

Multimedia 2018/19

Coach & city buses

Monitor and camera systems, audio and video components, multimedia and digital image processing



All products can also be found on the internet
www.roscho.de



CONTENT



Whether for agriculture, construction, transport vehicles or buses: Rosho provides camera or video solutions which are perfectly tailored to the different scenarios. We cover all the leading manufacturers and their current vehicle models.

Those of your used or offered vehicles are not among them? No problem! Even for less widely used brands or scenarios we find excellent solutions. This is our promise.

We want you to have it as simple as possible to equip your vehicles with powerful, innovative camera technology. To protect health and property, for the benefit of your and our customers.

You have the challenge.

We have the solution.

ROSHO GmbH Rose & Holiet

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MONITORS

6,5 AND 7-INCH

Monitors for mobile special operations have to meet stringent requirements in terms of resolution or robustness and mass products cannot solve the individual problems.

Therefore we developed our high-resolution 5-, 7-, 8- or 10-inch monitors themselves. With all the practical experience which we have gained for 30 years.

You want a 7-inch monitor in heavy duty version with quad function and intuitive menu?
We can help you.



Monitor LCM 606

6.5-inch LCD built-in monitor for connecting up to two cameras or video inputs.

LCM 606 with 2x BNC/AMP **MB-2-065-01**

2 x Camera/video input // Protection class IP 54

Technical Data

Resolution / TVL	400 x 234
Brightness	300 cd/m ²
Operating voltage	10 - 36V DC
Temperature range	-30 °C ~ +85 °C
Connector	2 x BNC / AMP
Dimension (W x H x D)	160,5 x 111,4 x 18 mm



Monitor LCM 706F

7-inch LCD built-in monitor for connecting up to two cameras or video inputs.

LCM 706FS with 2x BNC/AMP **MB-2-070-05**
150 mm adapter cable

LCM 706FL with 2x BNC/AMP **MB-2-070-06**
1000 mm adapter cable

2 x Camera/video input // Protection class IP 54

Technical Data

Resolution / TVL	800 x 480
Brightness	500 cd/m ²
Operating voltage	10,5 - 36V DC
Temperature range	-30 °C ~ +85 °C
Connector	2 x BNC / AMP
Dimension (W x H x D)	160,5 x 111,4 x 18 mm

MONITORS 7-INCH



Monitor LCM 703 series

Our 7-inch monitors are assembled in a sleek and rugged design case. The very flat case helps to install the monitor on busses or commercial vehicles. Moreover you can connect from 3 up to 4 camera or video inputs to the monitor (depends on the model).

Our LCM 703QHD is able to display the connected images in different split screens or in full screen. In addition a key lock can be activated as well to protect the settings on the device against unauthorized changes.

LCM 703T (3 x Camera input) **MM-3-070-01**
LCM 703QHD (4 x Camera input) **MM-4-070-01**

3 x / 4 x Camera input // Protection class IP 64

Technical Data

Resolution / TVL	800 x 480
Brightness	450 cd/m ²
Operating voltage	10 - 32V DC
Temperature range	-20 °C ~ + 70 °C
Connector	3 x / 4 x MiniDIN
Dimension (W x H x D)	181 x 122 x 24 mm

3 x / 4 x



Connector
MiniDIN



Protection class



MONITORS 8 AND 10-INCH



Monitor LCM 809

8-inch LCD monitor for the connection of up to two camera/video inputs. The monitor can be installed in different places in the driver's cab.

LCM 809 with 2 x BNC/AMP **MM-2-080-01**

2 x Camera/video input // Protection class IP 54

Technical Data

Resolution / TVL	800 x 600
Brightness	350 cd/m ²
Operating voltage	12 - 36 V DC
Temperature range	-20 °C - + 70 °C
Connections	2 x BNC / AMP
Dimension (W x H x D)	203 x 163 x 28 mm



Connector
BNC/AMP



Protection class



Monitor LCM 1006

Our new developed 10,4 inch observation monitor LCM 1006, which can be connected to up to two video inputs, is mounted in an elegant metal case. The monitor is a perfect match for all coaches.

LCM 1006 with 2 x BNC/AMP **MB-2-104-0**

2 x Camera/video input // Protection class IP 54

Technical Data

Resolution / TVL	800 x 600
Brightness	400 cd/m ²
Operating voltage	10 - 36 V DC
Temperature range	-20 °C - + 80 °C
Connections	2 x BNC / AMP
Dimension (W x H x D)	260 x 202 x 28 mm



Connector
BNC/AMP



Protection class

CAMERAS ALLROUNDER

The camera is the heart of any solution and has to fit to the vehicle, to the application and to your quality requirements.

To achieve this we use a lot of our resources to improve the camera optic, the case and the electronic engineering.

Our cameras are always inspected and tested under operating conditions. We offer certified quality up to the highest protection class.



RK 1002M

RK 1004M



Connector
MiniDIN



Viewing angle



Protection class



Connector
MiniDIN



Viewing angle



Protection class



Power supply

Camera RK 1002M/1004M

Ball camera with extremely robust case (highest protection class IP 69K) for hard-to-reach areas outside on the vehicle. Alignable on all sides.

Camera RK 1002M
Camera RK 1004M

CM-1-110-01
CM-1-110-04

Viewing angle 110° // Protection class IP 69K

Technical Data

Resolution / TVL	480 TV Lines
Sensitivity	0 Lux (8 IR LED)
Lens / angle	2,6 mm / 110°
Operating voltage	12V DC +/- 10%
Temperature range	-30 °C ~ +70 °C
Case	Aluminium/ABS
IP class	IP 69K
Dimension (W x H x D)	
RK 1002M	63 x 76,5 x 50,5 mm
RK 1004M	84 x 97 x 79,2 mm
Connections	MiniDIN screwable

Camera RK 1306M

Small 12 and 24V camera for special application outside of the vehicle. Extremely robust construction (highest protection class IP 69K) which can be accommodated almost everywhere.

Camera RK 1306M

CM-1-130-11

Viewing angle 130° // Protection class IP 69K

Technical Data

Resolution / TVL	700 TV Lines
Sensitivity	0 Lux (5 IR LED)
Viewing angle	130°
Operating voltage	12 - 24V DC
Temperature range	-30 °C ~ +70 °C
Case	Aluminium
IP class	IP 69K
Dimension (W x H x D)	41 x 29 x 45,5 mm
Connections	MiniDIN screwable



Camera RK 1705M/SK 1701M/SK 1702M

Compact drop-shaped reversing camera for buses and commercial vehicles. Extremely robust (highest protection class IP 69K).

Available in different variants:

- Camera RK 1705M** (Rear) **CM-1-120-01**
- Camera SK 1701M** (Right) **CM-2-120-01**
- Camera SK 1702M** (Left) **CM-2-120-02**

Viewing angle 125° // Protection class IP 69K

Technical Data

Resolution / TVL	640 TV Lines
Sensitivity	0,01 Lux (4 IR LED)
Viewing angle	125°
Operating voltage	9 - 15V DC
Temperature range	-30 °C ~ +85 °C
Case	Aluminium
IP class	IP 69K
Dimension (W x H x D)	45 x 61 x 41 mm
Connections	MiniDIN screwable



Connector
MiniDIN



Viewing angle
125°



Protection class
IP69K

CAMERAS ALLROUNDER

Camera RK 1703B

Our RK 1703B is versatile and can be used for buses and commercial vehicles. This unit can also be used for our brand new TurnCam application.

This camera is available in 78° or 180° (mirrored or unmirrored) and is fixed into a ball housing which can be individually adjusted regarding the needed requirements.

Also the camera can be used as a front, side or rear view camera.

Camera RK 1703B

CB-1-130-03

Viewing angle 78°/180° // Protection class IP69K

Technical Data

Resolution / TVL	700 TV Lines
Sensitivity	0,1 Lux (8 IR LED)
Viewing angle	130°
Operating voltage	12V DC +/- 10%
Temperature range	-30 °C ~ +85 °C
Case	Aluminium
IP class	IP 68
Dimension (W x H x D)	60 x 53,8 x 78,5 mm
Connections	BNC / AMP





Connector
BNC/AMP



Viewing angle
130°



Protection class
IP68

Camera SK 1708M/1710M

180° and 78° body-mounted camera for good all-round visibility. The camera itself is fixed into a ball case and can be individually adjusted. With extremely robust design (highest protection class IP 69K). Suitable as front, sides and rear view camera.

- Camera SK 1710M** (78°) **CM-1-078-01**
- Camera SK 1708M** (180°) **CM-2-180-01**
- Camera SK 1709M** (180°, unmirrored) **CM-2-180-02**

Viewing angle 78°/180° // Protection class IP69K

Technical Data

Resolution / TVL	580 TV Lines
Sensitivity	0 Lux (8 IR LED)
Viewing angle	78°/180°
Operating voltage	12 V -24V DC
Temperature range	-30 °C - + 70 °C
Case	Aluminium
IP class	IP 69K
Dimension (W x H x D)	57 x 47.5 x 65.5 mm
Connections	MiniDIN screwable





Connector
MiniDIN



Viewing angle
180°



Protection class
IP69K



Power supply
12/24V

CAMERAS

Mini

Camera RK 1304M

With an Viewing angle of 180° and an IP protection class of IP69K the 12-24V camera can be used perfectly for the rear view observation for travel and public buses. Moreover the camera offers HD resolution, high dynamic range (HDR), wide dynamic range (WDR) and noise reduction (2DNR).

Camera RK 1304M (180°) **CM-1-185-01**
Other models on request

Viewing angle 180° // Protection class IP 69K

Technical Data

Resolution / TVL	800 TV Lines
Sensitivity	0,02 Lux
Viewing angle	180°
Operating voltage	5 - 30V DC
Temperature range	-30 °C ~ +70 °C
Case	Aluminium
IP class	IP 69K
Dimension (W x H x D)	23 x 23 x 25 mm
Connections	MiniDIN screwable



- Connector MiniDIN
- Viewing angle 180°
- Protection class IP69K
- Power supply 12/24V

CAMERAS

BESTSELLER!

Camera RK 14xx series

12 and 24V reversing camera with disc heater for use on agricultural machinery and commercial vehicles. Viewing angles of 78°, 130° or 150° diagonally. Extremely robust (highest protection class IP 69K). Dust, dirt, rain and frostresistant.

Camera RK 1404M (78°) **CM-1-070-06**
Camera RK 1405M (130°) **CM-1-130-10**
Camera RK 1415M (150°) **CM-1-150-05**

Viewing angle 78° / 130° / 150° // Protection class IP 69K

Technical Data

Resolution / TVL	580 TV Lines
Sensitivity	0 Lux (8 IR LED)
Viewing angle	78° / 130° / 150°
Operating voltage	12 - 24V DC
Temperature range	-30 °C ~ +70 °C
Case	Aluminium
IP class	IP 69K
Dimension (W x H x D)	76 x 70 x 42 mm
Connections	MiniDIN screwable



- Connector MiniDIN
- Viewing angle 130°
- Protection class IP69K
- Power supply 12/24V

Camera RK 1100M

Rear view camera with an electric protective flap. Extremely robust (highest protection class IP 69K).
Scope of delivery: Shutterbox for flap control, 20-meter connection cable, camera.

Camera RK 1100M (PAL) **CM-1-130-08**
Camera RK 1100M (NTSC) **CM-1-130-12**

Viewing angle 145° // Protection class IP 69K

Technical Data

Resolution / TVL	650 TV Lines
Sensitivity	0 Lux
Viewing angle	145°
Operating voltage	12V DC
Temperature range	-40 °C ~ +70 °C
Case	Stainless steel, silver
IP class	IP 69K
Dimension (W x H x D)	88 x 65 x 53 mm
Connections	MiniDIN screwable



- Connector MiniDIN
- Viewing angle 145°
- Protection class IP69K
- Format PAL/NTSC

CAMERAS

FRONT-/ DOOR CAMERAS



Connector
BNC/AMP



Viewing angle



Protection class

Bullet camera DBC 11xx series

Our bullet camera can be used for the space-saving and discreet use. Only the lens and the protective screen are visible. The camera is installed with a screw mechanism for the simple and precise integration into different molded parts.

Camera DBC 114081 (92°) **CB-5-092-04**
Camera DBC 114082 (130°) **CB-5-130-01**

Viewing angle 92°/130° // Protection class IP69K

Technical Data

Resolution / TVL	650 TV Lines
Sensitivity	0,3 Lux
Viewing angle	92° / 130°
Operating voltage	12V DC +/- 10%
Temperature range	-10 °C ~ +60 °C
Case	Aluminium
IP class	IP 69K
Dimension (W x H x D)	29,5 (24,4) x 59,8 mm
Connections	BNC / AMP

Camera RK 1330/1331

With an angle of view of 180° and an IP protection class of IP69K the 12-24V camera can be used perfectly for the rear view observation for travel and public buses.

Camera RK 1330 (PAL) **CB-1-150-04**
Camera RK 1331 (NTSC) **CB-1-150-05**

Viewing angle 150° // Protection class IP 69K

Technical Data

Resolution / TVL	800 TV Lines
Sensitivity	0,02 Lux
Viewing angle	150°
Operating voltage	5 - 30V DC
Temperature range	-30 °C ~ +85 °C
Case	PC ABS
IP class	IP 69K
Dimension (W x H x D)	28 x 37,6 mm
Connections	Fakra / AMP



Connector
Fakra/AMP



Viewing angle



Protection class



Format



CAMERAS INTERIOR



Connector
BNC/AMP



Viewing angle



Protection class



Connector
BNC/AMP



Viewing angle



Protection class

Dome camera DBD 15xx series

This high-resolution dome camera is used for the interior observation in buses or trains. The camera is mounted in a vandal-proofed aluminium case and matches perfectly to the digital recording system from ROSHO.

Camera DBD 154643 (70°) CB-3-070-01
Camera DBD 154060 (92°) CB-3-092-01
Camera DBD 1540600 (120°) CB-3-120-01

Viewing angle 70° / 92° / 120° // Protection class IP 10K

Technical Data

Resolution / TVL	800 TV Lines
Sensitivity	0,01 Lux
Viewing angle	70° / 92° / 120°
Operating voltage	12V DC +/- 10%
Temperature range	-10 °C ~ +60 °C
Case	Aluminium/Acryl
IP class	IP 10K
Dimension (W x H)	80 x 57 mm
Connections	BNC / AMP

Design camera DBD 11xx series

High-resolution and elegant design camera for installation in buses. Particularly large viewing angle.

Camera DBD 114052 (92°) CB-3-092-10
Camera DBD 114051 (120°) CB-3-120-02

Viewing angle 92° / 120° // Protection class IP 10

Technical Data

Resolution / TVL	560 TV Lines
Sensitivity	0,1 Lux
Viewing angle	92° / 120°
Operating voltage	12V DC +/- 10%
Temperature range	-25 °C ~ +60 °C
Case	ABS
IP class	IP 10K
Dimension (W x H x D)	96 x 53 x 101 mm
Connections	BNC / AMP

CAMERAS IP LINE



Connector
RJ45/AMP



Viewing angle



Protection class



Connector
RJ45/AMP



Viewing angle



Protection class

IP Dome camera DBD 150161

This high-resolution dome camera is used for the interior observation in buses or trains. The camera is mounted in a vandal-proofed aluminium case and matches perfectly to the digital recording and fleet management systems from ROSHO.

Camera DBD 150161 XR (120°) CX-3-120-05
Other models on request

Viewing angle 120° // Protection class IP 10K

Technical Data

Resolution / TVL	3 Megapixel
Sensitivity	0 Lux (IR on)
Viewing angle	120°
Operating voltage	12V DC and PoE
Temperature range	-25 °C ~ +60 °C
Case	Aluminium/Polycarbonate
IP class	IP 10K
Dimension (W x H x D)	97,4 x 114,5 x 53 mm
Connections	RJ45 / AMP (opt.M12)

IP Dome camera DBD 150200

This high-resolution dome camera is used for the interior observation in buses or trains. The camera is mounted in a vandal-proofed aluminium case and matches perfectly to the digital recording and fleet management systems from ROSHO.

Camera DBD 150200 (120°) CX-3-120-20
Other models on request

Viewing angle 120° // Protection class IP 10K

Technical Data

Resolution / TVL	2 Megapixel
Sensitivity	0,05 Lux
Viewing angle	120°
Operating voltage	12V DC
Temperature range	-25 °C ~ +60 °C
Case	Aluminium/Polycarbonate
IP class	IP 10K
Dimension (W x H)	85 x 58 mm
Connections	RJ45 / AMP (opt.M12)

CABLE

CONNECTION CABLE 19

BNC / AMP

A system is only as strong as the weakest link. Often small details like the right connector have a large influence on the quality of the system.

Meanwhile the system installation you can identify the quality of the connections: Is the cable long enough? Are the right adaptations present? Do you need additional effort to connect everything proper?

With our accessories you can ensure that everything fits perfectly. We know what is required for which vehicle. And everything in good ROSHO quality.



Camera cable BNC / AMP

BNC connector plug / AMP connector plugged

2 m	CW-1-020-02
5 m	CW-1-050-01
10 m	CW-1-100-01
15 m	CW-1-150-01
20 m	CW-1-200-01
25 m	CW-1-250-01
30 m	CW-1-300-01
35 m	CW-1-350-01



Video cable BNC

BNC connector plug

3 m	VW-1-030-01
6 m	VW-1-060-01
10 m	VW-1-100-01

20 CONNECTION CABLE CABLE MiniDIN



Camera cable MiniDIN

MiniDIN connector plug
MiniDIN socket screwable

2 m	CW-2-020-01
3 m	CW-2-030-05
5 m	CW-2-050-02
10 m	CW-2-100-03
20 m	CW-2-200-01



Extension cable MiniDIN

MiniDIN connector screwable
MiniDIN socket screwable

2 m	CW-2-020-02
5 m	CW-2-050-06
10 m	CW-2-100-04
20 m	CW-2-200-03



Camera cable for RK 1705M / SK 1701M / SK 1702M

MiniDIN connector plug
MiniDIN socket screwable

5 m	CW-2-050-05
10 m	CW-2-100-01
20 m	CW-2-200-02



Adapter for SK 1708M

This adapter helps to unmirror an camera SK 1708/SK1710
The unmirrored camera can be used as an front or side camera.

0,10m	ZA-1-007-03
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ADAPTER MiniDIN - BNC

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Adapter Navi

for camera use with mobile navigation
MiniDIN connector plug
3.5 mm jack plug can be plugged / AMP connector plugged

Garmin	ZA-5-900-03
Snooper	ZA-5-900-07



Adapter AV

MiniDIN connector plug
RCA plug pluggable / AMP connector plugged

ZA-5-900-04



Camera adapter

MiniDIN connector plug
BNC plug / AMP connector plugged

ZA-1-900-12



Monitor Adapter

MiniDIN connector plug
BNC plug / AMP connector plugged

ZA-2-900-10



Adapter for RK 1705M / SK 1701M / SK 1702M

MiniDIN socket screwable
BNC plug / AMP connector plugged

ZA-1-900-07

MULTIMEDIA AUDIO

To satisfy the passengers demands of today, buses have more and more electronics for security and entertainment purposes on board.

Rosho offers a comprehensive range of certified and high-performance audio and video components for the bus segment.

Our range of products includes WLAN, driver microphones, digital microphone amplifier and much more.



RFM 02/02S Driver microphone

The sturdy telescopic RFM 02 Rev.01 microphone was developed for the use in city buses and trains. The microphone can be switched on and off with a separate control line. Moreover there is a steeples adjustability of the microphone length. It can be turned in all directions by using the integrated 360 degree joint on the floor.

RFM 02 (without a control line) **A-3-004-04**
RFM 02S (with a control line) **A-3-004-05**



DMV2 MIC Microphone amplifier

The digital stereo amplifier DMV 2-MIC has a power output of 2 x 45 watt. The device has 2 x remote in, 2 x line in and can be used for indoor and outdoor announcements (available with Bosch adapter).

DMV2 (without accessories) **SA-1-002-01**
DMV2 (incl. Bosch adapter) **SA-1-002-02**



DMV4 MIC Microphone amplifier

A four-channel amplifier with integral 56-bit DSP technology. Output capacity: 4 x 45 watt. Coach radios can be connected to the amplifier. With the DSP it is possible to make vehicle-specific sound settings such as an equalizer or a real-time correction (optional).

DMV4 MIC (without accessories) **A-1-003-02**



MULTIMEDIA USB CHARGER



USB charger for handrails

- Never again a flat battery!
- For pipe diameters 30, 34 and 35 mm
 - 12/24 V connection to existing on-board network
 - 2 x 2.5A charging current (sufficient for all standard smartphones and tablets)

- Standard colours:**
- RAL 7001 – grau
 - RAL 9005 – black
 - RAL 1023 – yellow
 - RAL 5017 – blue
 - RAL 3020 – red
 - RAL 6024 – green

Part number on request



USB socket

Mounted socket with 1 x 3A 5V USB port for installation in the dashboard

- | | |
|---------------|-------------|
| Without cover | ZA-7-900-51 |
| With cover | ZA-7-900-53 |

USB doublesocket

Mounted socket with 2 x 2.5A 5V USB port for installation in the dashboard

- | | |
|---------------|-------------|
| Without cover | ZA-7-900-49 |
| With cover | ZA-7-900-54 |

MULTIMEDIA SWITCHBOXES



Audio/Video Switchbox (24V) with bracket

Switches 2 audio and video inputs via a 24V signal

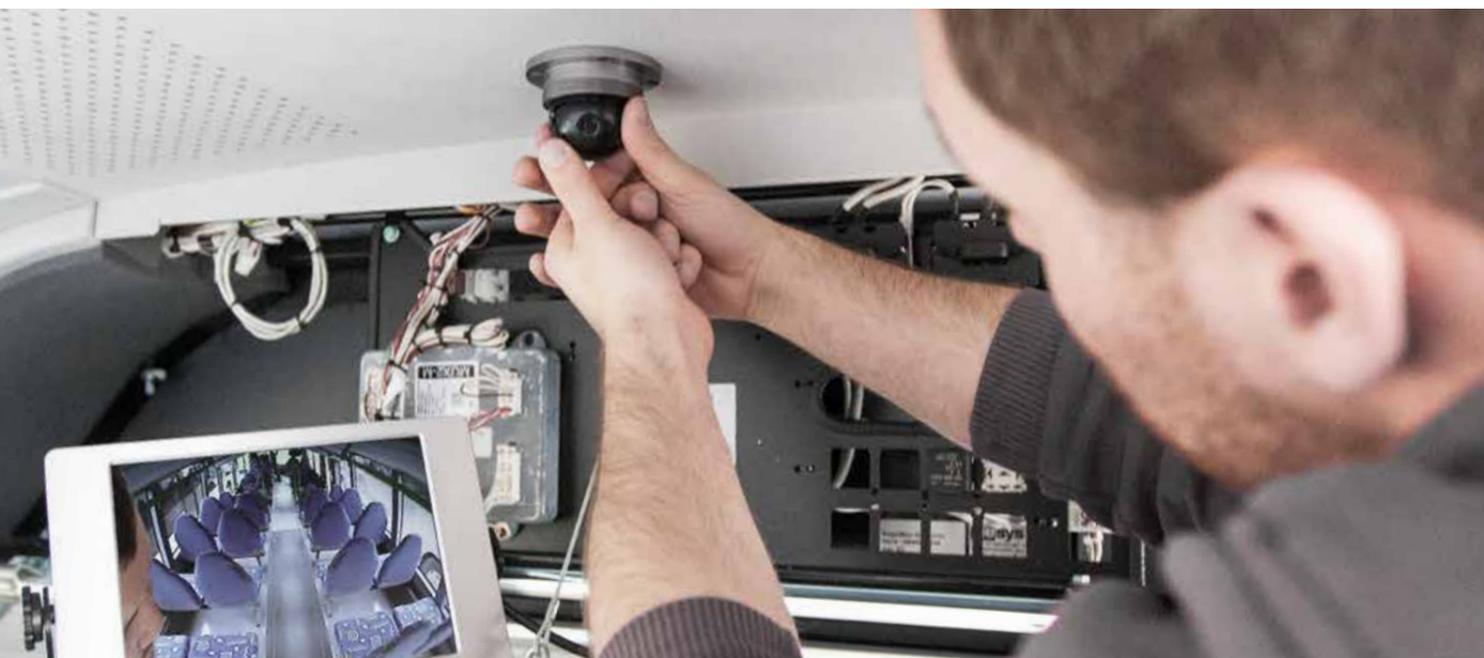
ZA-1-004-01



Video Switchbox (24V) without bracket

switches 2 video inputs via a 24V signal

ZA-1-004-00



MULTIMEDIA QUADBOXEN



Quad Control Box M1

Split / Quadbox for connecting up to four camera or video inputs via MiniDIN connectors.
Scope fo delivery: IR eye and remote control, Quad Control Box M1

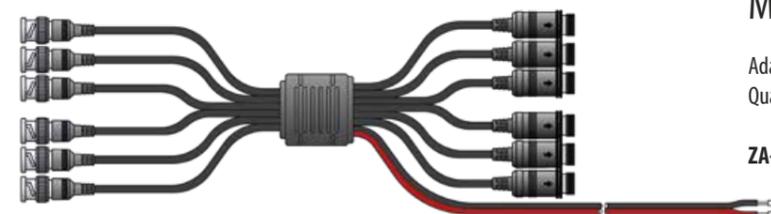
ZA-1-002-01



Quad Control Box M3

Our quad control box M3 is able to display up to 6 cameras. The screen splitting can be adjusted to the customer requirements. Moreover the quad control box M3 is in charge for the power supply of all connected cameras.

ZA-1-002-20



M3-Adapter BNC / MiniDIN

Adapter to connect up to 6 ROSHO MiniDIN cameras on the Quad Control Box M3.

ZA-6-900-06

MULTIMEDIA LTE-WLAN-ROUTER



D-Wi Public LTE-WLAN-Router

- Router for internet access in the bus
- one integrated 4G LTE modem
- WAN connection up to 100Mbit / s
- WLAN up to 300Mbit / s usage for up to 50 users
- USB storage for media content
- 2 SIM card slots
- 12 / 24V

ZA-7-900-10 (Additional accessories required)*

*Indoor mount antenna for LTE WLAN Router

ZA-7-006-02



ATLAS WiFi Comfort / Comfort Stream

- Router for internet access in the bus
- 1 integrated 4G LTE modem (2.4 GHz and 5 GHz)
- WAN connection up to 100Mbit / s
- WLAN up to 300 Mbit / s usage for up to 35 users
- USB storage for media content
- 2 SIM card slots
- 12 / 24V

The Comfort Stream Router has an internal storage medium for travel catalogs, image films, travel guides, films, music, daily newspapers, on-board information etc. to show. The router also has a streaming function for the mobile devices of passengers. The delivery package already includes adhesive antennas and all cable harnesses.

Comfort
Comfort Stream

ZA-7-900-45
ZA-7-900-85



NB2800 LTE-WLAN-Router

- Router for LTE internet access in the bus
- Media server functionality
- Up to 1 terabyte of local storage
- Several LTE modems
- Quad SIM
- Multiple WLAN ac AP / clients
- 2 Gigabit ethernet ports
- VLAN, RSTP, LLDP
- 12 / 24V

ZA-7-900-94 (with LTE + GPS)*

ZA-7-900-87 (with Dual-LTE + GPS)*

***(Additional accessories required)**

*Roof antenna MIMO LTE + GPS - 3m cabel, series NB2800

ZA-7-900-88

*Indoor-mount antenna MIMO WLAN, 3m cable, Fakra - series NB2800

ZA-7-900-89

MULTIMEDIA DISPLAY SYSTEMS



LED Signal display

24V LED interior display for buses and trains. Available in further languages on request.

	STOP	MB-0-100-01
	WAGEN HÄLT	MB-0-100-02
	DE BUS HÄLT	MB-0-100-03
	ARRET DEMANDE	MB-0-100-04
	PARAR	MB-0-100-05
	STANNAR	MB-0-100-06
	FERMATA PRENOTATA	MB-0-100-07
	STOPP	MB-0-100-08
	STOPPER	MB-0-100-09
	DURACAK	MB-0-100-10

MULTIMEDIA RECORDING

Digital recording and monitoring systems of the latest generation for use in vehicles

The DIRECS systems offer a maximum of features with an excellent price-performance ratio, such as active alarm management, live data transmission, automatic sabotage and motion detection, digital signature of the recording data, integration into existing vehicle systems and much more.

The DIRECS products combines the extensive experience ROSHO have gained and the highest level of technological know-how. Our recorders are characterized by excellent performance parameters and high reliability.

Only the preventive effect demonstrably leads to a reduction of vandalism damage of more than 80%!



Strong DIRECS 4/8plus Hybrid recorder and DIRECS-IP recorder

- Specially developed for use in public buses and trains
- Certifications (e / E, EN 50155) for mobile use
- Optimized for use in extreme conditions (-15 to + 70 ° C)
- Minimal power consumption of the DIRECS systems
- Recording of video, audio and additional data (IBIS, logfile, GPS)
- Record up to 8 analog CCTV and digital network cameras
- Efficient codec: MJPEG(H264/265 bei Direcs-IP)
- Signature of the recording data
- Usability of cameras from many manufacturers
- Wear-free recording on hard disks (HDD) and flash (SSD)
- Permanent and alarm records in separate archives
- Up to 8 digital outputs for controlling external systems
- Up to 6 digital inputs
- Automatic movement and sabotage detection
- Automatic deletion and activatable overwrite protection
- Automatic self-monitoring of the systems (watchdog)
- First-class price-performance ratio through enormous functionality
- High-quality recording in real time with up to (200 fps)
- Robust and maintenance-free industrial design

- Space saving and easy installation
- USB connection to PC or TV monitor via integrated readout unit
- Black Box function with interface for connection to vehicle systems
- Integration in fleet management solution
- Active alarm management for monitoring by an alarm center Optional
- Transmission of recording data via WLAN and mobile radio (GPRS) Optional
- Efficient analysis and monitoring software
- Automatic display of system errors and alarm records
- Integration into vehicle systems (IBIS, IBIS-IP, CAN), connection to RBL systems and much more.....

DIRECS 4 (4 Camera inputs) **DR-1-004-01**
DIRECS 8plus (8 Camera inputs) **DR-8-008-01**
DIRECSIP (up to 32 IP Camera inputs)
(Additional accessories required)*

*DIRECS 4 power supply and in/outputs **ZA-3-900-12**
 *DIRECS 8 power supply and in/outputs **ZA-3-003-02**

MULTIMEDIA DIRECS EQUIPMENT

Schematic representation OFFENDER IDENTIFICATION PROCESS



Removable hard disks SSD

250 GB (linear) **DF-1-250-11**
 500 GB (linear) **DF-1-500-02**



Removable hard disks HDD

320 GB (linear) **DF-1-320-02**
 320 GB (linear + extended temperature range) **DF-1-320-03**
 500 GB (linear) **DF-1-500-11**
 1000 GB (linear) **DF-1-1000-01**



USB evaluation unit

USB evaluation unit for DIRECS hard disks to connect to a PC or laptop including a power supply.

ZA-3-900-05



Imprint

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The information in this publication contains only general descriptions or performance characteristics, which do not always apply in the specific case of use as described or which may change as a result of further development of the products. This information is merely a technical description of the product. Make a particular quality or durability characteristics shall only exist if expressly agreed in the contract. Subject to availability and technical modifications.

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