v.LOGiC Intelligent Solution

Interface

V5-CCC

For the E-series BMW and Mini with navigation system or radio and 6.5” or 8.8” monitor with 10pin BMW LVDS connector

Product features

- Own on-screen display and setup
- Rear-view camera input
- Automatic switching to rear-view camera input on engagement of reverse gear from all operation modes
- Front camera input
- Manual switching to rear-view camera (only for vehicles with PDC button)
- Manual return from rear-view and front camera (cancellation of automatic switching)
- 2 trigger outputs (+12V max. 1A), separately adjustable switching events (CAN, ACC, camera, reverse gear)
- Picture-in-picture mode combining after-market rear-view and front camera picture(s) with factory parking sensor graphics
- Compatible with all factory video accessories (e.g. rear-view camera, Top-View, nightvison, DVD-changer, TV-tuner)
- USB update-port for software-updates by consumer

Contents

Legal Information

By law, watching moving pictures while driving is prohibited, the driver must not be distracted. We do not accept any liability for material damage or personal injury resulting, directly or indirectly, from installation or operation of this product. This product should only be used while standing or to display fixed menus or rear-view-camera video when the vehicle is moving, for example the MP3 menu for DVD upgrades.

Changes/updates of the vehicle's software can cause malfunctions of the interface. We offer free software-updates for our interfaces for one year after purchase. To receive a free update, the interface must be sent in at own cost. Labor cost for and other expenses involved with the software-updates will not be refunded.

1. Prior to installation

Read the manual prior to installation. Technical knowledge is necessary for installation. The place of installation must be free of moisture and away from heat sources.

1.1. Delivery contents

Take down the SW-version and HW-version of the interface boxes, and store this manual for support purposes.

Interface-box
V5C-M631
HW_____ SW_____

LVDS cable
V4C-LVDS10

V5C-UNI01
harness

1.1. Check compatibility of vehicle and accessories

Requirements

Navigation	E-series and Mini with navigation system or radio with 6.5” or 8.8”monitor with 10pin BMW LVDS connector

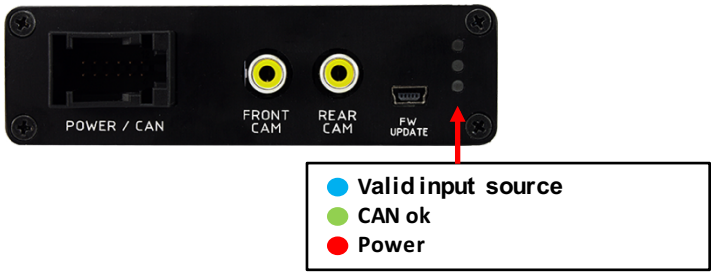
1.2. Setting the dip switches of the interface-box V5C-M631

Dip 1 and 2 on the back of the interface-box V5C-M631 are used to set the monitor type. The default setting is:

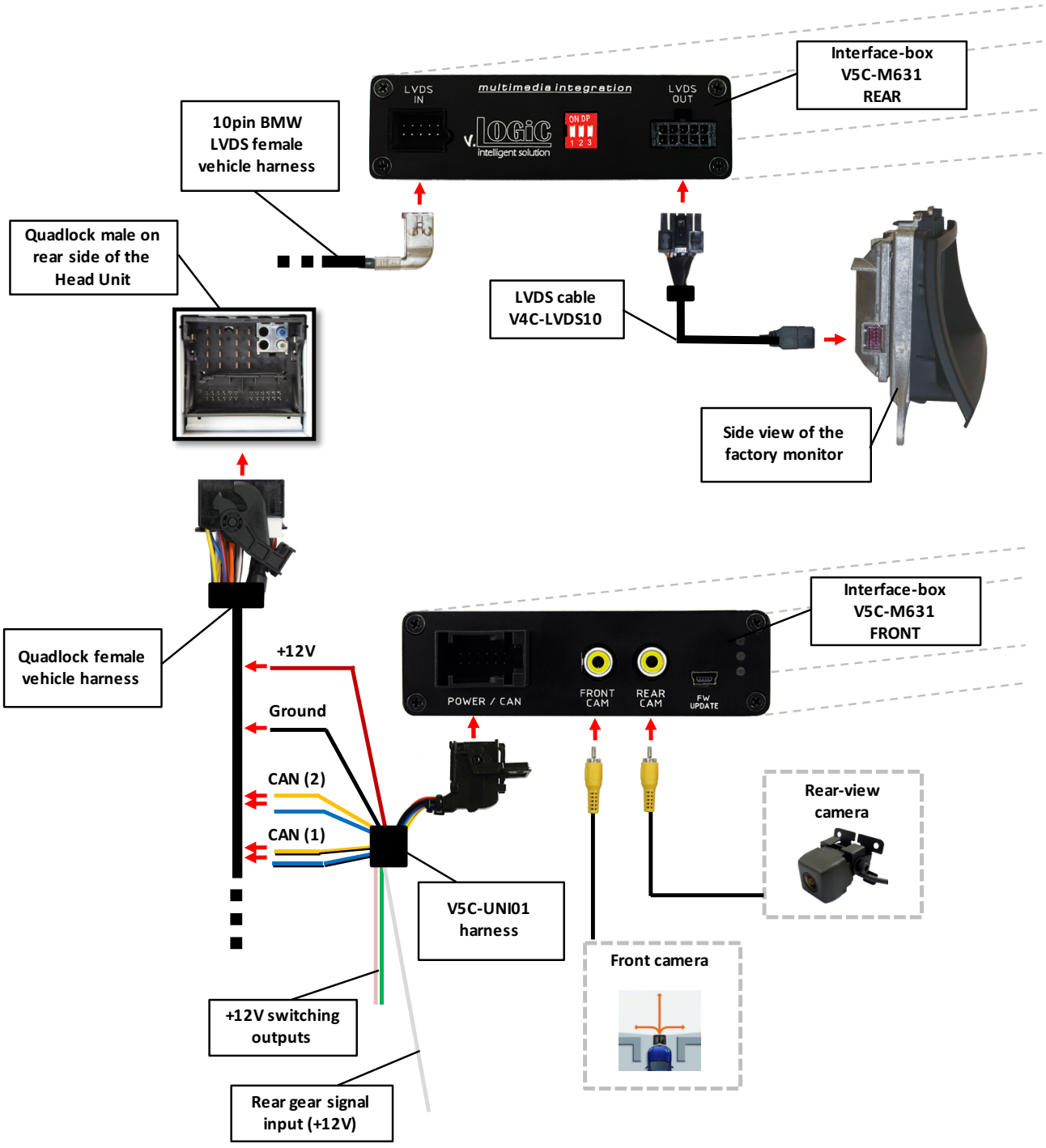
Vehicle/ navigation	Dip 1	Dip 2	Dip 3
M-ASK	OFF	No function	No function
CCC	ON	No function	No function

After each change of the dip switch settings you have to execute a power reset of the interface-box!

1.3. LED‘s of the interface-box V5C-M631



2. Connection schema

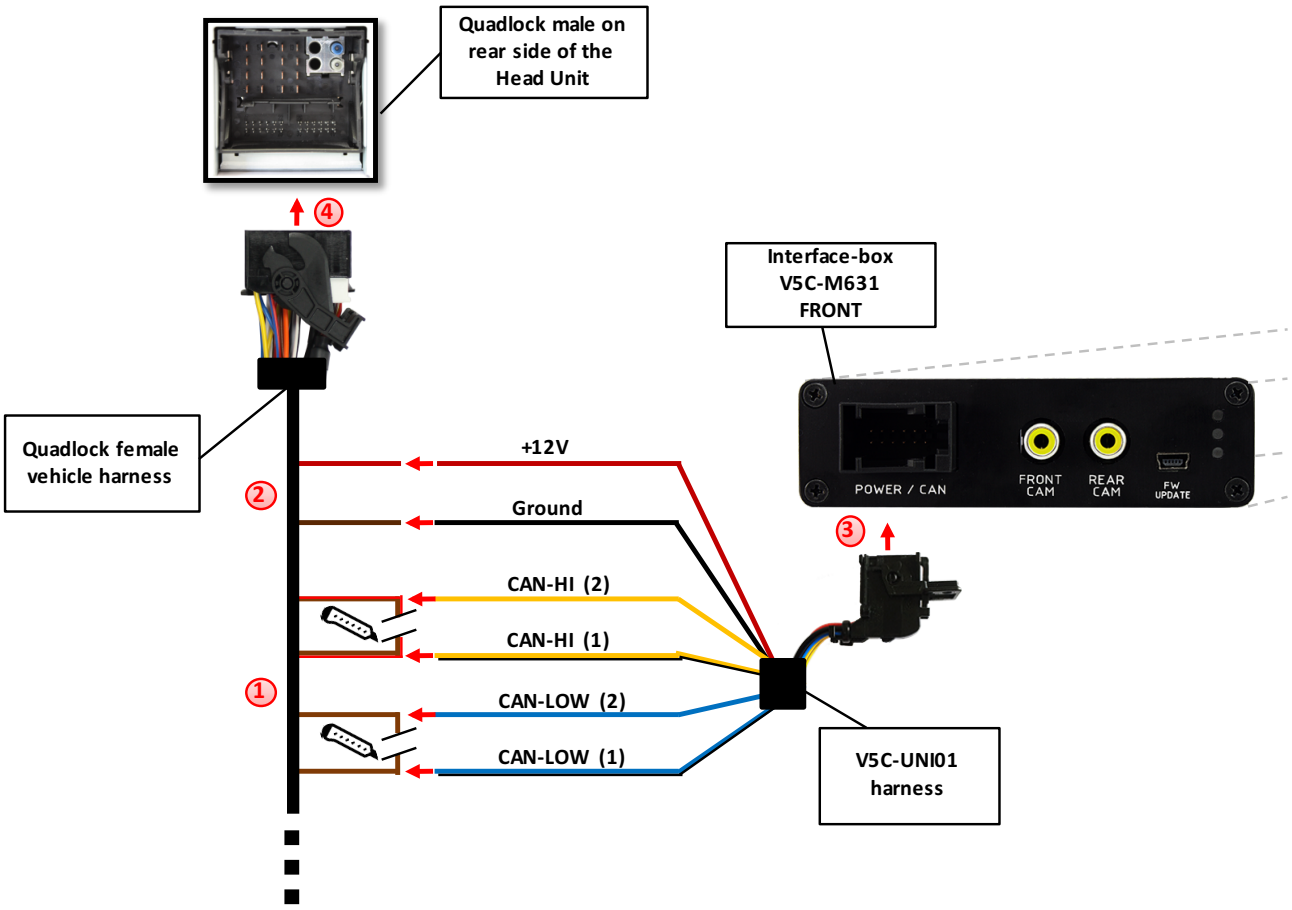


3. Installation

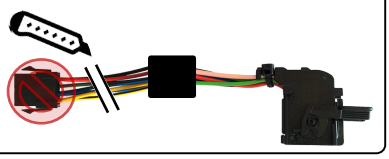
Switch off ignition and disconnect the vehicle's battery! The interface needs a permanent 12V source. If according to factory rules disconnecting the battery is to be avoided, it is usually sufficient to put the vehicle is sleep-mode. In case the sleep-mode does not show success, disconnect the battery with a resistor lead.
If power source is not taken directly from the battery, the connection has to be checked for being start-up proven and permanent.
Prior to wire and device installation we suggest to connect and test correct function of all after-market and factory infotainment equipment!

The interface is installed on the backside of the head unit.

3.1. Connecting interface-box and harnesses



Cut off the 8 pin Molex connector from V5C-UNI01 harness (is not needed).



1. Cut the CAN bus wires of the vehicle harness and connect them in series according to the pin assignment (see below) with the CAN bus wires from the V5C-UNI01 harness.

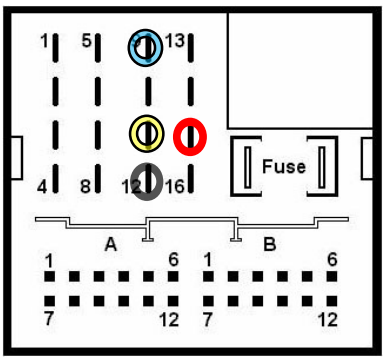
2. Connect red wire with +12V (pin 15) and black wire with ground (pin 12).

3. Connect female 12pin AMP connector of the harness V5C-UNI01 to the front site of the V5C-M631 interface box.

4. Connect the female Quadlock connector of the vehicle harness on the rear side of the head unit.

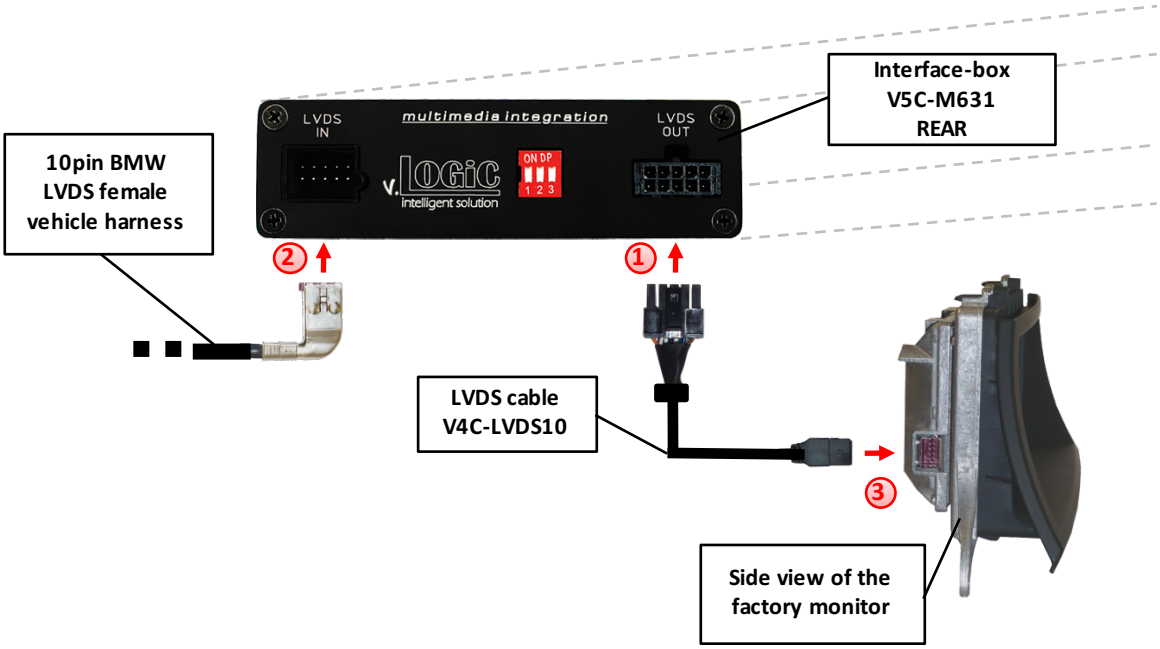
Pin assignment:

Cable colour	Assignment
Red	+12V permanent input - Pin15
Black	Ground - Pin 12
Yellow/Black	CAN HIGH Pin 11 - to the vehicle side
Blue/Black	CAN LOW Pin 9 - to the vehicle side
Yellow	CAN HIGH Pin 11 - to the head-unit side
Blue	CAN LOW Pin 9 - to the head-unit side
Green	+12V power output
Pink	+12V power output
White	Rear gear signal input (+12V)



Quadlock

3.2. LVDS connection



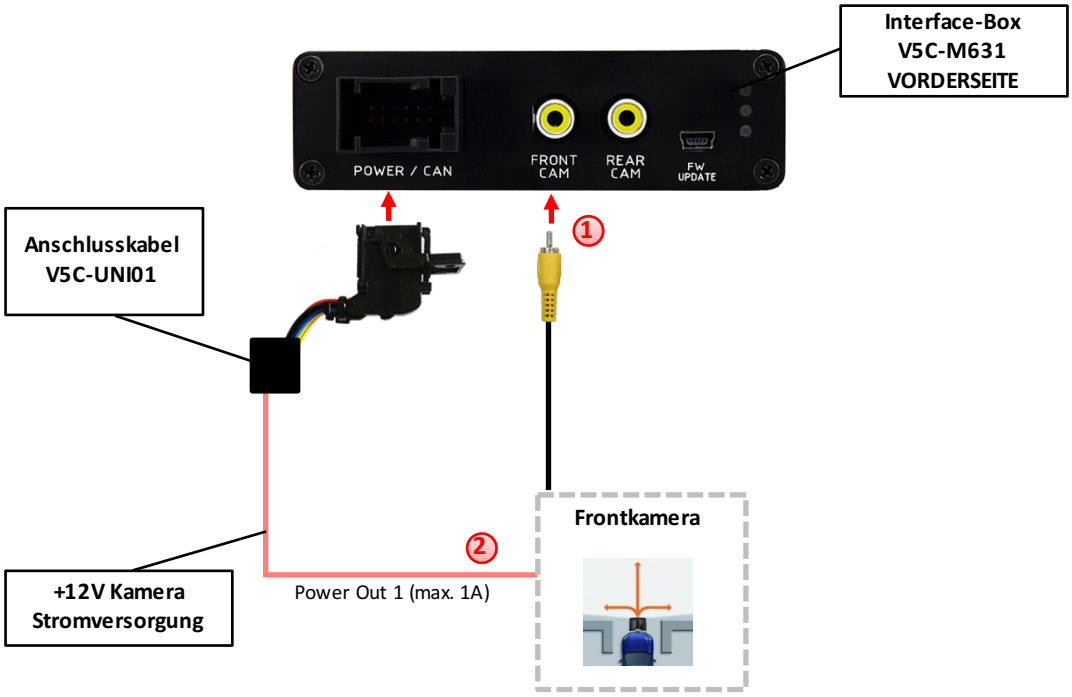
1. Connect the female 10pin Micro-Fit connector of the LVDS cable V4C-LVDS10 to the male 10pin Micro-Fit connector (LVDS-OUT) on the rear of the interface-box V5C-M631.

2. Remove the female 10pin BMW LVDS connector of the vehicle harness at the side of the factory monitor and connect it to the male 10pin BMW LVDS connector (LVDS-IN) on the front of the interface-box V5C-M631.

3. Connect the female 10pin BMW LVDS connector of the LVDS cable V4C-LVDS10 to the male 10pin BMW LVDS connector of the factory monitor.

3.2.1. After-market front camera

3.2.1.1. Connection to the after-market front camera



1 Connect the video RCA of the after-market front camera to the female RCA connector “FRONT CAM” of the interface box V5C-M631.

2 The pink wire of harness V5C-UNI01 can be used for +12V electric power supply (max. 1A) of the after-market front camera. Configure in the OSD-menu “MISC”, menu item “POWER OUT 2” the designated electric power supply (see chapter “Configurable switching outputs”).

3.2.1.2. Settings for connecting an after-market front camera

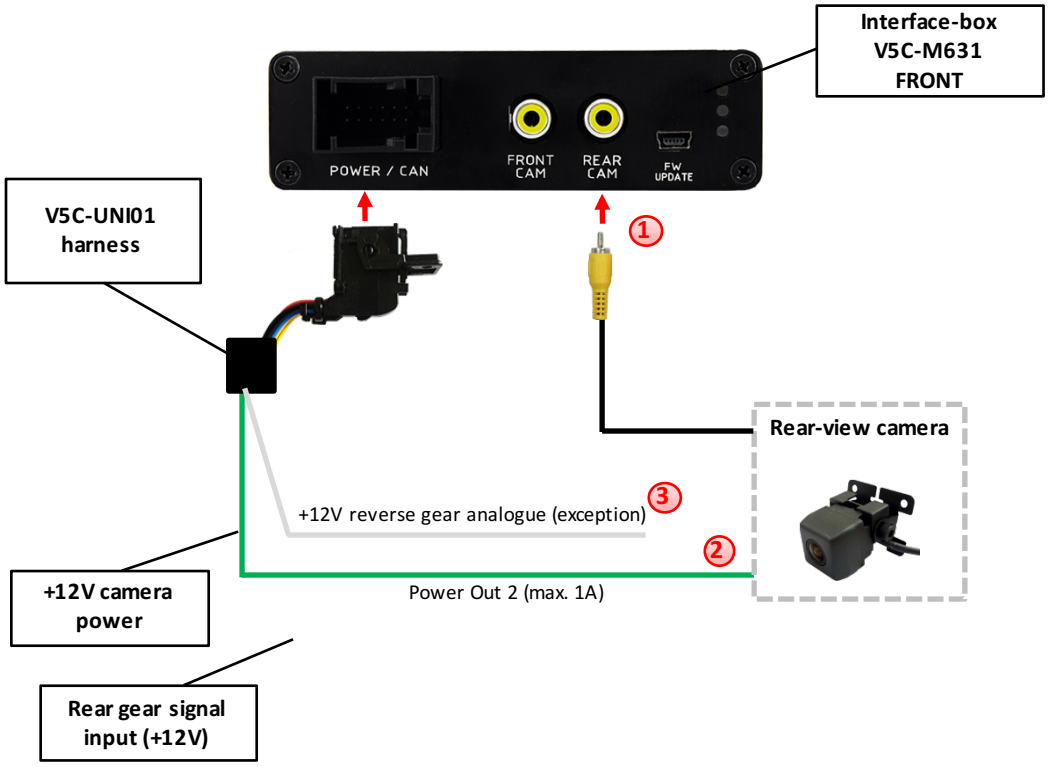
You have to configure some settings in the OSD-menus INPUTS and MISC if you want to connect an after-market front camera (Operation of the OSD: see chapter “OSD-Operation”).

OSD-menu	Menu item	Setting	Explication
INPUTS	FRONT CAM	OFF	No front camera connected
		ON	Switches to front camera if parking process is enabled and reverse gear is released
	ReverseLogic	Intelligent	For vehicles with PDC button. Enabled while parking process and up to 20 km/h or together with PDC if existing
		Gear only	For vehicles without PDC button. Enabled while parking process and up to 20 km/h.
MISC	OEM PDC CAR	Horizontal	PDC-display of the vehicle is horizontal
		Vertical	PDC-display of the vehicle is vertical

Note: You can deactivate the enabled parking process by pressing the iDrive or by enabling other modes (e.g. radio). After deactivation you can’t enable the parking process again until the vehicle is diving faster than 20km/h, the ignition is switched off and on or the PDC will be disabled and enabled again, if existing.

3.2.2. After-market rear-view camera

3.2.2.1. Connection to the after-market rear-view camera



1 Connect the video RCA of the after-market rear-view camera to the female RCA connector “REAR CAM” of the interface box V5C-M631.

2 The green wire of harness V5C-UNI01 can be used for +12V electric power supply (max. 1A) of the after-market rear-view camera. Configure in the OSD-menu “MISC”, menu item “POWER OUT 2” the designated electric power supply (see chapter “Configurable switching outputs”).

3 On some vehicles the reverse light signal doesn’t exist on the CAN-bus. Connect the white wire of harness V5C-UNI01 to reverse light signal (+12V of reverse light) if the system doesn’t switch to the rear-view camera automatically after the described OSD-setup (see next chapter).

3.2.2.2. Settings for connecting an after-market rear-view camera

You have to configure some settings in the OSD-menus INPUTS and MISC if you want to connect an after-market rear-view camera (Operation of the OSD: see chapter “OSD-Operation”).

OSD-menu	Menu item	Setting	Explication
INPUTS	REAR CAM	OFF	No rear-view camera connected
		ON	Switches to rear-view camera if reverse gear is engaged and/or PDC-display is displayed
		OEM	If a factory rear-view camera is existing! Interface turns off, if PDC or reverse gear is enabled and it displays factory rear-view camera and/or PDC-display
	ReverseLogic	Intelligent	For vehicles with PDC button. Enabled while parking process and up to 20 km/h or together with PDC if existing
		Gear only	For vehicles without PDC button. Enabled while parking process and up to 20 km/h.
MISC	OEM PDC CAR	Horizontal	PDC-display of the vehicle is horizontal
		Vertical	PDC-display of the vehicle is vertical

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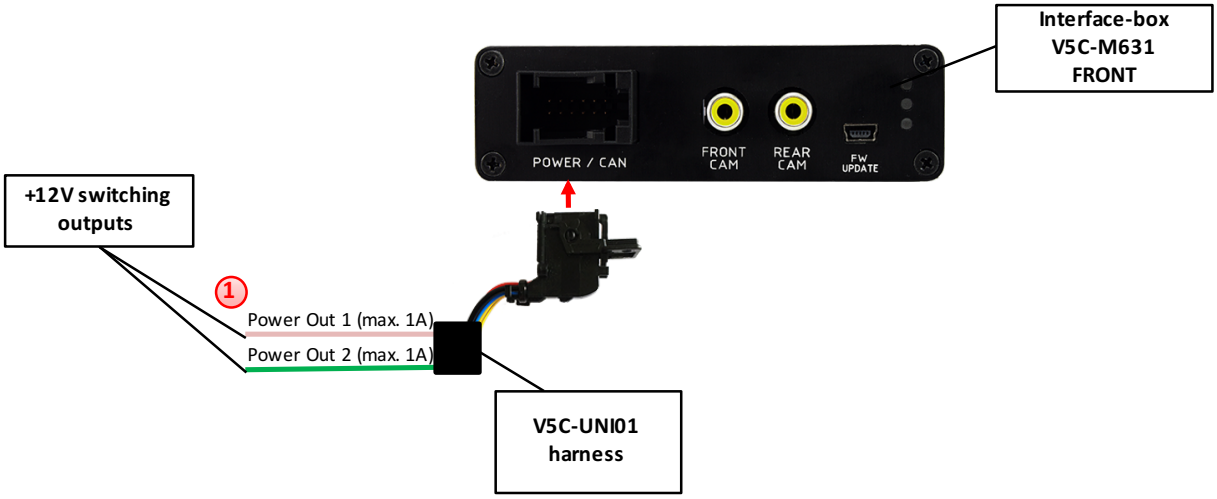
Note: You can deactivate the enabled parking process by pressing the iDrive or by enabling other modes (e.g. radio). After deactivation you can’t enable the parking process again until the vehicle is diving faster than 20km/h, the ignition is switched off and on or the PDC will be disabled and enabled again, if existing.

3.2.3. Configurable trigger outputs



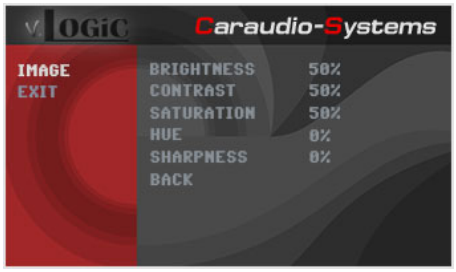
1 You can configure the both +12V trigger outputs separately. The pink wire is POWER OUT 1 and the green wire is POWER OUT 2.

Note: You can configure the both trigger outputs in the OSD-menu MISC separately (Operation of the OSD: see chapter “OSD-Operation”).

OSD-menu	Menu item	Setting	Explication
MISC	POWER OUT1 (pink) POWER OUT2 (green)	CAN	+12V when the interface is on (red LED on)
		Ignition	+12V when ignition is on
		RearCam	+12V when the rear-view camera input is activated
		Reverse Gear	+12V when reverse gear is engaged
		OFF	Trigger putput deactivated

3.3. Picture settings

You can change the picture settings in the OSD-menu IMAGE (Operation of the OSD: see chapter “OSD-Operation”).



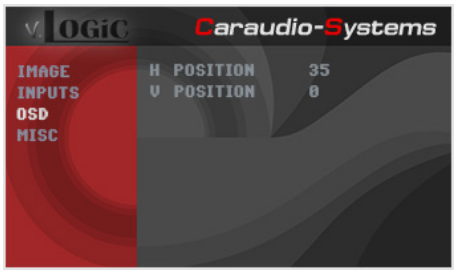
- Brightness
- Contrast
- Saturation
- Hue
- Sharpness

Note: The picture settings will be retained for each video source separately.

4. Operation

4.1. OSD – On-screen display

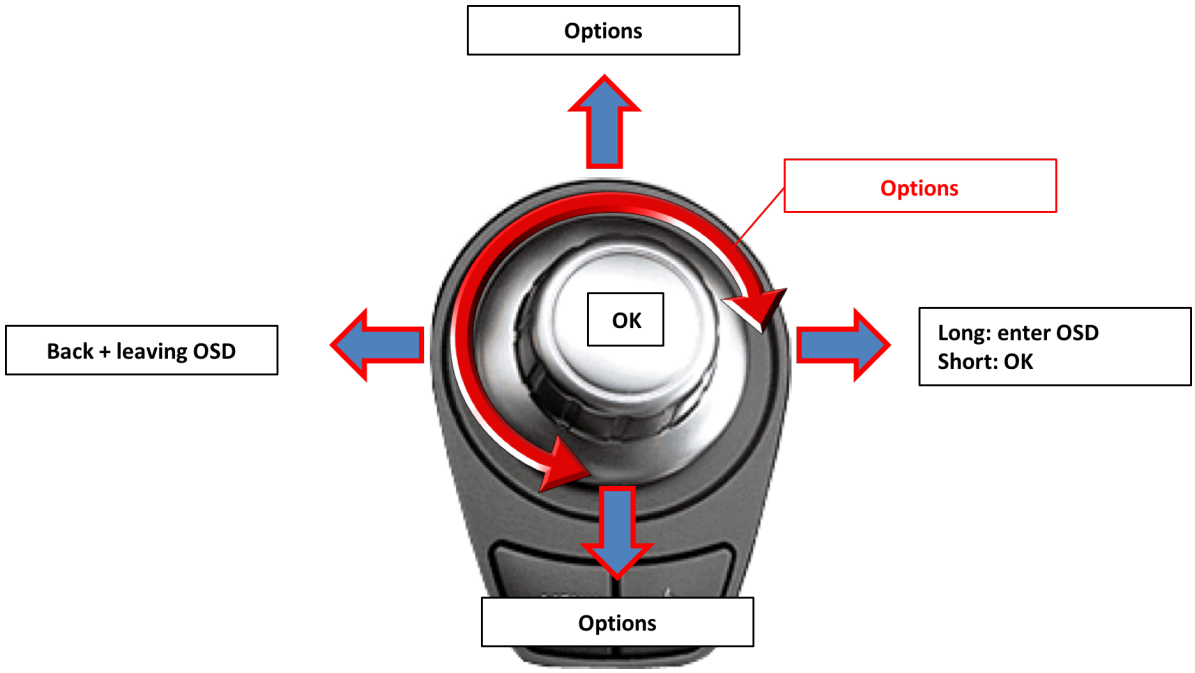
You can change the basic configurations of the interface in the OSD (on screen display).



4.1.1. OSD – Operation

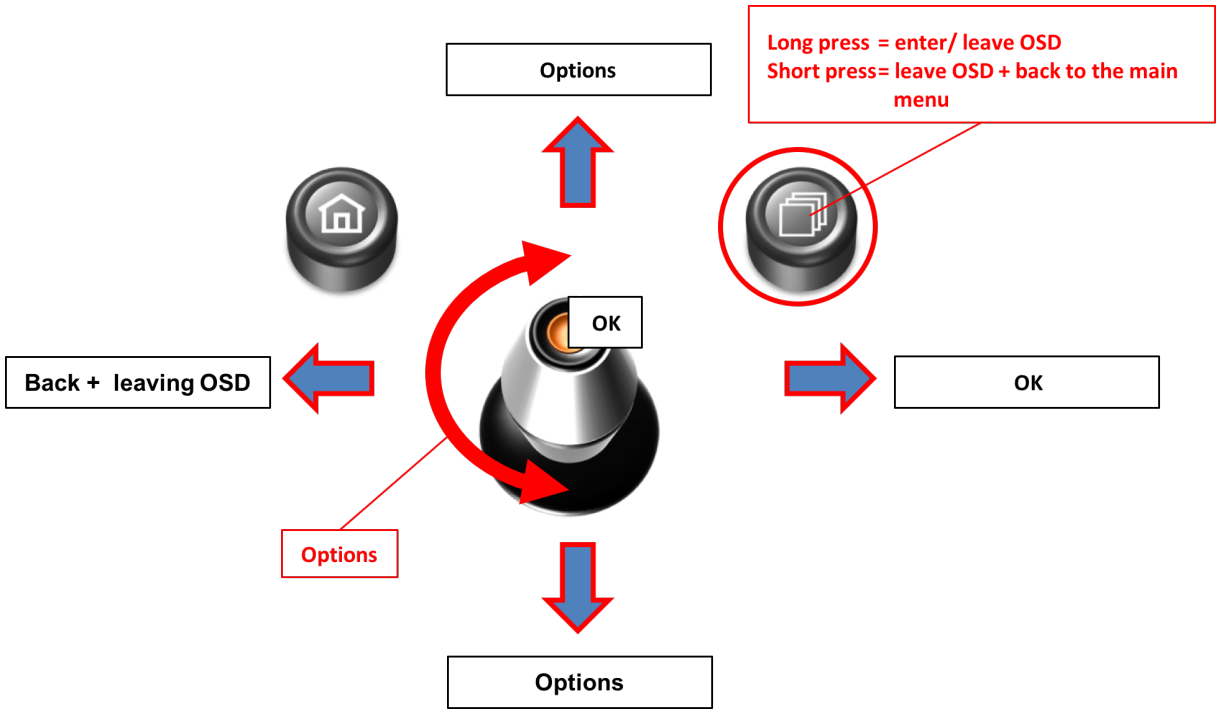
You can control the OSD by iDrive.

4.1.1.1. 1- and 2-button iDrive



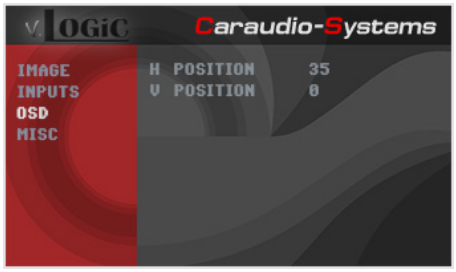
Note: If the interface is selected as active video source then the OSD menu is activated via iDrive button "**OK**" (press and hold) **+** "**iDrive-right**". In this OSD menu only image adjustments can be made.

4.1.1.2. 2-button iDrive in Mini



4.1.2. OSD – Additional setting options

The following settings in the OSD-menus OSD and MISC can be configured over and above the described settings in this manual (Operation of the OSD: see chapter “OSD-Operation”):



OSD-menu	Menu item	Setting	Explication
	H POSITION	0-xxx	Horizontal position of the OSD
	V POSITION	0-xxx	Vertical position of the OSD
MISC	VERSION	X.XX.XX	Displays the current SW-version
	FACTORY RESET		Resetting to factory settings

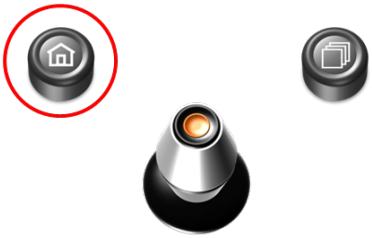
4.2. Video-in-motion function

It is possible to activate and deactivate the video-in-motion in the OSD menu “MISC” (Operation of the OSD: see chapter “OSD-Operation”).

OSD-menu	Menu item	Setting	Explication
MISC	VIM	ON	Video-in-motion activated
		OFF	Video-in-motion deactivated

For the V5-CIC-E-PNP the video-in-motion function is permanently active without disturbing the navigation performance.

4.3. Selecting the interface as current AV-source



Long press Menu-button to choose the interface as current video source.

Short press MENU button to switch the video sources (cameras). Each short press will switch to the next enabled input. If all inputs are enabled the order is:

FRONT CAM → REAR CAM → …

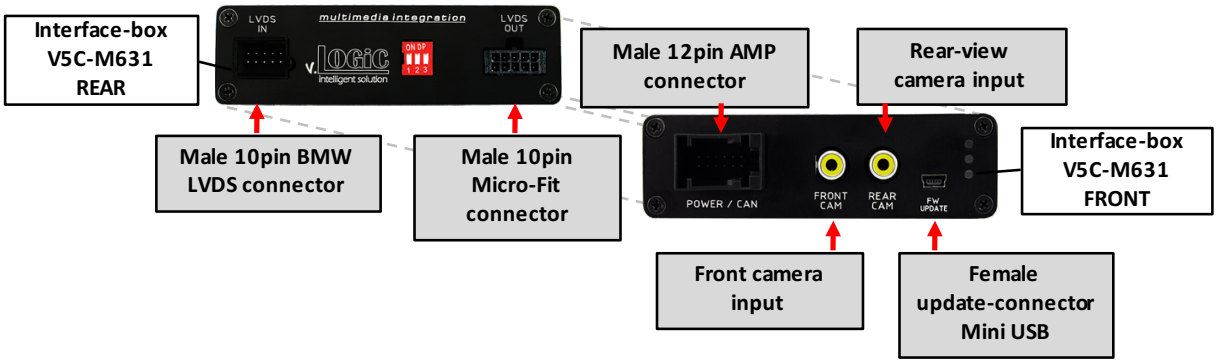
Inputs which are not enabled are skipped.

5. Specifications

Operation voltage	10.5 – 14.8V DC
Stand-by power drain	<0,1mA
Operation power drain	190mA
Power consumption	2,6W
Temperature range	-20°C to +80°C
Weight (box only)	285g
Measurements (box only) B x H x T	141 x 30 x 105 mm

CE ⎓12V DC

6. Connections (interface-box)



7. Technical Support

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