

# SuccessStory

## Personal safety on an amusement ride

### Project Overview

#### Branch

Amusement parks

#### Application

Speed monitoring and collision prevention for amusement rides

#### Hardware

- 2 HIMatrix 60
- 8 HIMatrix F31
- 12 HIMatrix remote I/Os

#### Number of I/Os

Approximately 600



### Customer

LTW Lagertechnik GmbH,  
Austria

### Project

#### **HIMA systems guarantee personal safety in the world's first wireless-controlled amusement ride**

HIMatrix systems with safeethernet guarantee high levels of personal safety on the world's first wireless-controlled "Mountain Glider" at Belgium's Walibi amusement park.



SAFETY  
NONSTOP

# Project Description

The world's first "Mountain Glider" at the Walibi amusement park near Brussels in Belgium has had HIMatrix safety controllers installed to ensure high safety levels for its passengers. The HIMatrix controllers prevent gliders from travelling at an extreme speed and from collisions arising between the gliders.

The Austrian mechanical engineering company LTW Lagertechnik commissioned HIMA to supply the HIMatrix components and to examine the communication conditions and interfaces. By using safeethernet, HIMA enables a wireless safety-related network to be built. Each of the eight gliders contains a F31 compact controller and a remote I/O module. The fixed control system comprises of two full-feature HIMatrix F60 and four remote I/Os. During its journey, a glider passes several access points at which a handover takes place between the radio cells.

Each HIMatrix F31 manages the safety-related processing of 28 digital inputs and 16 digital outputs. The gliders are in constant contact with the central station which itself handles 300 digital input and 280 digital output safety-related signals. Operating conditions and faults are transmitted to a panel using a non-safety-related protocol. All the controllers fulfil the required safety levels, SIL 3 (IEC 61508) and Cat. 4 (EN 954) and PL e (EN ISO 13849).



## Overview of Features

- Wireless signal transmission between the vehicles and the central station
- Flexible networks with 100 Mbit/s transmission capacity due to safeethernet
- HIMatrix systems certified up to SIL 3 (IEC 61508) and Cat. 4 (EN 954)
- HIMatrix and safeethernet, a combination of the fastest safety controller and the fastest safety bus
- Dual operation of safety-related and non-safety-related systems in the same network

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