Digital Hybrid Recorder MR3140

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
- IBIS, CAN-BUS (optional), GPS
- maintenance-free operation by fanless design
- e1, EN 50155, CE, RoHS, VDS
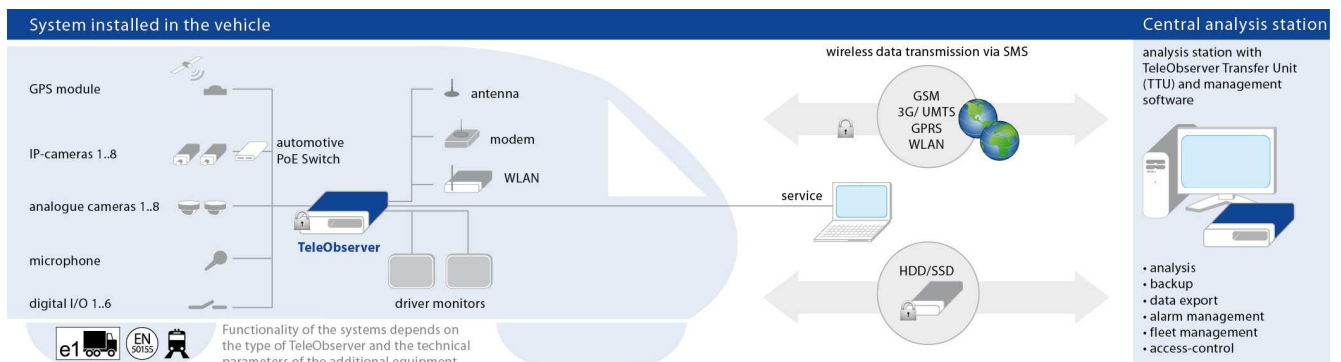- easy installation

Specified use

- Hybrid recorder to record video-, audio- and additional data. Especially for use in buses, trains, trams and other vehicles, e1 and EN 50155 certificated
- 4 x video-In analogue cameras, 8 x video-In for AXIS network cameras (> 1 megapixel, 1280 x 1024 pixel)
- 2-channel audio recording (e.g. for the documentation of the driver communication)
- Removable media: up to 250 GB HDD, 64 GB SSD
- 2 x video-OUT (for up to 12 AXIS network cameras), split screen representation & video forwarding
- Recording of additional data such as IBIS (VDV 300), GPS, CAN-Bus integration
- Interfaces: RS232, RS485, Ethernet
- 6 digital alarm-inputs and 4 outputs for switch-relays
- Compact, robust industrial design for use under difficult conditions, vibration protection
- Solid aluminium housing (continuous casting), maintenance-free by fanless operation

Software and data management

- Live-video-images, search- and playback-function and rapid video-download via an Ethernet interface
- Configuration and management software with ergonomic graphic user interface
- Extended event und information management (additional data IBIS, GPS)
- Support for alarm and fleets management
- Data encryption, watermark, sabotage detection, role based access control, motion detection
- Flash-based operating system (pSOS) & hardware control system
- MJPEG and H.264 (MPEG-4 AVC) compression 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

System installed in the vehicle

GPS module
IP-cameras 1..8
analogue cameras 1..8
microphone
digital I/O 1..6

automotive PoE Switch

antenna
modem
WLAN

TeleObserver

driver monitors

wireless data transmission via SMS

GSM 3G/ UMTS GPRS WLAN

service

HDD/SSD

Central analysis station

analysis station with TeleObserver Transfer Unit (TTU) and management software

- analysis
- backup
- data export
- alarm management
- fleet management
- access-control

e1   EN 50155

Functionality of the systems depends on the type of TeleObserver and the technical parameters of the additional equipment

Compresssion	MPEG-4 AVC (H.264+), MJPEG
Video-IN	4 x FBAS (BNC, analogue), 8 x IP-network cameras
IP-video compatibility	Axis-cameras from firmware version 4.15
Recording IP-network cameras	200 fps (QVGA/CIF), ca. 50 fps (VGA/4CIF) Resolution up to > 1 MPx (1280 x 1024 Px)
Recording time & memory	24/7 permanent, terminated, manual and event-driven; recording of IBIS- and GPS-data (extern GPS-Receiver), removable media with vibration protection up to 250 GB 2,5" HDD (also HT-version up to 80 GB)
Video-connections Axis network cameras	Up to max. 8 IP-cameras for recording, Video-OUT max. 12 IP-cameras
Video-OUT	2 x video out (FBAS, BNC, PAL/NTSC) for single-, quad- or sequential view of up to 4 analogue cameras and 12 IP-cameras, composite video
Audio	2-channel-audio recording
Alarm-Management	System report via SMS in the case of system errors, manual alarm through digital input or IBIS/CAN-Bus
Playing and data research	through Ethernet interface or Transfer Unit with Central Management Software (CMS) and/or ImageFinder NX; synchronous playback of up to 8 parallel video sources; research of date, time, events/ alarms, GPS-/IBIS-data
Video-Export	Single images or sequences with separate player on HDD or CD/DVD
Synchronization	Date/time of the network cameras will be synchronized by MR3140 (integrated NTP-Server); MR3140 can be synchronized by IBIS-bus of the vehicle
Security features	HD-Lock, watermark, data encryption, sabotage and motion detection, configurable lead & follow-up times for the device and alarm recording
Connectors: **- Digital I/O**	Input: 6 x (low: 0-3 V, high: 6-34 V), output: 4 x relay (max. 60 V DC, 125 V AC, 500 mA)
** - Ignition contact**	1 differentially (low: 0-3 V, high: 6-34 V)
** - Serial Interfaces**	RS232 D-Sub-9-connector (female), RS485 D-Sub-25 connector (male), IBIS D-Sub-25 connector (male)
** - Ethernet**	1 x 10/100 Mbit, RJ-45 interface
System parameters	embedded OS (pSOS), Flash, CPU: 1 x TriMedia (PNX 1502), 300 MHz, RAM: 128 MB, Flash: 32 MB, power consumtion: max. 18 W (without analogue cameras); 40 W (with 4 analogue cameras)
Power supply cameras	12 V DC / 1,5 A for power supply of external 12 V devices; power supply of the network cameras via external PoE-switch
Temperature range	0 ℃ … + 70 ℃ (depends on the type of HDD); humidi ty 10 – 90 %
Supported protocols	RS232, RS485, HTTP, ENMA, NTP, Syslog
Supported languages	German, English, French, Italian
Installation, management and maintenance	Easy installation of the CMS, update via Ethernet and web-interface, widely maintenance-free by fanless design, easy data-researches and system-updates
Updates	Integrated web interface (Browser required)
Delivery content	device, product-CD with configuration- and management software CMS, ImageFinder NX, manual in different languages
Available accessories	19"chassis for build-in installation with terminal block (pre-wired), GPS-receiver, GPIO-tester, HDD (up to 250 GB), SSD (64 GB), various cable kits, WLAN-modules, PoE-switches
Certifications	e1 (Kraftfahrt-Bundesamt), EN 50155 (Eisenbahn-Bundesamt), CE, RoHS, VDE
Housing, dimensions & weight	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 in this system description refer to the current state and may be subject to unannounced changes.