

## NETWORK VIDEO CAMERAS AND RECORDERS

The top quality cameras and embedded network video recorders offer the benefits of managing bandwidth and storage with the latest technology. As the top choice for onboard scenarios, the cameras adopt anti-vibration and fire-proof design to ensure stable performance on the move. They are designed for shifting light conditions and tailored for limited physical space in light rail applications.

In wireless transportation environments the mobile onboard surveillance systems offer both analog and IP solutions with durable products designed for the harsh environmental challenges of vibration, dust and varying temperatures. The systems feature market-proven performance for video surveillance.

## MOBILE NETWORK VIDEO RECORDER

The Mobile Network Video Recorders (MNVR) support high definition video and have superior storage and robust recording for onboard surveillance. The MNVRs can accommodate up to 32-ch IPC access and offer more choice for channel selection.

- Video inputs: 16
- Inbuilt multiplexer: yes
- Resolution: 1080p
- Recording system: 2 x 2.5 inch HDD/SDD, up to 2 TB for each, SD card
- Signal mode: PAL, NTSC
- Power supply: 9 to 32 VDC
- Operating conditions -30 °C – 60 °C, storage -40 °C – 60 °C
- Railway standards: EN50155-2017, EN45545-2
- MTBF 100 000 h (excluding. HDD)



## MOBILE NETWORK CAMERAS



### Mobile Mini Dome Network Camera

- Efficient H.265+ compression technology
- IP67, IK10
- Operating/storage conditions -30 °C – 60 °C, humidity < 95% (non-condensing)
- Railway standards: EN50155-2017, EN45545-2
- MTBF 100 000 h



### Mobile Fisheye Network Camera





- Efficient H.265+ compression technology
- IP67, IK10
- Operating/storage conditions -30 °C – 60 °C, humidity < 95% (non-condensing)
- Railway standards: EN50155-2017, EN45545-2
- MTBF 100 000 h

# Onboard PIS Equipment and Integrated Solution

### Cabin Equipment

**User Interface**

- HMI (touch panel)
- CCTV monitor
- Integrated vehicle computer (PIS/PA server)

Mirror display

Microphone and cabin speaker

Driver phone

### Saloon Equipment




**LCD displays**




Intercom

Audio announcement




360° / 120° cameras



Passenger WiFi

### Outdoor and Indoor LED Displays



Flat LED displays




Curved LED displays




Ultra slim LED displays


### Network Components and Other Equipment




Train Link Modem




Passenger Counting



CCTV recorder



Wireless Data Transmission Link



Fire Detection

Train coupling

2-wire Ethernet, 70 Mbps

Wireless 1 Gbps

UIC WTB / MVB gateway

Connectivity

Mobile router

Wireless 1 Gbps

Redundant Network

DA-Group designs and manufactures smart, high performance and reliable products for public transportation. Our solutions provide vehicle manufacturers and operators with computer control systems in an open IP network.

With our PIS system all devices can be managed in an open IP network, including the displays, driver control panels, CCTV cameras and Public Announcement systems. The control system interfaces with outer networks.

Excellent choice for new installations or retrofit and modernization projects. Contact us at [sales@da-group.fi](mailto:sales@da-group.fi)!