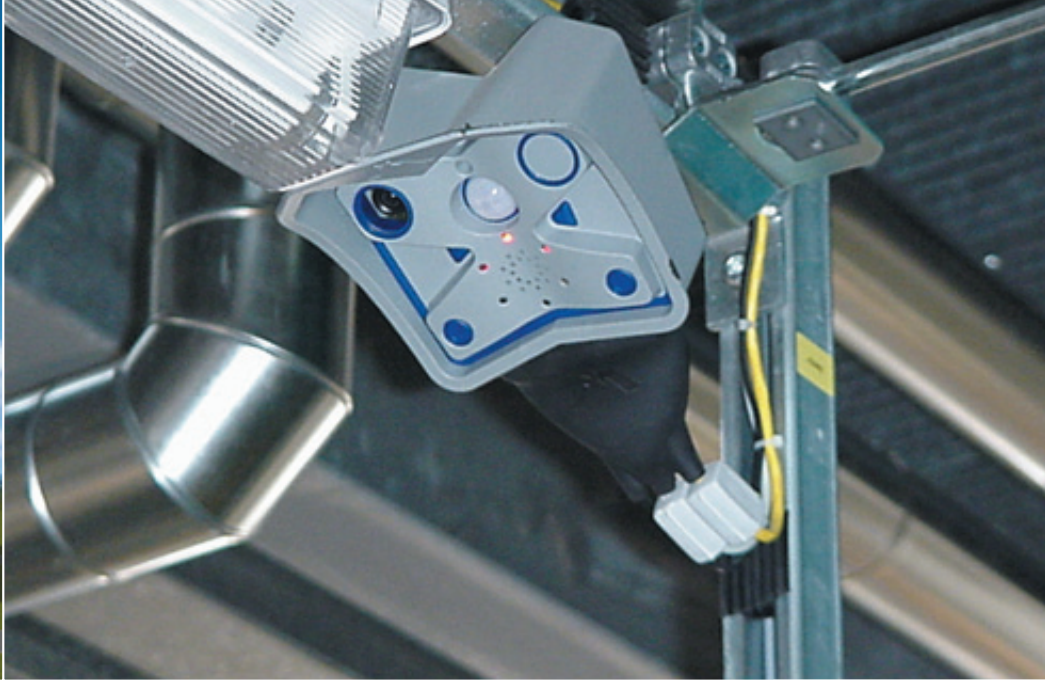
"Most cameras don't begin to record until the alarm goes off," explained Georg Leichtle, head of the control department at MAN Logistics. "What fascinated us about the MOBOTIX technology is that the network camera also documents the events prior to the alarm and shows us how the malfunction occurred. This is important information that we cannot do without." When everything is running smoothly, the camera simply overwrites the previously stored image sequences. If an error occurs, this event stops the camera from overwriting these images. If desired, the images recorded in the last seconds before the malfunction occurred can then be analyzed.

Quick And Precise

This makes it possible to process the malfunction quickly and precisely, and frequently, it is not even necessary to shut down the system to allow a service technician to inspect the rack affected. If it is necessary to eliminate the problem on location, however, the video images make it possible to determine exactly which tools or spare parts will be needed.

Many Features

"We did some pretty intensive research in advance to find a camera suitable for our rack feeders," Georg Leichtle said. "We finally found almost by accident just what we wanted on the homepage of IT and automation service provider IBC, a company with which we had already been working in the field of material-handling control." IBC (www.housewebcam.de) then demonstrated the MOBOTIX technology at MAN Logistics and competently presented the many diverse possibilities, features and application stages – always focusing on how this technology could be used most effectively in a high-rack warehouse.



MOBOTIX M1M Mono-IT camera makes managing malfunctions in the warehouse a lot easier.

“What really convinced us was the fact that the solution adapts perfectly to the existing IT infrastructure and that it would not be necessary to lay any extra cables or to install any programs,” continued Georg Leichtle.

MOBOTIX Offers Mobility

The cameras on the automatic rack feeders at Aventis are connected to a mobile access point. Thus, the live images can be transmitted from the rack aisle via mobile communications either continuously or event-controlled and also fed into the TCP/IP Ethernet, for example, so that any access-authorized PC can manage and operate the cameras remotely using just a browser. This makes it possible for MAN Logistics to dial directly into the customer’s system from the service center in Heilbronn via a router connection – and, if needed, to give tips on how to eliminate any problems. It is also possible to transmit a visual error message directly to a service technician’s handheld computer or PDA.

Ideally Suited To Industrial Applications

“And finally,” continued Georg Leichtle, “the attractive price-performance ratio and the industrial design of the cameras spoke clearly in favor of MOBOTIX: the camera housing is extremely robust, very shock and vibration resistant and operates well even in harsh environments, where they have to deal with dust and steam, for example. In addition, the camera system is designed in such a way that it can be retrofitted to existing rack feeders without having to intervene into the actual machine controls.”

Cost Savings

There are many features that give the sales team at MAN Logistics good arguments in selling the systems. “With the integration of MOBOTIX network cameras in the rack feeders, we have gained a leading position in the industry,” summarized Mark Vogt, head of sales. “And this commitment will pay off. After all, simplifying maintenance, enhancing availability and the resulting cost savings are unbeatable advantages that the market welcomes with enthusiasm and is also beginning to demand. The next projects with integrated camera technology are already in the planning.”

The company plans to use the MOBOTIX M10-DevKit (Developer Integration Kit), which is equipped with a fisheye lens and a special zoom function. This function makes it possible to virtually select a section of the image with the mouse and also facilitates remote transmission.





MOBOTIX Technology – Cost Savings in Every Aspect

High Resolution For Sharp Images

All MOBOTIX cameras are high-resolution cameras with integrated image storage and 960 lines (1280x960 pixels) resolution. The **stored image** thus contains 12 time more detail for creating zoomed sections of the image than regular cameras with 240 or 288 lines (CIF, 2CIF). This is why one single MOBOTIX camera with a 90° wide-angle lens is sufficient to monitor an entire room and yet provides more detailed images than traditional technology. The MOBOTIX Day/Night cameras feature zero maintenance with one color and one B/W image sensor.

Intelligent Storage Technology Uses Fewer DVRs

The new, decentralized storage technology pioneered by MOBOTIX reduces the number of recorders that store the smooth high-resolution video by up to 90%. 40 cameras store smooth video streams including audio on a single PC, each managing its own ring buffer and database. Intelligent search features provide swift access to the stored events. There is no software required for storing and managing video, eliminating license fees and the need for expensive software. Event-controlled recording and automatic increase of frame rates upon detecting movements drastically reduce the storage requirements.

Low Power Consumption Means Enormous Savings

Since MOBOTIX cameras are anti-fogging, do not require heating and only use 3 Watts each, power can be injected into the network cabling using standard PoE products, year round. This drastically reduces the amount of cables and the power requirements for backup power.

Integrated Telephone Features

All MOBOTIX IT and Secure models feature bidirectional audio support. The built-in microphone and loudspeaker are used for live audio transmissions and storage purposes. Voice messages with PIN confirmation and call forwarding via IP or ISDN telephony have been integrated as well. Using the switch outputs, you can switch lights or open doors from the phone or from the computer.

Robust and Well-Protected

The fiberglass-reinforced housing is shockproof and the SecureFlex mount protects the network cabling as it completely conceals the cables (M12/D12 models). Weatherproof (IP65) from -30° to +60°C (-22° to +140°F).

High Return on Investment

Since the number of cameras and storage capacity are freely scalable and any kind of data connection can be used (ISDN, DSL, Ethernet, Wireless, GSM, copper, optical), MOBOTIX means high ROI, even years after installing.

State-Of-The-Art Technology

Developed and manufactured in Kaiserslautern, Germany, MOBOTIX produces image-storing weatherproof high-resolution cameras, including lens and wall/ceiling mount for as little as 598 EUR excl. VAT. To date, more than 100,000 cameras have been sold worldwide.



Download **MxViewer** alarm management software free of charge. 30 cameras with 30 fps each, layout editor, remote alert notification

MOBOTIX AG
 Security Vision Systems
 Luxemburger Straße 6
 D-67657 Kaiserslautern
 Tel.: +49 (631) 3033-103
 Fax: +49 (631) 3033-190
 E-Mail: sales@mobotix.com
 www.mobotix.com

