# **DRESEARCH**

# **TeleObserver TO3100**

Mobile Video Recording and Remote Video Transmission via GSM and GPRS

The TeleObserver TO3100 provides more security in buses, trams, underground and trains by transmission of live video images via GSM and GPRS and integrated digital recording.

The security feeling of passengers in public transport decreases constantly while the damages due to vandalism increase. This can be remedied by means of mobile video surveillance and the TO3100, which not only records fluid high-quality video images, but sends them to a central office via GSM and GPRS as well.

# Higher deterrence, more security

Offenders must expect to be observed while they commit their acts. This fact greatly increases the deterrence effect. In case of alarm, the security staff in the central office can estimate whether it is a real emergency event and is able to introduce adequate measures right away. Thus, the TO3100 increases effectively the protection of passengers against assaults, fire and other accidents. It is proven that damages due to vandalism decrease up to 75%. The

TO3100 has been especially designed to

operate under extreme conditions like temperature fluctuations, mechanical stress or dust pollution. The system is compact, operates airlessly with IP53 and has a very low power consumption.

Many functions of the TO3100 are tailored for fleet operation, like the guard tour around selected devices in a fixed order. The central office, designed for security applications, allows an alarm management as well as a remote maintenance of the system via mobile radio. Software updates and data investigations can be carried out in the same way.

# TeleObserver TO3100. Recording alone is not enough.

# **Application Examples**



The TO3100 helps to make public transport safer. The operation of the devices in public transport clearly shows the high effectivity in contrast to mere recording solutions.

Contrast to mere recording solutions. The TO3100 can be applied in the following

- fields:
- Buses, trams, trains and underground;
- Transport of hazardous materials, valuables and other security transports;
- Army and police vehicles;
- Emergency service vehicles.

Moreover, the TO3100 is suited, due to the low power consumption and the independence from wired telephone networks, for the video surveillance of remote or extensive objects like:

- Open areas;
- Bus stops and train stations;
- Harbours and airports;
- Railway constructions;
- Power plants;
- Fenced areas, military objects.





In high sea navigation, increasingly menaced by accidents and piracy, the TO3100 supplies via satellite navigation the authorities, insurance companies or shipping companies with live images from the vessels in the event of an alarm.

The TO3100 offers certified security. It fulfills the EN50155 directives for rail-mounted vehicles, possesses the E1 license of the Federal Motor Transport Authority as well as the Germanischer Lloyd's Type Approval Certificate for water crafts and installations.

# System Description

Like all video transmission systems from the TeleObserver family, the TO3100 uses the compression method H.263+. This makes it unrivalled in compression, quality and speed – independent of the network used for the transmission.

The TeleObserver TO3100 is constructed in a modular way. The inputs and outputs as well as the interfaces are released in the desired amount and can be extended at any time. The compact and very robust cabinet ensures a long, maintenance-free operation. The Central Monitoring Software (CMS) supports, among other features, a prompt access to all relevant data.

#### Connectors

- Up to 8 video inputs
- 1 video output to connect a separate monitor
- LAN/WLAN interface
- Serial interface RS485
- Serial interface RS232 (DX variant)
- IBIS interface (Integrated Board Information System)
- Digital I/O: 8 sensor inputs, 4 switch outputs
- Internal GSM/HSCSD/EDGE/GPRS data modem (mobile radio variant)
- Internal ISDN modem (ISDN variant)
- Tray for removable hard disk
- Voltage input for a board voltage between 18 V and 32 V
- 12 V camera power supply (up to 8 cameras)
- State display

#### Tests, Licenses and Certificates

- $\blacksquare \quad \begin{pmatrix} \mathsf{EN} \\ \mathsf{50155} \end{pmatrix} \qquad \qquad \mathsf{EN} \quad \mathsf{50155} \text{ (Federal Railway Authority)}$ 
  - E1 (Federal Motor Transport Authority)
    - GL (Germanischer Lloyd)

#### 19" Variant

Also available as 19-inch industrial technology



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#### Software

The Central Monitoring Software (CMS) enables alarm and fleet management, remote maintenance, remote configuration, data investigation and software updates of the local system per GSM/ISDN. DRESEARCH

- Easy-to-operate visualizing and investigating software with releases for all desired functions.
- Watchdog, heartbeat and self-test functions.
- System requirements: Win2000; WinXP prof.

#### **Transmission Performance**

System variant	TO3100 GSM/ HSCSD	TO3100 EDGE/ GPRS	TO3100 ISDN	TO3100 DX
Frame rate	<b>1-3/1-7</b> images/s	<b>1-15</b> images/s	5-15 images/s	<b>0,5 - 16</b> images/s
Network	GSM/ HSCSD	EDGE or if not available GPRS	ISDN	e.g. Iridium/ CDMA/ permanent line
Bandwidth	<b>9,6 / 28,8</b> kbps	ca. <b>100</b> (EDGE) ≤ <b>56</b> (GPRS) kbps	<b>64</b> kbps	<b>4,2 - 115</b> kbps
Audio	<b>yes</b> (alternative to video)	<b>no</b> (only recording)	<b>yes</b> (parallel)	no

Presented by: