

Scania Parts Logistics *Keeps Motoring* With a Wireless Network From LXE.

CASE STUDY

Scania is the third largest manufacturer of heavy trucks and buses in the world and a major producer of industrial motors and engines for ships. Since the company began in 1891, Scania has built more than 1 million trucks for heavy transportation. Today, about 400,000 Scania vehicles haul goods and carry people throughout the world, and 70,000 of the company's engines are providing the driving force for a range of applications. Keeping the motors running are some 29,000 employees in 1,500 service centers. Scania is a global operation that is active in Europe, Latin America, Asia, Africa, and Australia. To ensure that all its dealers and service centers receive the necessary spare parts on time, Scania Parts Logistics works around the clock 365 days a year.



Scania Parts Logistics operates the company's distribution center (DC) in Opglabbeek, Belgium. The logistics division is responsible for the worldwide distribution of spare parts. To do this efficiently and accurately, Scania Parts Logistics relies on a 2.4GHz spread-spectrum wireless network and rugged wireless computers from LXE. A key component of the wireless network is LXE's Spire® Antenna solution which optimizes wireless coverage in the DC using a limited number of access points.

Around the Clock and Around the World

Locating the DC in Belgium keeps transportation costs low and guarantees short delivery times. Scania has also streamlined its supply chain by delivering directly to dealers, without involving import companies or other agents. For the same reason, suppliers also deliver directly to the DC. All dealers and workshops connect to the DC via an intranet, allowing them instant access to online stock information.

"The Opglabbeek DC covers 31,000 m² and includes 7,000 m² of office space, with a 24,000 m² warehouse," says Peter van Voorhuysen, assistant plant manager for Scania Parts Logistics. "We have about 44,000 parts on the shelf."

Seventy tons of product leave the premises each day using third-party transporters. The items include 2,000 parcels of various sizes containing items ranging from a sealing ring to a complete truck cabin. The same volume of goods is received each day.

"We use a three-shift system to cope with the amount of work. Goods are received and dispatched 24 hours a day. We work from 10 pm Sunday evening to 6 pm the following Saturday afternoon to ensure that we keep our customers happy," says van Voorhuysen.

From Narrow Band to 2.4GHz

When the warehouse was expanded, Scania decided to update the existing, outdated narrow-band wireless system. The team at Scania that was responsible for replacing the system, began to look for the most suitable wireless supplier. "In particular, we were looking for reliable wireless computers that were sturdy," says Patrick Paredis, the DC's warehouse manager. "LXE had what we were looking for."

"Thanks to LXE, we needed much less cabling than we originally anticipated," adds Chris Put, IT Manager at Scania. "Scania already had a wireless telephone network, and we assumed a lot of extra cables would have to be fitted in the new building. However, LXE had the ideal solution: a seamless integration of a wireless telephone network on top of the new 2.4GHz network. By opting for a wireless voice over IP solution (a telephone network that uses internet protocol), we now have wireless coverage throughout the plant. We can even work wireless with our laptops if we put a radio card in."

The migration from the old to the new wireless system went very smoothly. The mainframe, located in Sweden, remains unchanged. All scanned data is sent using TCP/IP over the frame-relay network to Sweden for processing. (The Swedish parent company develops all the software internally.)

At receiving, each pallet gets its own bar coded label containing the article and package numbers. A forklift driver brings the pallet directly to the "mother location" or a buffer location. The mother location is the actual destination in the DC of the pallet, but sometimes this location is full and the pallet is taken to a buffer location where it is stored temporarily.

The driver scans the location label when he puts away the pallet. Each position has its own checkpoint



number. This enables the system to track everything in the main warehouse.

Online Process Gives Immediate Item Visibility

The order picking process uses wireless so that the system immediately knows when a mother location is vacant. All forklift trucks and reach-trucks are equipped with a compact LXE MX3 vehicle-mount wireless computer with integrated keyboard. The order-picker sends a message in real time to the forklift driver's MX3 to replenish the location. Empty runs are avoided by immediately replenishing the mother locations with new stock. The order-picker then continues his normal work in the warehouse.

When the order is finished, a message is sent to the central system. The data is extremely important for stock control and processing online.

From the warehouse, the goods move to the packing department where they are packed, labeled and scanned. The packed goods then move to the shipping area. Each package is given a label with the route number and the delivery address. There is always a reference to the truck assigned to carry the order.

Speed and Accuracy Ensures Just-in-Time Delivery

The forklift driver loading the truck requests the loading transactions on the screen of his LXE vehicle-mount wireless computer (LXE-VX1). He scans all the goods and the system verifies that they are loaded on the correct truck.

If a lorry is ready to leave, the shipment is closed on the screen of the wireless computer. The consignment notes are then printed immediately and are ready to be picked up by the lorry when it passes the desk.

It is very important that all trucks leave the DC on time; otherwise, they may miss connections when they arrive at the hub. Moreover, all goods have to be delivered to the customer before 9 am.

All dealers and workshops are connected via an internal network to the DC. This provides dealers and workshops a clear view of what is on the DC's shelves. The intranet allows users to send orders, up to an hour before the trucks leave the DC. Urgent orders are given priority by the system and appear online and in real-time on the screen of the order-picker's wireless computer. Trucks leave at different times to various destinations throughout the day, however, it is a race against time to have all the trucks ready to leave on time every day - a race that is won with the support of wireless!

Scania Parts Logistics is very pleased with the quality and functionality of LXE's wireless solution. "All the equipment we use in the DC must be robust and industrial-grade quality and that includes the wireless phones and the wireless computers. The service level grade is 99% thanks to the wireless system. We have ongoing checks and errors that can be traced and solved immediately. And, last but not least, we can meet all our deadlines, even for emergency orders that need to be shipped and delivered within twelve hours. Wireless has made our job as easy as one, two, three," concludes Put.

The logo for LXE Inc. features the letters "LXE" in a bold, blue, sans-serif font. A registered trademark symbol (®) is positioned to the upper right of the letter "E". Below the text, there is a stylized blue swoosh that curves under the letters.

About LXE Inc. LXE Inc. improves supply chain performance by applying over 30 years' experience developing wireless products and solutions. From wireless computers, advanced auto-ID technologies, and wireless network infrastructure, to our award-winning customer support - LXE's easy-to-use products are as reliable as the people who install and support them.

Based in Norcross, Georgia, LXE also offers a full range of turnkey services, including radio integration, project and installation management, network design, technical support, and repair services. LXE is a wholly-owned subsidiary of EMS Technologies, Inc. (NASDAQ: ELMG), and has offices worldwide. For more information, visit www.lxe.com.