

# Digital hybrid recorder MR3140

video solutions



### Description

Digital hybrid recorder to record up to 4 analogue and 8 IP-network cameras. Especially designed for use in buses, trains and other vehicles.

### Article number

- VPV 200008

### Main Features

- video recording: 4 x analogue, 8 x IP-cameras
- 2-channel audio recording
- Event protocol, IBIS, GPS
- maintenance-free operation by fanless design
- e1, EN 50155, CE, RoHS, VDS
- multi-level security concept

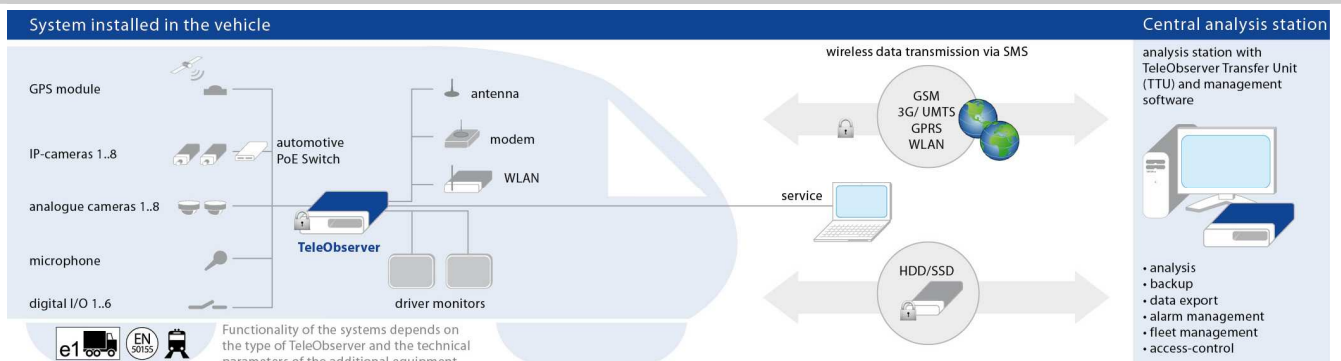
### Specified use

- Hybrid recorder for recording video data from up to 8 cameras, audio- and additional data. Especially for use in buses, trains and other vehicles, e1 and EN 50155 certificated.
- 4 x video-In analogue composite (BNC), 8 x video-In for digital IP network cameras (up to 1280 x 1024 pixel)
- 2-channel audio recording (e.g. for the documentation of the driver communication)
- Removable media HDD/ SSD up to 250 GB
- 2 x video-OUT (for all analogues cameras and up to 12 digital IP network cameras), split screen representation & video forwarding
- Recording of additional data such as IBIS (VDV 300), GPS, system event protocol
- Interfaces: RS232, RS485, Ethernet
- 6 digital alarm-inputs and 4 outputs for switch-relays, logically combinable detectors
- 'Pause' mode to start and stop recording, 'Standby mode'
- Compact, robust industrial design for use under difficult conditions, (vibration protection, maintenance free by fanless operation, dust protected, without ventilation slots)

### Software and data management

- Live-video-images, search- and playback-function, analysis with USB-TTU and ImageFinder NX software
- Configuration and management software with ergonomic graphic user interface
- Extended event und information management inc. additional data IBIS, GPS
- Support for alarm and fleets management
- Data encryption, watermark, sabotage detection, role based access control, motion detection
- Flash based realtime operating system
- Compression: H.264+ (MPEG-4 AVC) and MJPEG with recording of up to 200 frames per second
- SMS support in case of alarms and for maintenance/service (via external GSM-modem)

### Installation scenario



Functioning on the example of a hybrid system MR3180 – MR3140 supports four analogue cameras.

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### video solutions

<b>Video-IN</b>	4 x analogue composite (BNC); 8 x digital (through external switch); possibility to configure 4 further digital cameras for the video-OUT; record of 8 cameras in total
<b>Video-OUT</b>	2 x composite video (BNC); PAL/NTSC video outputs for single-, quad- or sequential view of all analogue and digital cameras (display of up to 12 IP-cameras)
<b>IP-video compatibility</b>	Axis-cameras from firmware version 4.15, Mobotix and others
<b>Recording format</b>	200 fps (QVGA/CIF), ca. 50 fps (VGA/4CIF); resolution up to 1280 x 1024 Pixel for IP cameras
<b>Recording time &amp; memory</b>	24/7 permanent, terminated, manual and event-driven; recording of IBIS- and GPS-data (external GPS-receiver); removable media with vibration protection HDD/SSD up to 250 GB
<b>Compression</b>	MPEG-4 AVC (H.264+); MJPEG
<b>Audio</b>	2-channel-audio recording, uncompressed
<b>Security features</b>	HD-Lock, watermark, signature of recording data, sabotage and motion detection; configurable lead & follow-up times for the system and alarm recording
<b>Supported protocols</b>	RS232, RS485, HTTP, NMEA, NTP, Syslog
<b>Connectors:</b>	Input: 6 x (low: 0-3 V, high: 6-34 V); output: 4 x relay (max. 60 V DC, 125 V AC, 500 mA)
- Digital I/O	
- Ignition contact	Differentially (low: 0-3 V, high: 6-34 V)
- Serial Interfaces	2 x RS232 D-Sub-9-connector (male), RS485 D-Sub-25-connector (male), IBIS D-Sub-25-connector (male)
- Ethernet	1 x 10/100 Mbit, RJ45 interface
<b>Synchronization</b>	Date/time of the network cameras will be synchronized by the system (integrated NTP-server); system can be synchronized by the IBIS-bus of the vehicle or via GPS
<b>Power supply</b>	System power: 12 – 32 V DC; power supply of external devices: 12 V DC / 1,5 A; power supply of the digital network cameras via external PoE-switch
<b>Power consumption</b>	Standby mode: < 0,5 W; pause mode: < 18 W; recording without cameras: max. 18 W; recording inc. cameras: max. 40 W
<b>Temperature range</b>	Operating temperature: 0 °C ... + 70 °C (depends on the type of disk); humidity: 10 – 90 % not condensing
<b>System parameter</b>	Flash based realtime operating system, CPU: 1 x TriMedia
<b>Supported languages</b>	German, English, Italian
<b>Installation, service and maintenance</b>	Service & configuration through CMS-software, update via Ethernet and web-interface, widely maintenance-free by fanless design, easy data analysis and system updates
<b>Data analysis</b>	Using CMS module ImageFinder and/or USB-TTU and software ImageFinder NX (only in conjunction with USB-TTU usable)
<b>Delivery content</b>	System, product CD with configuration- and management software CMS, documentation and firmware
<b>Available accessories</b>	19"chassis for build-in installation with terminal block (pre-wired), GPS-receiver, GPIO-tester, removable disk HDD/SSD up to 250 GB, various cable kits, WLAN-modules, PoE-switches
<b>Certifications</b>	e1, EN 50155, CE, RoHS, VDE, DIN 5510, EN 55022, EN 61000, EN 55024, EN 60950
<b>Housing, dimensions &amp; weight</b>	Robust industrial design, stainless aluminium housing, fanless, IP 42, external dimensions (W x H x D): 235 x 80 x 240 mm, weight: appr. 3000 g

Information refer to the current state and may be subject to unannounced changes.