

Customer Success Story



KONCAR-KET

*Westermo networking technology helps
ensure efficient running of railways in Croatia*



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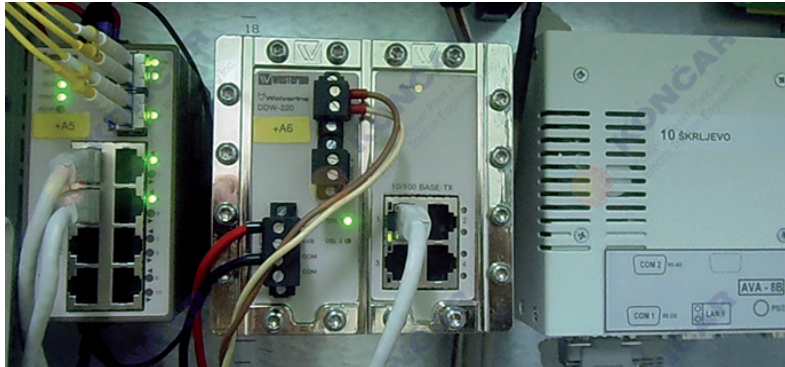
Westermo Partner
MICROSTAR★

Westermo has many years' experience of successfully providing data communication technologies in mission-critical railway applications and was chosen to support a major railway project in Croatia by supplying robust and reliable trackside devices.

The project involved implementing a SCADA remote control system to connect railway stations, sectioning facilities and substations on the Moravice-Rijeka-Šapjane, and Škrljevo-Bakar lines in the far north-west of the country with the Remote Control Centre in Rijeka. The remote control system collects data on critical communications such as signalling, alarms, control orders and the state of the IT system, therefore extremely reliable data communications networking technology is required.

Koncar - Power Plant and Electric Traction Engineering (Koncar-KET), based in Zagreb, was employed to implement the new remote control

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Dejan Fabris is a systems engineer at Končar-KET and responsible for the network design.

system and the supporting data communications network on the two lines. The decision to use Westermo devices was based on a strong working relationship between Koncar-KET and Westermo's Croatian distributor Microstar:

"The network supports critical applications and therefore has to offer very high levels of reliability, said Dejan Fabris, systems engineer at Koncar-KET. "We understood the benefits of Westermo technology, such as its robustness and reliability, so we had no hesitation in selecting Westermo products for this very important project."

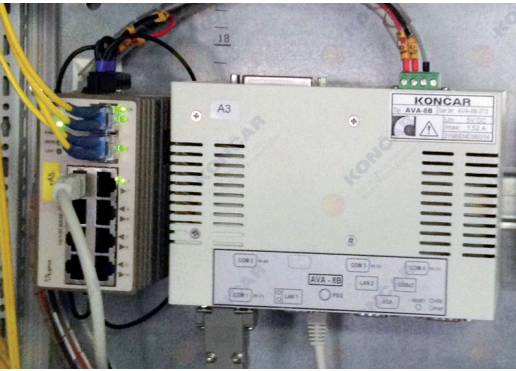
"Critically, Westermo networking products have been designed, certified and proven in harsh trackside applications, which gave us great confidence in this solution."

The industrial network designed by Koncar-KET supported both data and telephone communications. The Moravice-Rijeka-Šapjane stretch of line is 120km long, and the data network supporting this line uses fibre optic cables. The Škrljevo-Bakar section of line is 2.5km long and the network is based on copper cabling. To manage the networks, Westermo provided Lynx industrial Ethernet switches, Wolverine industrial Ethernet extenders and fibre optic modems for connecting peripheral devices.

The Westermo WeOS operating system, which powers the switches, enabled faster device and network configuration and ensured that a highly reliable solution was achieved. It also provides multiple layers of security to protect against cyber-attacks.

The climate in Croatia provides a tough challenge for trackside equipment, as temperatures can soar to 40 degrees C in the summer and plunge to -10 degrees C in winter. Westermo's robust Lynx and Wolver-

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ine switches were ideal for this project as they are designed to cope with such challenging environments. Specifically they are able to 'cold start' at -40 degrees C and operate (over a long lifetime) at +70 degrees C without the need for holes or fans for cooling.

"Being able to perform well in extreme weather conditions was an essential requirement for the equipment on this project," said Fabris. "Critically, Westermo networking products have been designed, certified and proven in harsh trackside applications, which gave us great confidence in this solution."

Because the network is critical to the safe and efficient operation of the line, network redundancy is required. This is provided using networking with a ring structure and Westermo's patented FRNT protocol, which enables fast recovery of the network should there be a fault (such as a failed device or cable) at any point in the network. However, since the network became operational, Koncar-KET reports that it has proved highly reliable, with no problems reported.

"We are talking about Westermo switches working 24/7, for 365 days a year, in a redundant ring topology without any problems whatsoever," said Fabris. "That proves just how robust and reliable their equipment is."

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For more information on reliable network solutions, please visit www.westermo.com

