Sony Full HD mini-dome cameras capture clear pictures in any light at the world’s largest subway project in Saudi Arabia

1700 SNC-XM637 IP network cameras from Sony are being installed in Riyadh’s brand-new metro by Siemens and System Integrator Ruf Telematik. Especially designed for transport applications, the compact minidome camera copes effortlessly with rapidly-changing lighting conditions underground.

The Challenge
Scheduled to open in 2019, Riyadh’s metro system will serve over five million people. With a total route length of 175 km, it’s one of the world’s largest contemporary rapid transit projects. Fast changing light levels are a challenge for ordinary security cameras as trains move between tunnels and brightly-lit stations. In addition, forward-facing cameras are needed to provide video evidence in the event of accidents.

Solution
Train provider Siemens has subcontracted the integration of video security cameras to Swiss-based integrator Ruf Telematik – a leading developer of passenger information and video surveillance solutions. Inside each carriage, SNC-XM637 minidome IP cameras are integrated into the train’s ceiling-mounted Passenger Information System (PIS) displays. Further external cameras are mounted at the front and sides of each trainset, with video captured by a custom solid-state data recorder.

Benefits
The compact SNC-XM637 camera’s high-resolution Exmor™ CMOS sensor is teamed with IPELA ENGiNE EX™ signal processing and View-DR technology for crisp, clear Full HD video images – even in challenging low-light conditions or with harsh backlighting. Built-in image stabilisation makes it easier for personnel to see clearly what’s happening on board a moving train. Blending neatly into each carriage, the rugged camera resists dust, water and interference by vandals.

CASE STUDY
Riyadh’s Metro

APPLICATION
Transportation

CUSTOMER
Siemens AG, Arriyadh Development Authority

COUNTRY
Kingdom of Saudi Arabia

SONY SOLUTIONS
1700x SNC-XM637 minidome IP cameras
The Challenge

As a large and rapidly-expanding city of over five million inhabitants, the city of Riyadh is seeking a sustainable solution to its local traffic problems. In common with all underground mass transit systems, Riyadh metro’s developers faced the challenge of rapidly changing light levels as trains move rapidly between dark tunnels and brightly-lit stations. This can pose a big problem for round-the-clock video monitoring inside each carriage, where sudden changes in illumination can overwhelm ordinary security cameras.

To support security and compliance requirements, the system’s constructors also specified forward-facing cameras at the front of each trainset. This provides essential video evidence in the event of unexpected incidents – like passengers accidentally falling or people jumping in front of a train.

Why was Sony selected?

The rugged SNC-XM637 minidome IP camera has been specifically designed, in cooperation with Ruf Telematik, for transportation applications such as on board trains and buses, where its compact form and flat finish help the camera blend neatly into its surroundings. It’s an ideal choice for cost-effective video monitoring solutions, with excellent image quality and high sensitivity to accommodate rapid lighting changes underground.

The high-resolution Exmor™ CMOS sensor is teamed with Sony’s IPLEX ENGINE EX™ signal processing system that delivers wide dynamic range and cuts noise for crisp, clear Full HD video images. View-DR technology ensures that scenes are clear and sharply detailed, even in challenging low-light conditions or with harsh backlighting. Extra intelligence is added by DEPA Advanced Intelligent Video Analytics that can intelligently trigger alarms based on user-defined rules. Built-in image stabilisation makes it easier for train staff and security personnel to see clearly what’s happening on board a moving train.

Sony Solution

Inside each carriage, Ruf Telematik has discreetly integrated SNC-XM637 minidome IP cameras into the train’s ceiling-mounted Passenger Information System (PIS) information displays. Further external cameras are mounted at the front and sides of each trainset. Video from each Sony camera is captured by a custom solid-state data recording solution developed and manufactured by Ruf Telematik.