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F-CAM

R-CAM

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germeslab.com

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TO MONITOR

TO MONITOR

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| #	CONNECTION DIAGRAM ELEMENTS DESCRIPTION
1	OEM car monitor (head unit/HU), front view
2	OEM car monitor (head unit/HU), rear view
3	Front view camera (not included in the package)
4	Rear view camera (not included in the package), OEM or additionally installed with the controller
5	Rear and front view camera controller – **RFCC**
6	Front view camera connection input – **F-CAM**
7	Rear view camera connection input – **R-CAM**
8	Front view camera power output – **12V OUT**
9	Rear view camera power output – **6V OUT**
10, 11	Adapter connectors for Plug&Play connection to OEM wiring
12, 13	Adapter sockets for Plug&Play connection to OEM wiring

CONTROLLER AUTOMATIC MODE
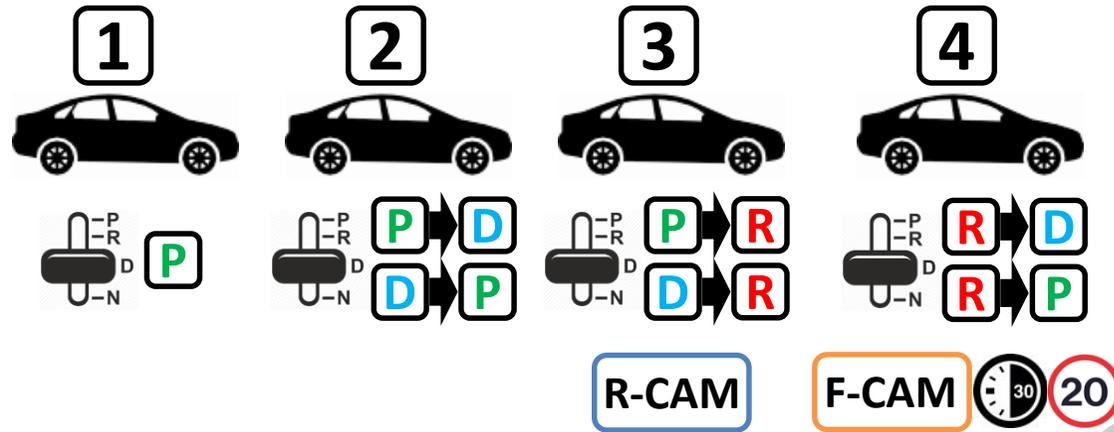
#	CONTROLLER MODE DESCRIPTION
1	Standby mode
2	Standby mode
3	(*STANDARD AND PRIORITY FUNCTION*) OEM/aftermarket rear view camera activation
4	Front view camera activation for 20/40 s or until the car speed exceeds 20 km/h

CONTROLLER MIXED MODE

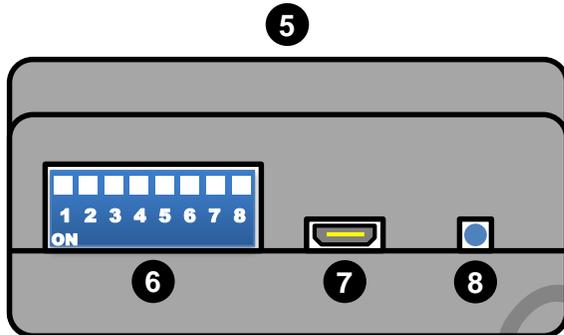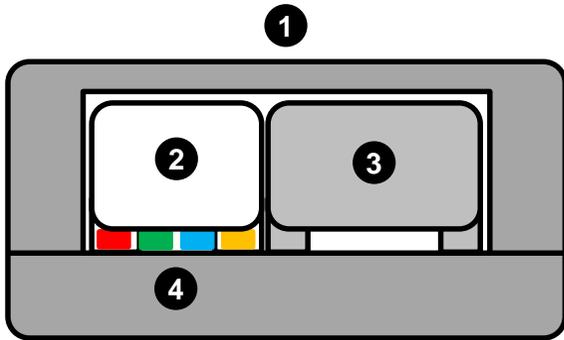| #	CONTROLLER MODE DESCRIPTION
1	• Standby mode • Manual activation mode of the front view or rear view camera with the off timer after 20/40 s • Forced activation mode with the front view or rear view camera image retention (followed by a short beep
2	• Standby mode • Manual activation mode of the front view or rear view camera with the off timer after 20/40 s • Forced activation mode with the front view or rear view camera image retention (followed by a short beep)
3	• Priority rear view camera activation • Manual activation mode of the front view camera at 0 km/h
4	• Front view camera activation for 20/40 s or until the car speed exceeds 20 km/h • Manual activation mode of the front view or rear view camera with the off timer after 20/40 sec • Forced activation mode with the front view or rear view camera image retention (followed by a short beep)
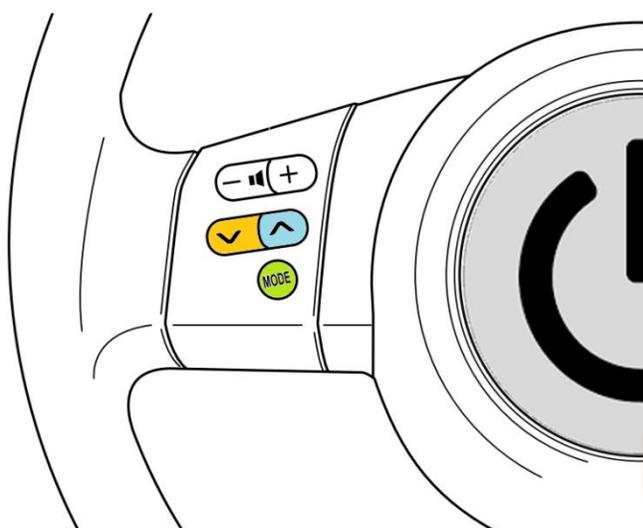
In **mixed control mode**, the user can activate any connected camera with OEM steering wheel controls. For this purpose three buttons are used: **MODE, SEEK+, SEEK-**. Below are the control algorithms (choosing different modes) with OEM steering wheel controls.

MODE button - double press for 1 s. Manual activation mode
MODE button - press once. Exiting active mode
SEEK+ button - press once in manual mode. Front view camera activation
SEEK- button - press once in manual mode. Rear view camera activation
SEEK+ button - press and hold in manual mode. Image retention mode activation

ATTENTION! Number of steering wheel control buttons, their location and appearance can be different from those in the manual.

#	CONTROLLER MODES	MODE ACTIVATION
1	• Manual activation mode of the front or rear view camera with the off timer • after 20/40 s	➤ Activation – double press **MODE** button ➤ Camera switching – **SEEK+ / SEEK-** buttons ➤ Deactivation – press **MODE** button once
	• Forced activation mode with the front or rear view camera image retention (followed by a short beep)	➤ Activation – (in manual mode) hold **SEEK+** button for 1 s ➤ Camera switching – **SEEK+ / SEEK-** buttons ➤ Deactivation – press **MODE** button once
2	• Manual activation mode of the front or rear view camera with the off timer after 20/40 s	➤ Activation – double press **MODE** button ➤ Camera switching – **SEEK+ / SEEK-** buttons ➤ Deactivation – press **MODE** button once
	• Forced activation mode with the front or rear view camera image retention (followed by a short beep)	➤ Activation – (in manual mode) hold **SEEK+** button for 1 s ➤ Camera switching – **SEEK+ / SEEK-** buttons ➤ Deactivation – press **MODE** button once
3	• Manual activation mode of the front view camera at 0 km/h	➤ Camera switching – **SEEK+ / SEEK-** buttons
4	• Manual activation mode of the front or rear view camera with the off timer • after 20/40 s	➤ Activation – double press **MODE** button ➤ Camera switching – **SEEK+ / SEEK-** buttons ➤ Deactivation – press **MODE** button once
	• Forced activation mode with the front or rear view camera image retention (followed by a short beep)	➤ Activation – (in manual mode) hold **SEEK+** button for 1 s ➤ Camera switching – **SEEK+ / SEEK-** buttons ➤ Deactivation – press **MODE** button once

#	Controller Elements Description
1	**RFCC Camera Controller** – front view
2, 3	Adapter sockets for Plug&Play connection to OEM wiring
4	LED pixels that display the controller operations and status: **Red** – car gearbox status **Green** – car CAN bus status **Blue** – controller power/status of steering wheel button presses **Yellow** – front view camera status
5	**RFCC Camera Controller** – rear view
6	DIP switches for changing the controller settings. DIP switches configuration changes depending on controller firmware version. Description of DIP switch settings can be found on the controller, on the sticker with the serial number of the device.
7	USB input for connecting to PC or updating the controller software (**microUSB** input type). Detailed description of the update procedure is attached to each firmware release.
8	Speaker for announcing the controller status