

Jungheinrich Case Study

# The ERC 215a as an autonomous solution.



# Automated helper for FOXCONN.

In the Czech production facilities of the Taiwanese company FOXCONN, completely different colours once dominated. Thanks to professional advice and a convincing range of products and services, we managed to convert most of the fleet to yellow. Today FOXCONN's warehouses and production spaces in Pardubice and Kutná Hora are travelled by more than 100 Jungheinrich vehicles of many types and configurations. Among them is the first ERC 215a Automated Guided Vehicle (AGV) installed in the Czech Republic.

FOXCONN is a leading electronics manufacturer and provider of after sales services. "In the Czech Republic, we have long ranked among the three most important exporters and we are one of the best-rated employers in the region," says the program manager at FOXCONN CZ s.r.o., Miroslav Pospíšil. Due to the fact that the company constantly strives to increase work productivity, it also focuses on automation across departments, including selected logistics operations. A pilot project is the use of an AGV in the dispatch department for finished products.

## A STANDALONE SOLUTION FOR FAST RESULTS

Contrary to popular belief, automation does not necessarily mean deploying a complex system. In fact, even in automation, it is possible to proceed in slow steps. "At FOXCONN, we installed the AGV ERC 215a. Basically, we installed it as a standalone solution. The vehicle is not connected in any way to the customer's internal systems, and transport logic is handled by the AGV control system based on signals from sensors at individual locations," says Pawel Byczkowski, a Jungheinrich project manager.

Implementing the project directly on site took our experts about a month. During that time, they brought the vehicle to life, set the transport route navigation, and got the external peripherals going. The vehicle is guided using a laser scanner and reflectors placed at various locations in the hall. Thanks to this system, along with safety sensors, the system can work even in mixed operation with people and ordinary technology.

The automated truck moves pallets with finished products 75 metres between pro-

**The Automated Guided Vehicle can work even in mixed traffic with people and ordinary technology.**

duction and dispatch at a maximum speed of 6 kilometres an hour. As soon as a pallet is placed at one of the 6 positions, the AGV activates and takes over the pallet, without further approval or control, and transports it to dispatch. There, the staff take it from one of 5 destination positions. This simple system replaced human labour where the human factor provided no added value, easily and after just a few weeks.

## LONG-TERM COLLABORATION

Jungheinrich's regional sales director Zdeněk Bárta has long experience with FOXCONN. "Until 2008, Foxconn was primarily a customer of our competition, which operated about 80 vehicles in the company's Czech branch. Only about 10 of our yellow vehicles ran there," he begins. "During construction of the new hall in Kutná Hora, however, we won a tender for supplying new handling technology and rack systems. Thanks to that, we were able to climb our way up to the individual FOXCONN divisions and finally flip the ratio of local technology from us and our competition. Before another tender in 2019, the ratio of the competitor to Jungheinrich was 30:70," Barta adds.

**01**  
Speed 6 km/h,  
distance 75 m.

**02**  
104 Jungheinrich  
vehicles at  
FOXCONN.





“**FOXCONN constantly strives to increase work productivity, so it focuses on automation across departments, including selected logistics operations. A pilot project is the use of an AGV in the dispatch department for finished products.**”

**Miroslav Pospíšil**

Program manager  
at FOXCONN CZ s.r.o.

**Thanks to lithium-ion technology, multiple shifts are possible with just one battery.**

#### **LI-ION BATTERIES SAVE MORE THAN SPACE**

With an expanding fleet, the need for charging stations also increased. One solution offered was lithium-ion batteries. However, at first sight, these seem to involve higher procurement costs for the battery itself and the charger. Due to their high performance, long life and the ability to work more than one shift on a single battery – plus there’s no need to build more space for changing and charging traditional batteries – FOXCONN ended up trying lithium-ion batteries. “Thanks to the approach at our headquarters, the warranties on lithium-ion batteries, the projects already realised together and the subsequent references, in combination with the calculated total costs for the lifetime of the vehicle, we finally convinced the FOXCONN representatives to go with lithium-ion technology. Now after a year of testing, we’ve already ordered more trucks – lithium-ion again,” Barta says.

## **JUNGHEINRICH FLEET AT FOXCONN**

**19** 

**EFG/TFG**  
forklift trucks

**25** 

**ETV**  
reach trucks

**60** 

**pedestrian stackers and pallet trucks**  
EJE, ERE, EJC, ERC, AGV ERC 215a

#### **FOXCONN**

The international company with headquarters in Taiwan, has operated in the Czech Republic since 1974 and has two production plants – one in Pardubice and one in Kutná Hora. It is one of the world’s largest producers of electronics and computer parts and supplies other electronics manufacturers. Its largest customers include Apple, Intel, Sony, Nintendo, Hewlett-Packard, Dell, PlayStation, Xbox, Motorola Cisco and Microsoft.

## PROJECT SUMMARY



Customer:	FOXCONN EMS
Sector:	Producer of electronic and computer components
Company size:	4,500 employees
Location:	Pardubice
Length of transport route:	75 m

## CHALLENGE

Company management continuously strives to increase work productivity across all departments, so it decided to automate selected logistics operations in the completed parts dispatch department.

## JUNGHEINRICH SOLUTION

At FOXCONN, we installed an ERC 215a AGV as a standalone solution. The automated truck is not connected in any way to the customer's internal systems and transport logic is handled by the AGV control system, based on signals from sensors at individual locations.

## RESULTS

Thanks to appropriate configuration, the AGV can travel at a speed of up to 6 km/h. It lifts loads to a height of 4.4 m and can carry 1.7 tonnes. FOXCONN has a 75 m handling route.

## CONCLUSION



The Jungheinrich ERC 215a Automated Guided Vehicle works at FOXCONN in mixed operation among the warehouse's other technology and workers.

In just a few weeks, this simple system replaced human labour where the human factor provided no added value.

