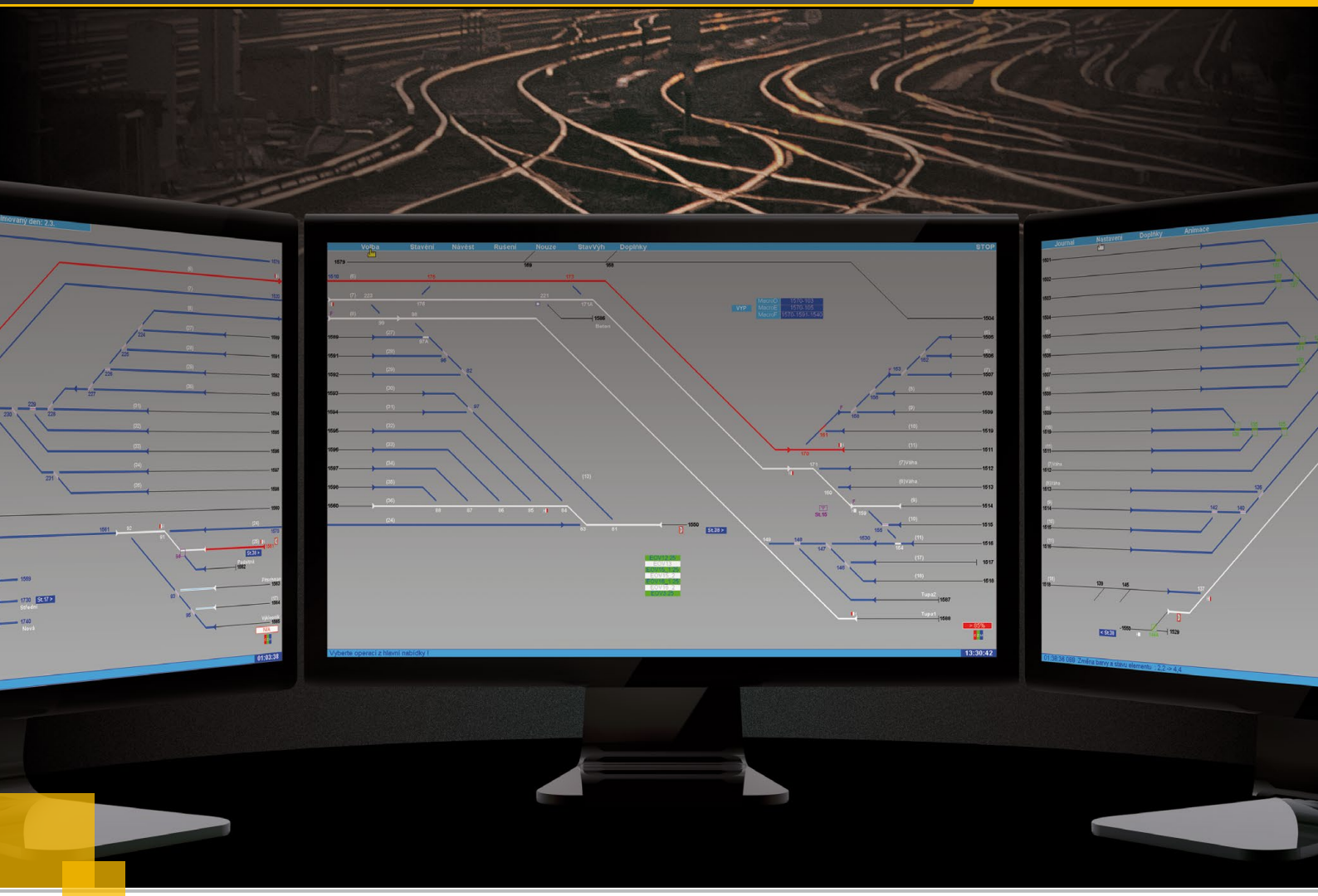
RAILWAY
TRANSPORT
SYSTEMS

MODEST-GEMINI

Fully Electronic Station Interlocking Equipment



- The highest safety level SIL4 according to the European standards of CENELEC
- The system´s scalability enables to control stations in an unlimited range
- Safe local or remote visualisation and commanding
- Automation support for operators reduces demands put on operators
- Top diagnostics
- Modular structure
- High reliability and excellent availability given by 2oo3 redundancy (hot back-up)
- Low construction & maintenance costs

PrvníSignální

www.1SIG.eu

GENERAL **DESCPRITION**

MODEST-GEMINI is station interlocking equipment designed for middle and large railway junctions.

The architecture enables both centralised and distributed control system solutions. **GEMINI** is thus able to control both the main station, and adjacent neighbouring stations and open line sections.

It enables co-operation with line block systems and level crossing systems. **GEMINI** is independent of the types of used outdoor elements.

GEMINI architecture enables to create price-optimum solutions for each customer, and guarantees extraordinary simple implementations of later modifications at the same time.

BASIC **TECHNICAL DESCRIPTION**

- MODEST-GEMINI is a hierarchical control system using state-of-the-art technologies.
- It meets the European standards for control system safety at the highest level SIL4.
- High availability parameters are reached both by top reliability of used HW solutions, and by using the fail-safe concept of hot back-up (2oo3).
- All data communications are redundant (with hot back-up).
- The system is based on a unified HW & SW platform of the safety controller NEXUS.
- Interfaces to outdoor controlled elements consist of fully electronic converters.
- Flexible architecture and modular structure enable to build up a control system having practically unlimited capacity (nodes with hundreds of points).
- All the traffic and diagnostic data are recorded and archived. Subsequently they serve for clarifications of accidents, or for statistical traffic evaluations in transportation optimization.
- The system has available top diagnostics for easy detection and localization of possible failures.
- Maximum accent is put on failure prevention using timely detection of deviations and issuing warnings for maintenance staff.

BASIC TECHNICAL PARAMETERS	
Number of controlled points	**unlimited**
Multi-operator workplace	**enabled**
Remote control	**enabled**
Remote/centralized maintenance	**enabled**
Local diagnostics	**enabled**
Connection to IS (Intranet)	**enabled**
Fully electronic solution	**yes**
Safe visualisation and commanding	**yes**
Hot back-up	**yes**
Radio control capability	**yes**
The most distant controlled place	**approx. 80 km**