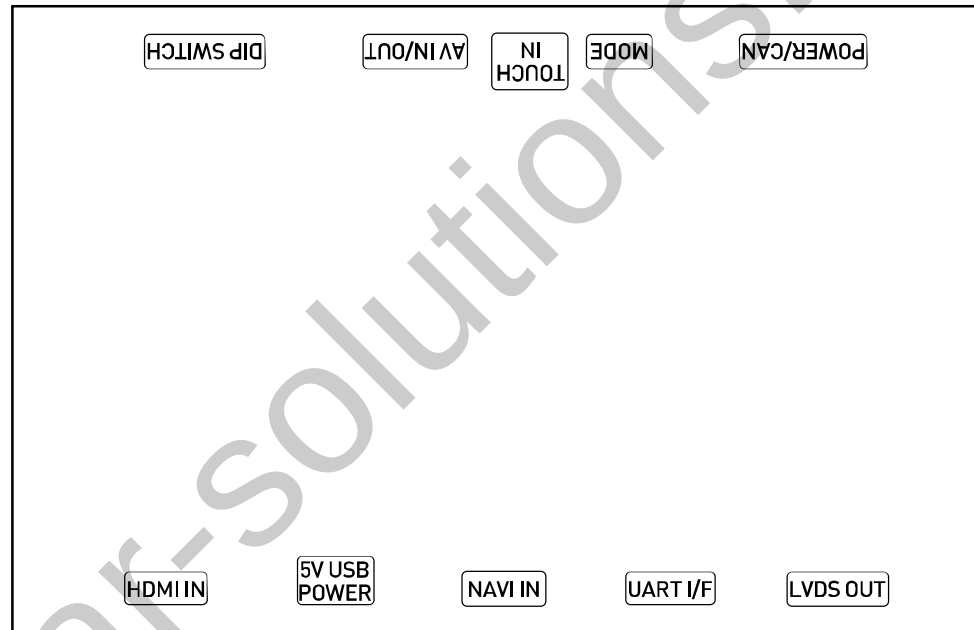


Instruction Manual

High-Definition Link for BMW



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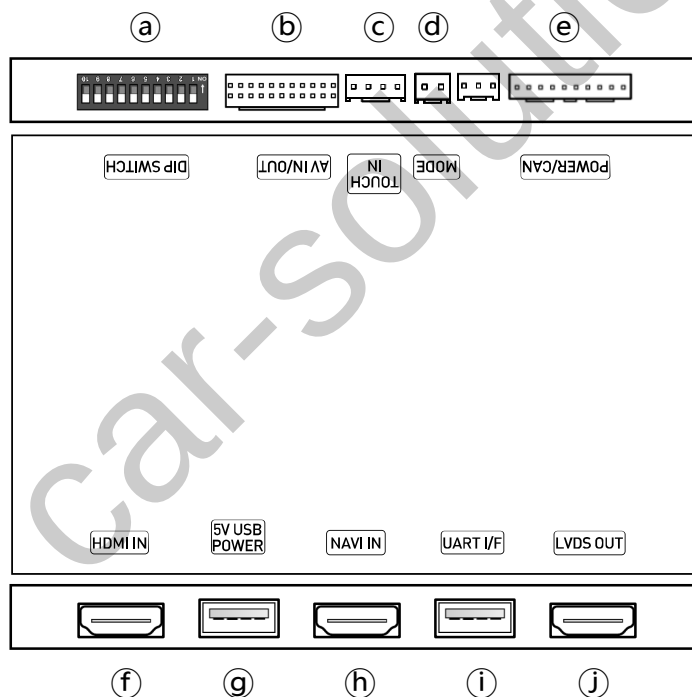
Cautions

- You should check the names and colors of each wires exactly, before you connect the wires.
ex) CAN HIGH: White wires / CAN LOW: Blue wires
- The 'POWER / CAN Cable' should always be connected last and be disconnected first.
- The 'Mode Switch' is an optional part to change modes forcibly without CAN-BUS.
Generally, the CAN-BUS wires are connected for changing modes by original buttons.
- When the reverse gear is not detected by CAN-BUS,
the 'REVERSE 12V IN wire' should be spliced with 12V power of reverse light.
- **HDMI device-related**
 - HDMI mode accepts general-screen resolution of HDMI devices.
 - Generally, '5V 1A Power output(5V USB POWER)' is a standard voltage for charging smartphone.
If you need higher voltage than 5V, you should add a separate power supply.
- **Navigation(GPS) box-related**
 - When you connect the power wires(B+, ACC) to the navigation(GPS) box,
the 'NAVI (12V) OUT' wire supported by video interface should be spliced with an ACC wire of navigation box
 - After installation is done, select an applicable navigation(GPS) box model in the 'Navigation model selection menu' of setting mode.
 - The navigation box should be powered off before unplugging the HDMI cable.

Dimension



Exterior



- (a) DIP SWITCH
- (b) AV IN / OUT
- (c) TOUCH IN (Not Used)
- (d) MODE
- (e) POWER / CAN
- (f) HDMI IN
- (g) 5V USB POWER
- (h) NAVI IN
- (i) UART I/F
- (j) LVDS OUT

Components



Power / CAN Cable



LVDS Cable



LVDS PCB



HDMI Cable
(For LVDS)



AV IN / OUT Cable



5-pin Micro USB Cable

Optional Parts (sold separately)



HDMI Cable
(Male to Male)



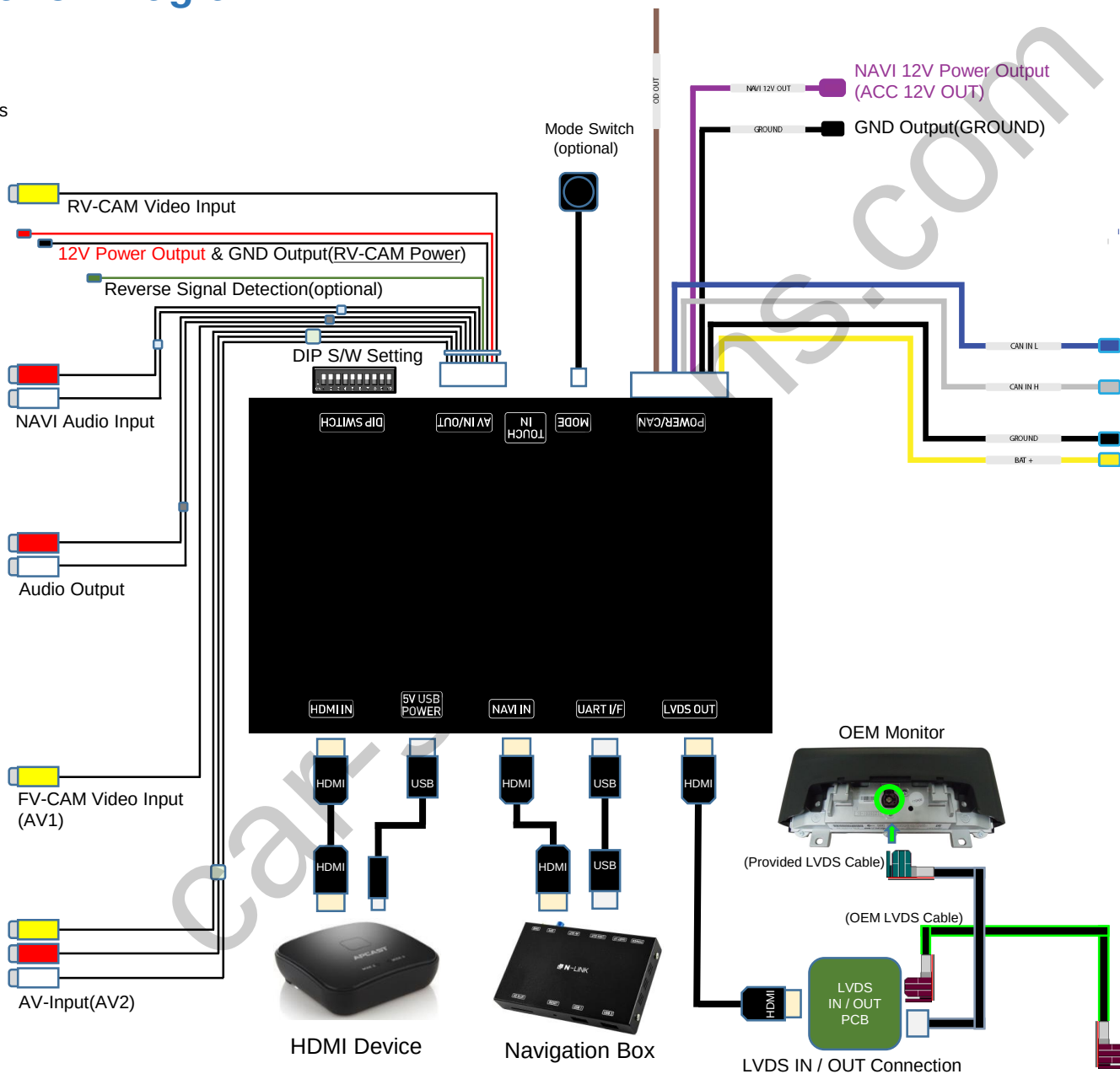
HDMI Extender
(For stick type HDMI device)



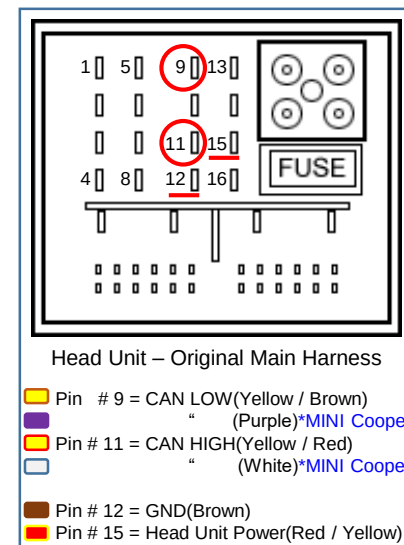
Mode Switch

Full Installation Diagram

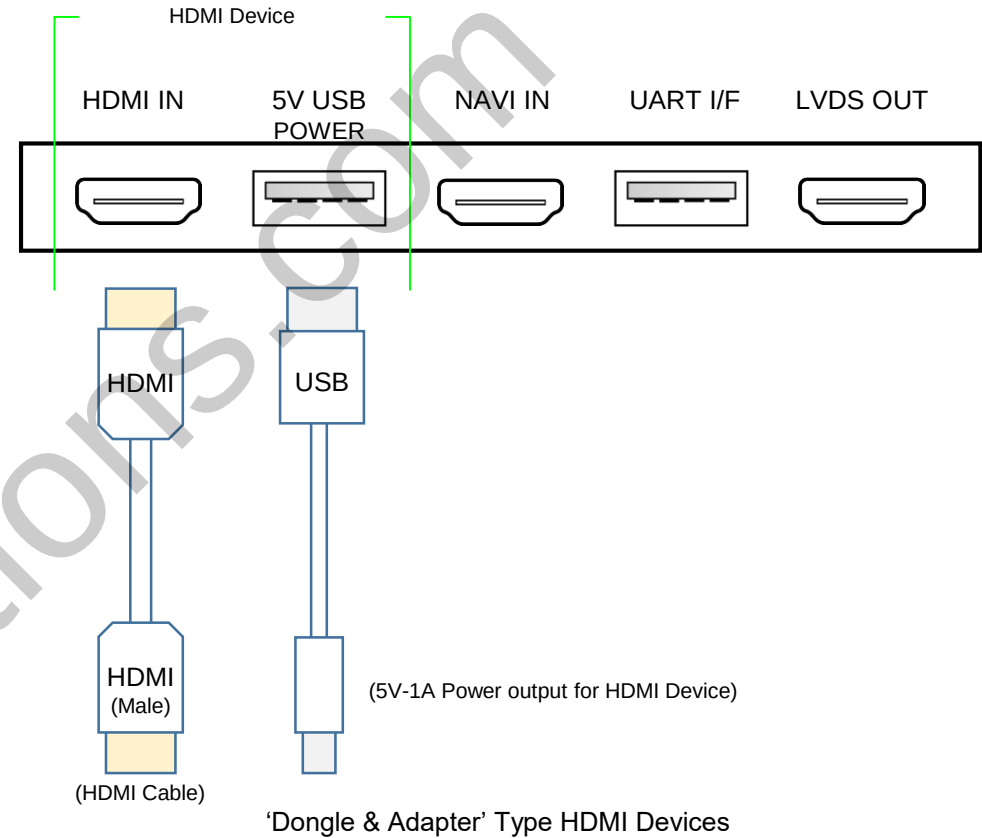
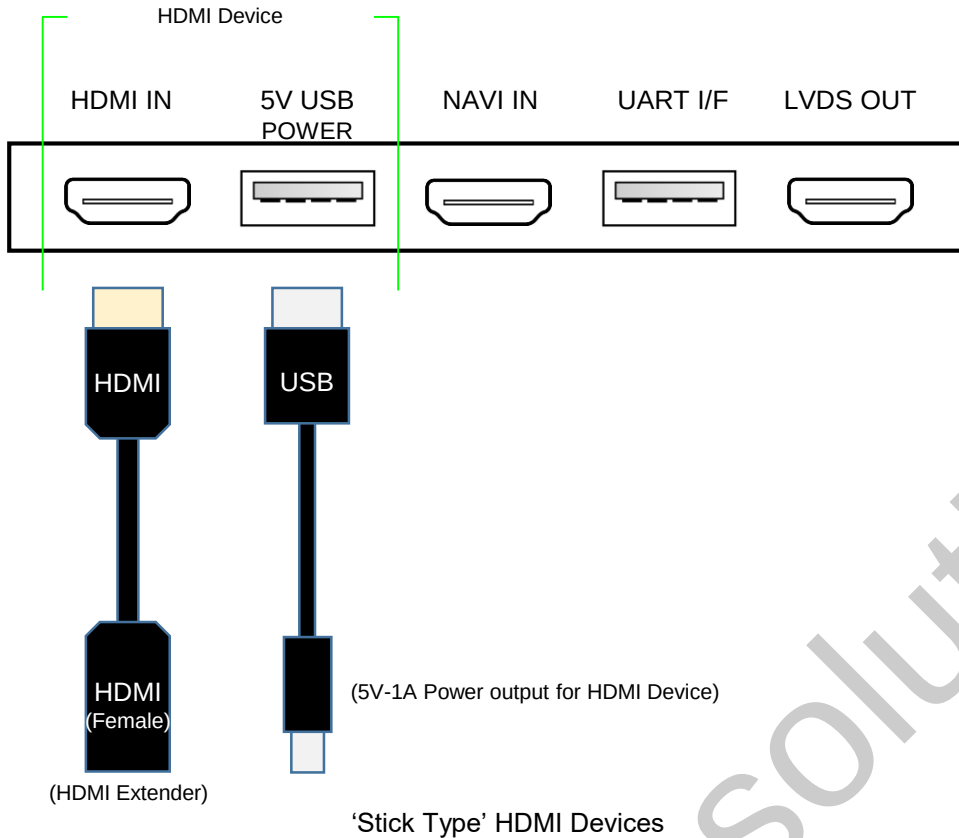
※ Optional External Devices



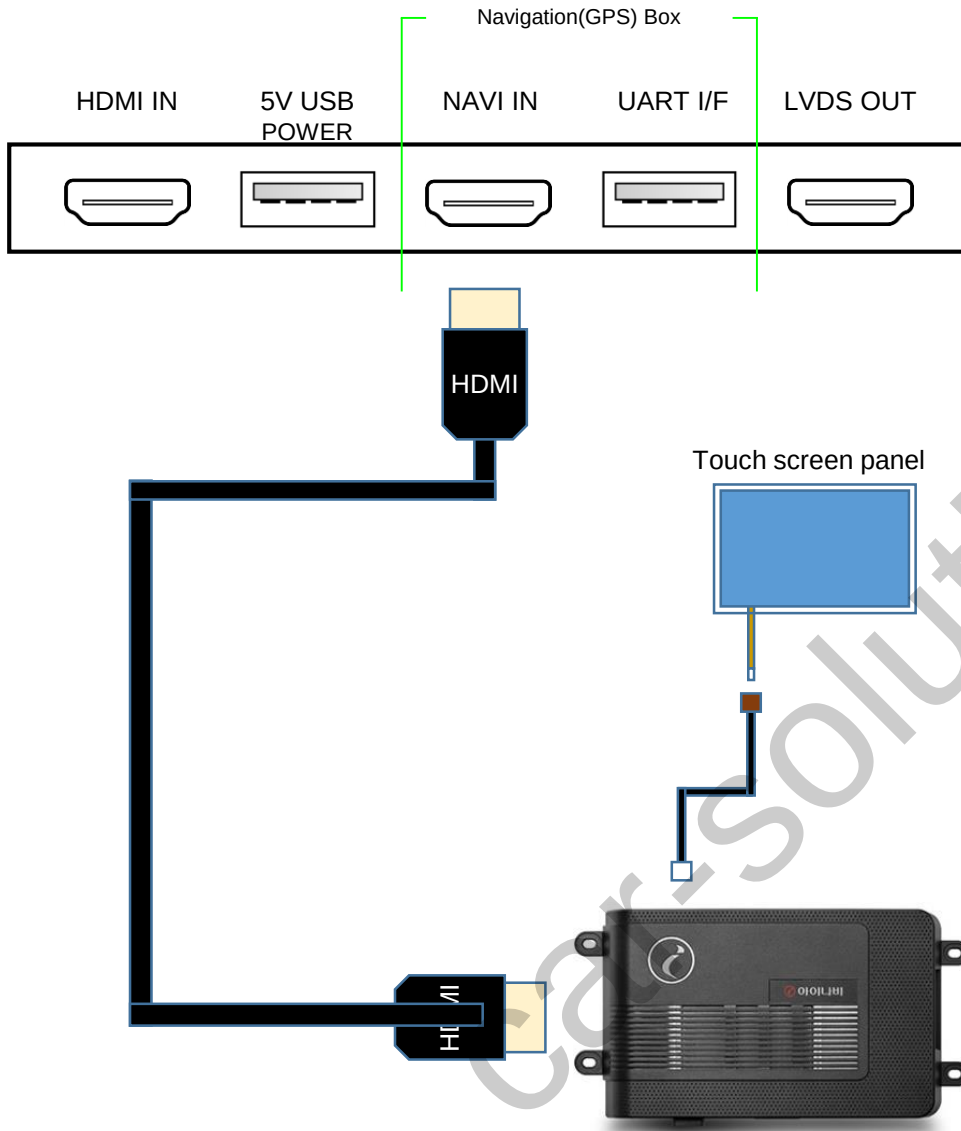
※ CAN HIGH / LOW Pin Specification



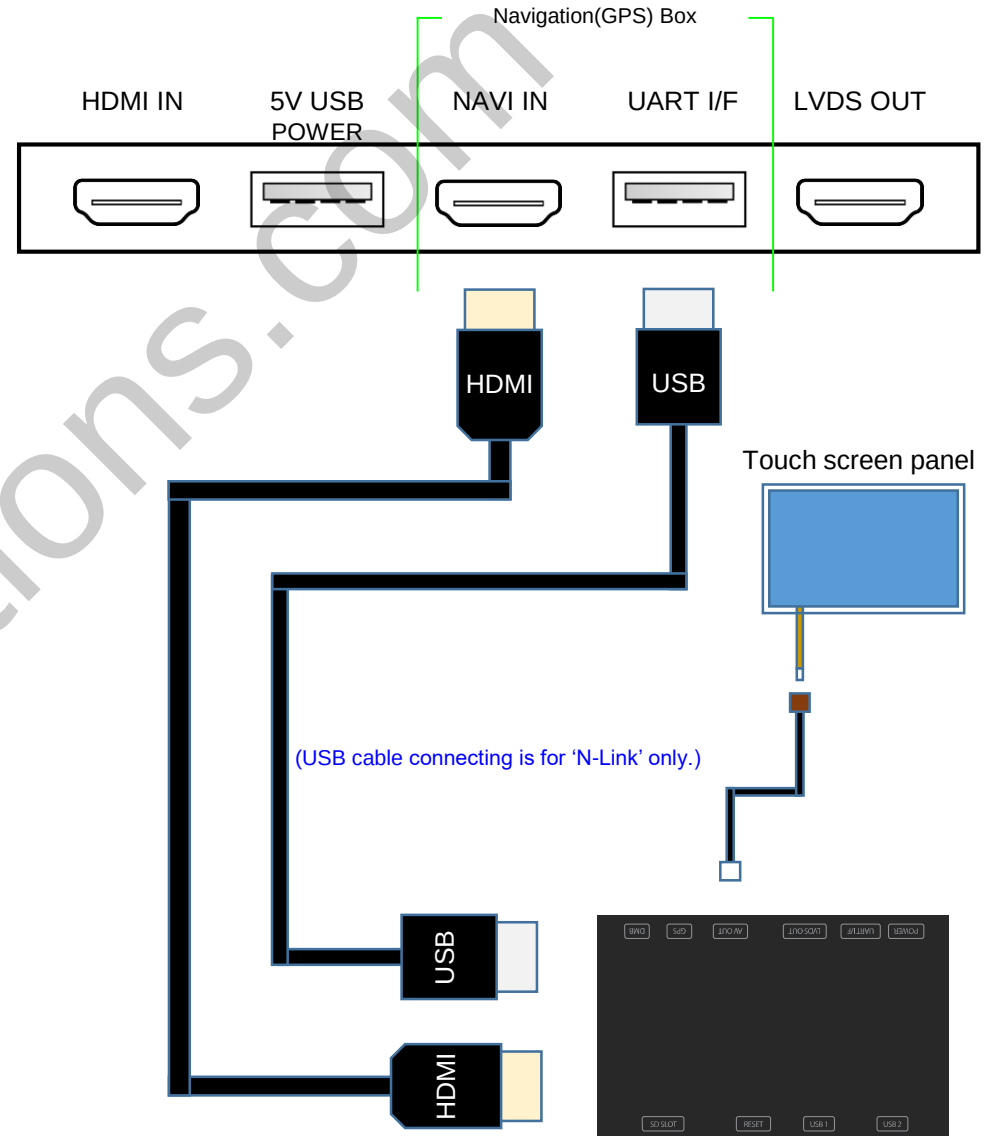
HDMI Connection Diagram



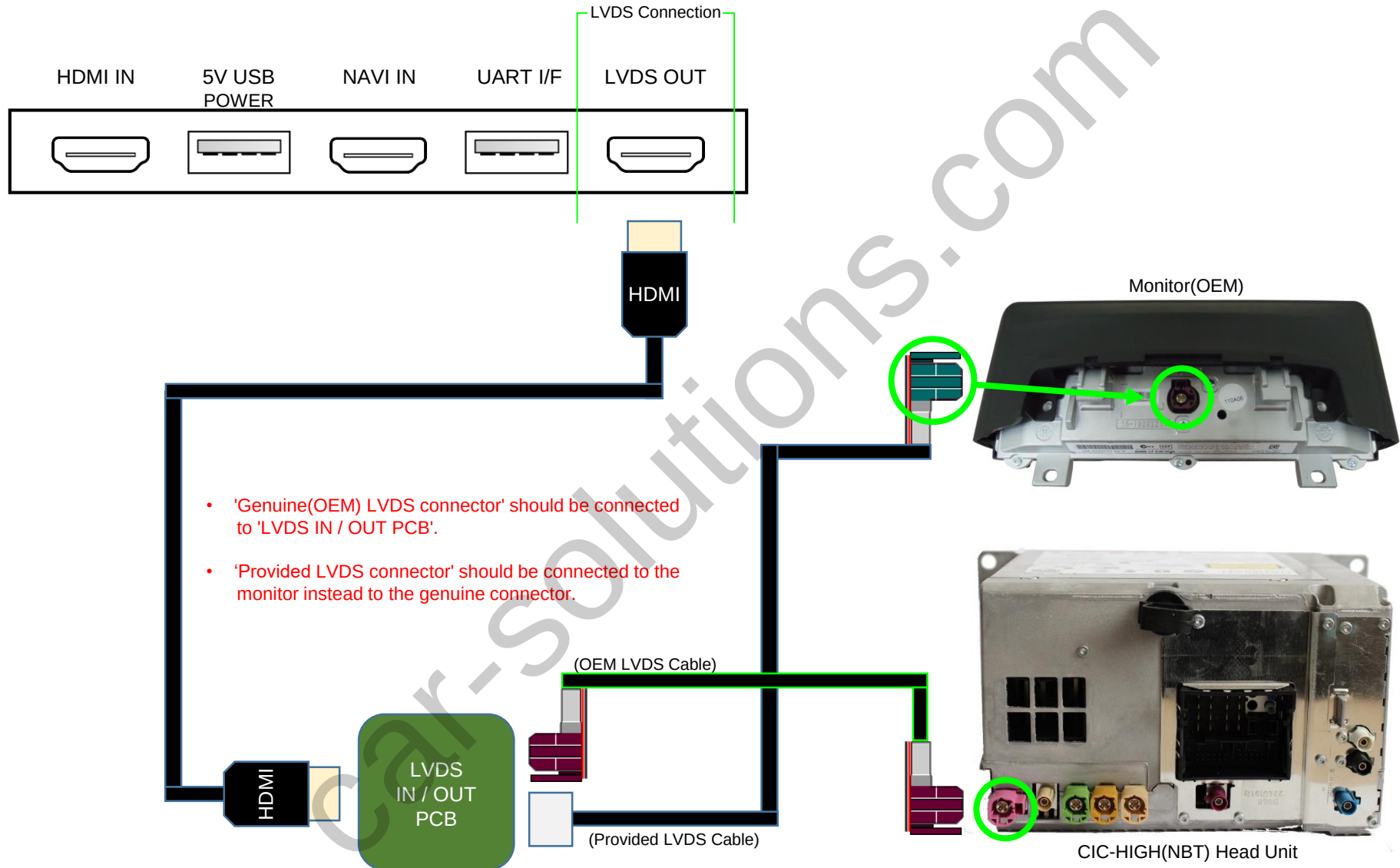
Navigation Connection Diagram



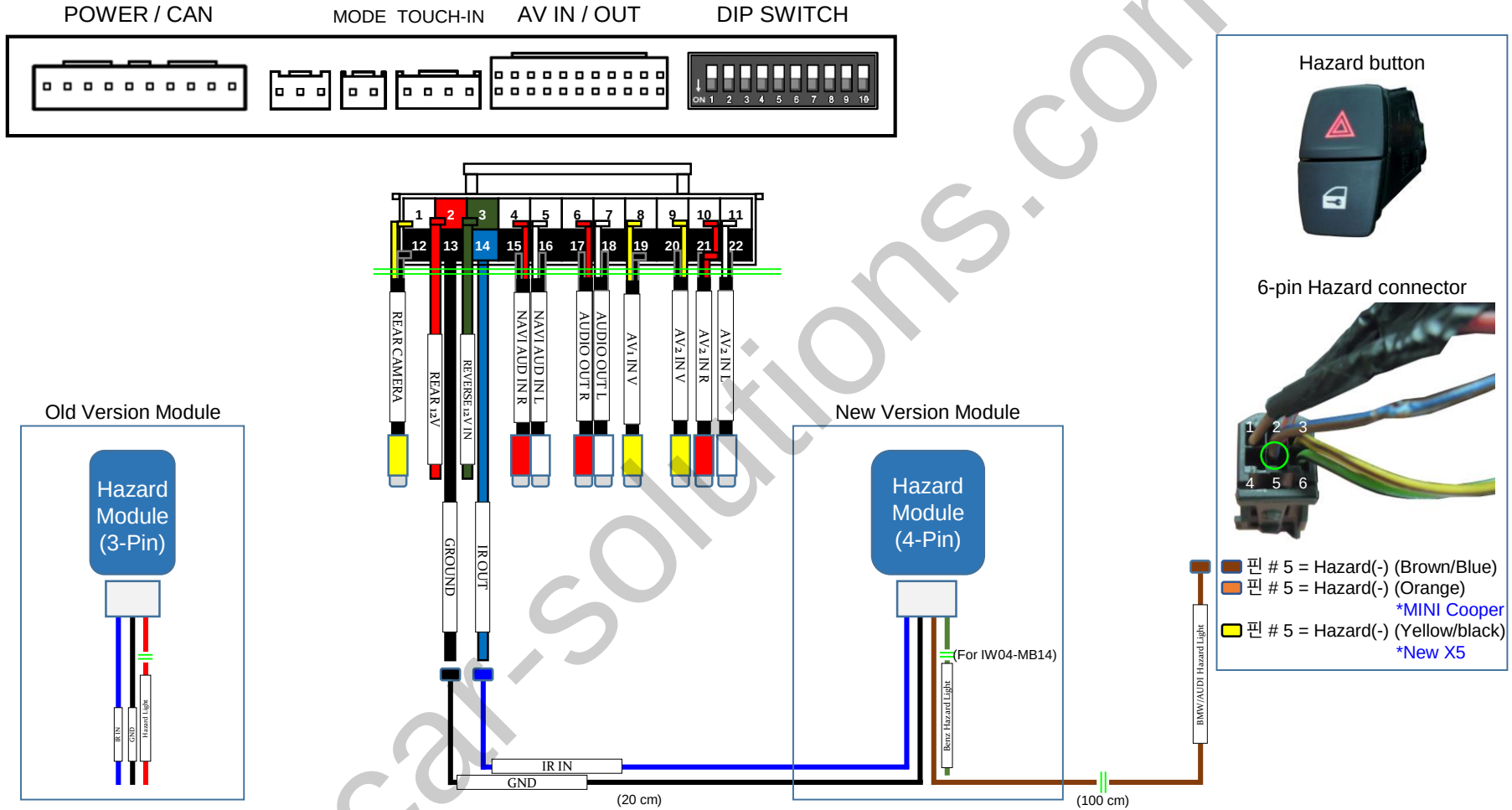
Navigation Connection Diagram



LVDS Connection Diagram



Hazard Module Connection

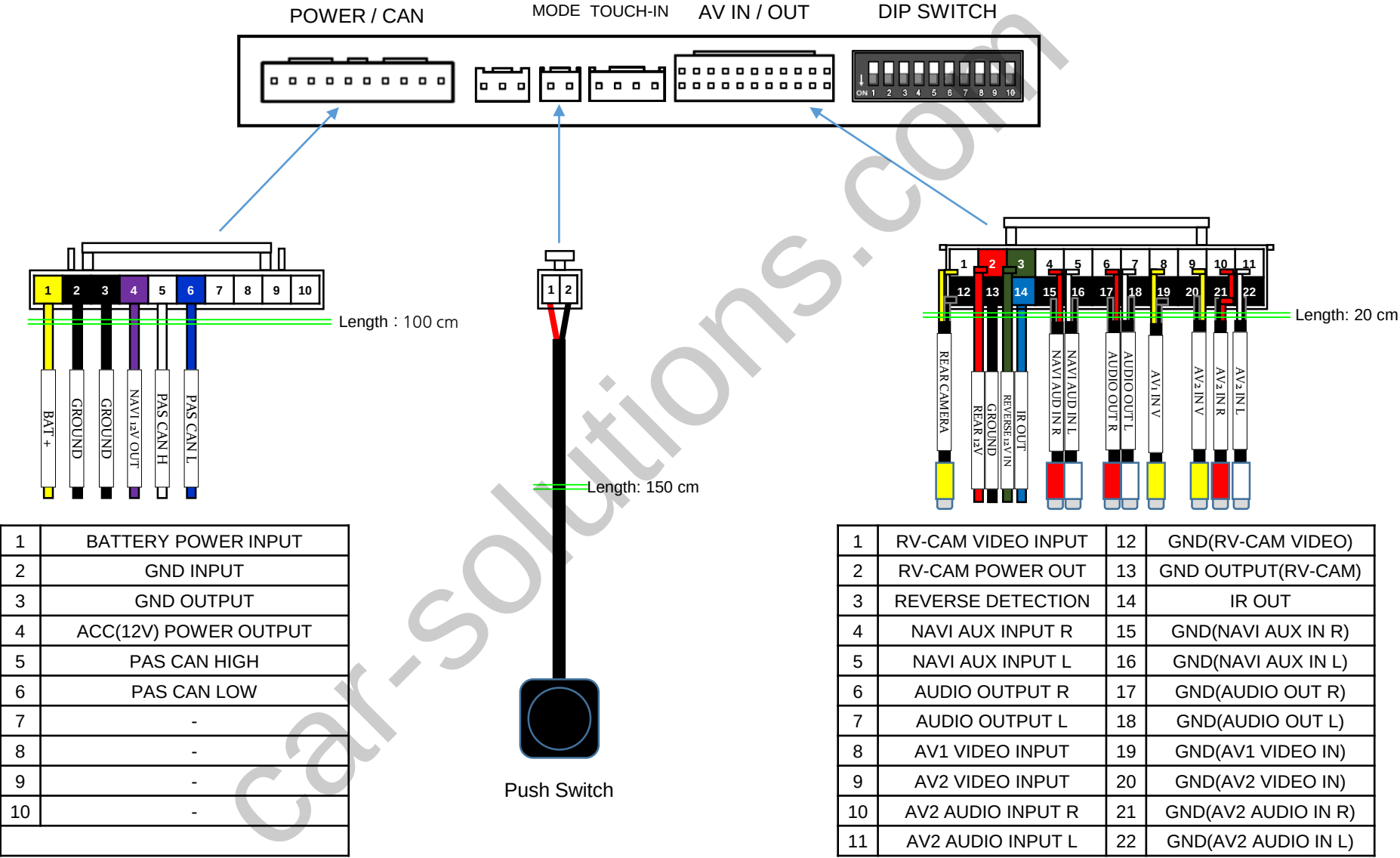


***Hazard Module is just available with 'Smart Drive function of N-Link' navigation in South Korea.**

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Body Connector specifications



Car Compatibility Chart

Car Models	Production Year	Specific Models
1 Series	2012 -	F20, F21
2 Series	2014 -	F22
3 Series	2012 -	F30, F31, F34(3 GT)
4 Series	2014 -	F32, F33, F36
5 Series	2012 -	F10, F11, F07(5 GT)
6 Series	2012 -	F12, F13
7 Series	2012 -	F01, F02
X3	2012 -	F25
X4	2014 -	F26
X5	2014 -	F15
X6	2015 -	F16
Mini Cooper	2014 -	F56



The device is used in combination with BMW iDrive CIC-HIGH(NBT)




The device supports the BMW original screen equipped with '6-pin LVDS round connector' only.

Please check the specification of original LVDS connector on the sidelines of a production year.

Activation by original buttons of BMW



BMW iDrive Controller



MINI iDrive Controller

For BMW & MINI Cooper

Button	Function	Operation	Remarks
1 MENU	Changing Modes	Press the button 2 seconds long.	Order: HDMI → NAVI → AV2 → OEM
1 MENU	Shortcut to each modes	Press the button 2 times. < OEM → NAVI >	
		Press the button 4 times. < OEM → AV2 >	
1 MENU	Back to OEM	Press the button short.	Return to the OEM mode in any modes.
3 OPTION	Enter into the setting menu	Press the button 5 seconds long.	All functions of setting menu is controlled by COMAND controller.
LEFT PUSH	Changing mode to Front View Camera mode(AV1)	Push the button left 2 seconds long.	It changes the screen from any modes to AV1 mode directly.
RIGHT PUSH	Changing mode to PIP(Rear)	Push the button right 2 seconds long. (Only Rear,AV1)	You can use this function only for 3 modes. (Full, PIP Mode1, PIP Mode2)
2 BACK	Reset to factory default setting and power.	Press the button 10 seconds long.	You can use this function when you get in trouble to see the screen while setting the screen.

DIP Switch Settings



Pin No.	ON(▼)	OFF(▲)
1	HDMI Mode	Skip HDMI Mode
2	Navigation Mode	Skip Navigation Mode
3	External Rear View Camera	Original Rear View Camera
4	External Front View Camera(AV1 Mode)	Skip External Front View Camera(AV1 Mode)
5	AV2 Mode	Skip AV2 Mode
6	Selection of car model	
7		
8		
9		
10		

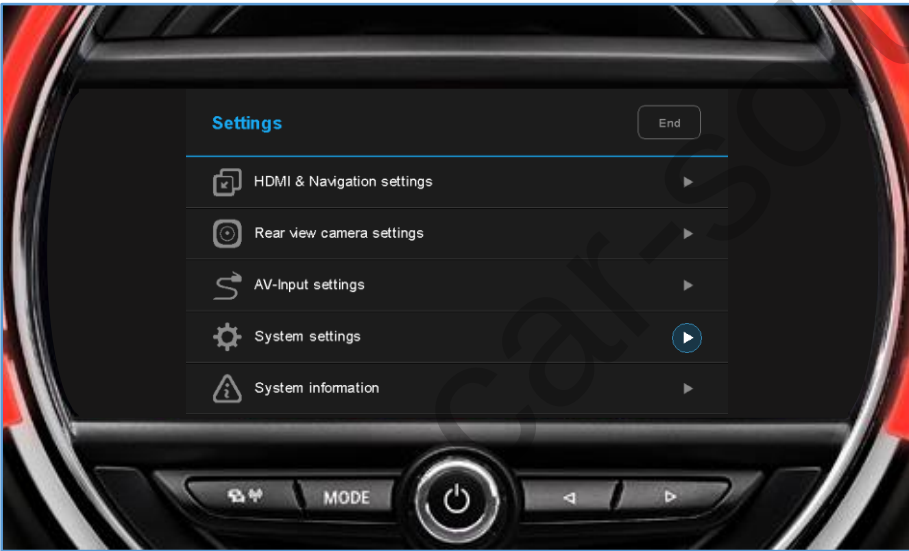
No.6	No.7	No.8	No.9	No.10	Car Models
OFF(▲)	OFF(▲)	OFF(▲)	OFF(▲)	OFF(▲)	5(F10), 6(F12), 7(F01), X5(F15) X3(F25), X4(F26), (10.2인치 / 8.8inch screen) (1280*480 , 800*480 / X1 CUBE Select resolution from the HD-LIN settings screen .Refer to Page.17)
OFF(▲)	OFF(▲)	OFF(▲)	OFF(▲)	ON(▼)	1(F20), 2(F22), 3(F30), 4(F32), (6.5 screen Johnson)
OFF(▲)	OFF(▲)	OFF(▲)	ON(▼)	OFF(▲)	1(F20), 2(F22), 3(F30), 4(F32), (6.5 screen Tpo)
OFF(▲)	OFF(▲)	OFF(▲)	ON(▼)	ON(▼)	Mini Cooper(F56) (8.8 screen)
OFF(▲)	OFF(▲)	ON(▼)	OFF(▲)	OFF(▲)	Mini Cooper(F56) (6.5 screen)

Settings

For BMW & MINI Cooper



Button		Function	Operation
1	OPTION	Enter into the setting menu	Press the button 5 seconds long.
2	BACK	Back to previous menu	Press the button short.
3	Selection	Select the menu and setting values.	Press the button short.
4	Turn the dial counterclockwise	Move the menu-pointer and adjust the setting values.	Move the pointer and setting values to up(↑) and left(←).
5	Turn the dial clockwise	Move the menu-pointer and adjust the setting values.	Move the pointer and setting values to down(↓) and right(→).

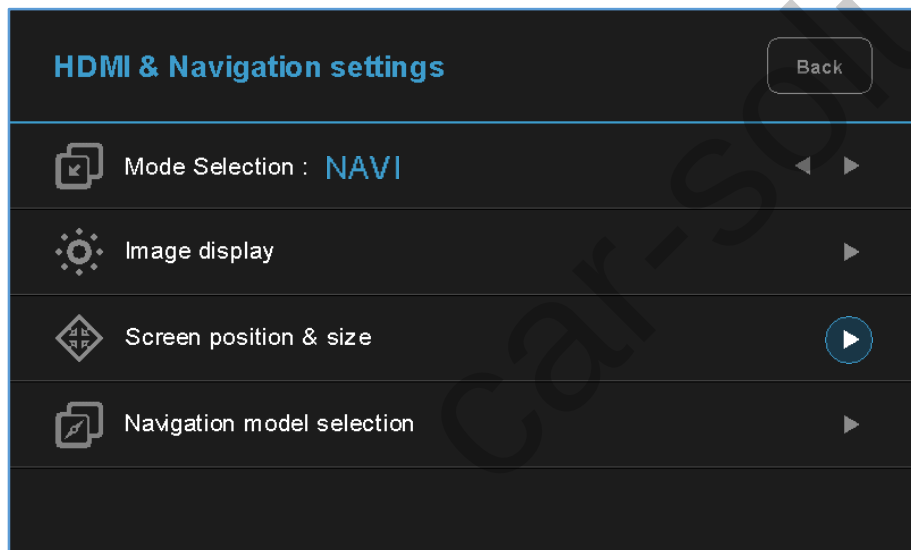
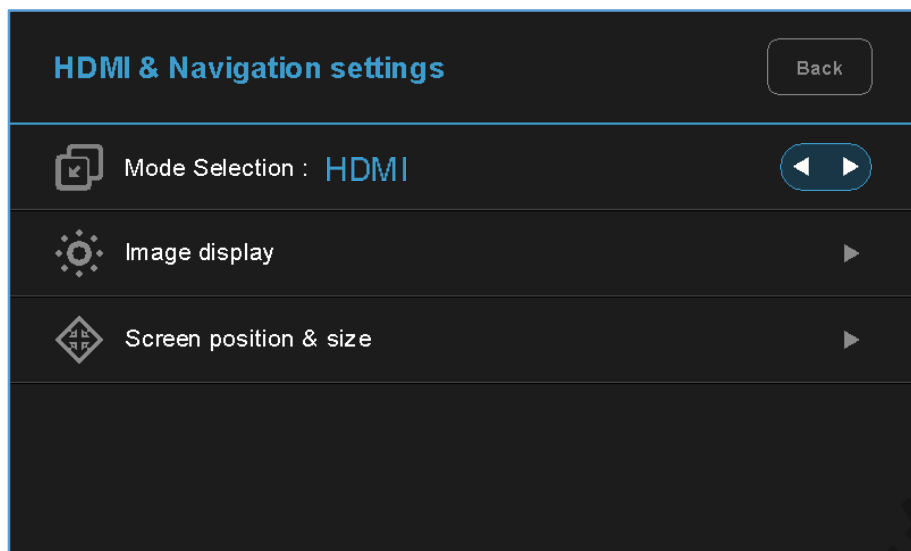


1. Enter into the setting menu.

<Press the 'OPTION' button 5 seconds long.>

- HDMI & Navigation settings
- Rear view camera settings
- AV-input settings
- System settings
- System information

Settings



2. HDMI mode settings

- Mode selection: HDMI ↔ NAVI
- Image display
= Adjust the values of brightness and contrast
Red-Green-Blue colors of HDMI display.
- Screen position & size
= Entry Disabled / Not applicable.

3. NAVI mode settings

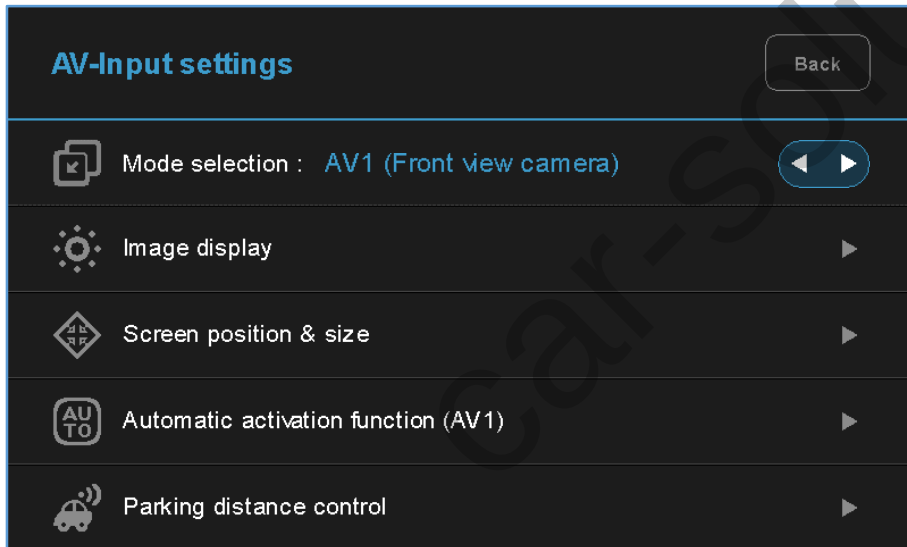
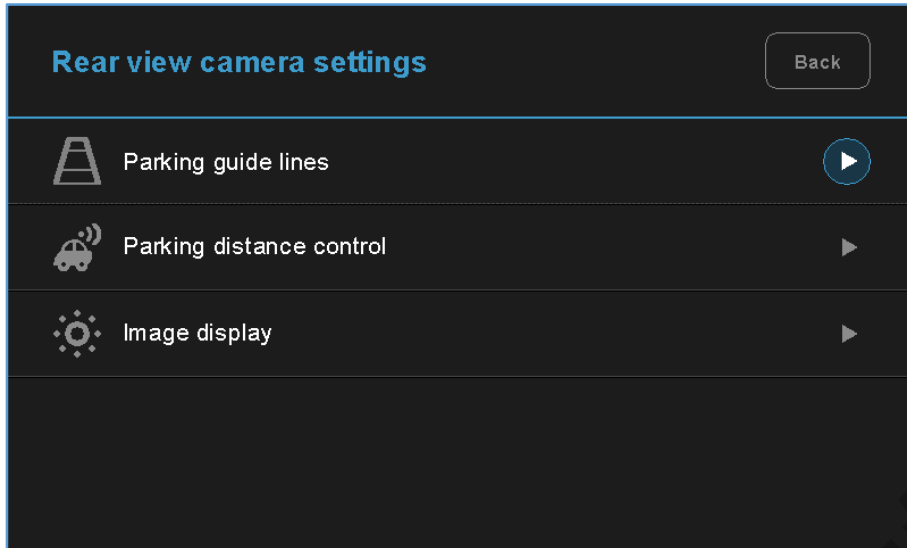
- Mode selection: NAVI ↔ HDMI
- Image display
= Adjust the values of brightness and contrast
Red-Green-Blue colors of NAVI display.
- Screen position & size
= Entry Disabled / Not applicable.
- Navigation Resolution selection

① 800 X 480

② 1280 X 480

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Settings



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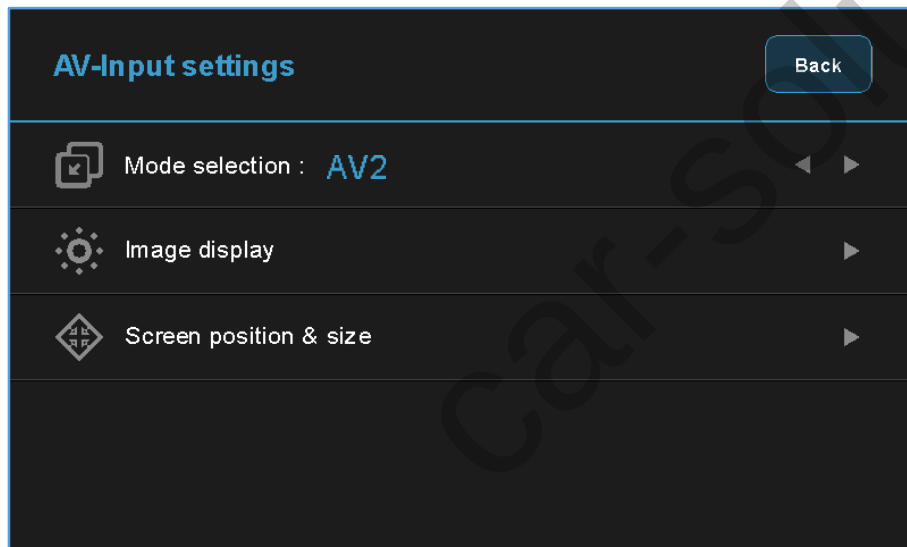
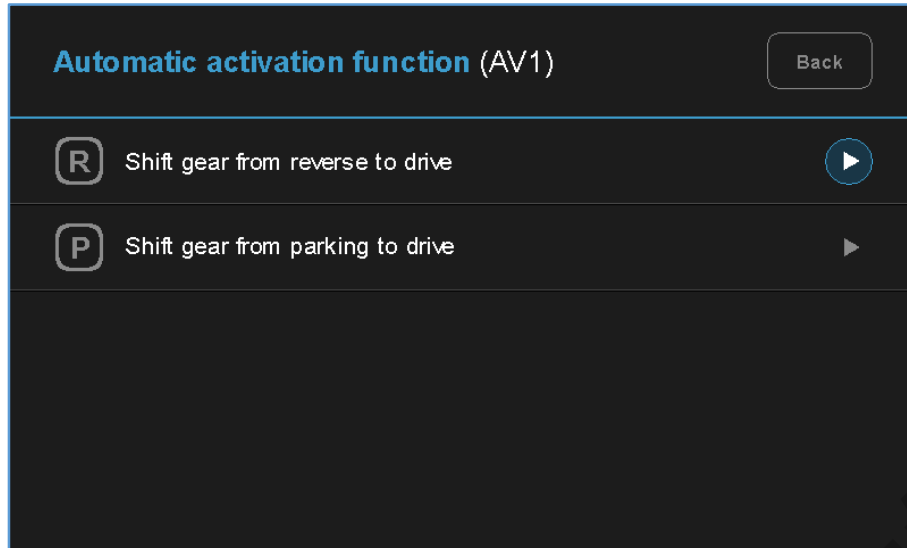
4. Rear view camera settings

- Parking guide lines
= Adjust position of parking guide lines and select the lines 'ON or OFF'.
- Parking distance control
= Adjust the position of parking distance control sensors to 'LEFT or RIGHT' and select the PDC 'ON or OFF'.
- Image display
= Adjust the values of brightness and contrast Red-Green-Blue colors of Rear view camera display.

5. AV1(Front view camera) settings

- Mode selection: AV1(Front view camera) ↔ AV2
- Image display
= Adjust the values of brightness and contrast Red-Green-Blue colors of AV1(Front view camera) display.
- Screen position & size
= Entry Disabled / Not applicable.
- Automatic activation function(AV1)
= * Please refer to next page.
- Parking distance control
= Adjust the position of parking distance control sensors to 'LEFT or RIGHT' and select the PDC 'ON or OFF'.

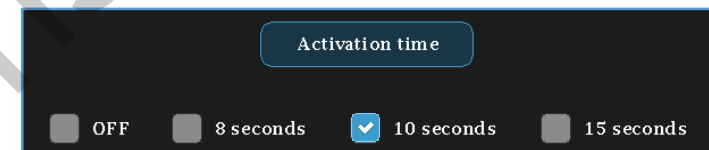
Settings



6. Automatic activation function(AV1)

- Shift gear from reverse to drive
- Shift gear from parking to drive

* When you shift gear 'from reverse to drive' or 'from parking to drive', it just works automatically during the activation time you selected.



7. AV2 settings

- Mode selection: AV2 ↔ AV1(Front view camera)
- Image display
= Adjust the values of brightness and contrast
Red-Green-Blue colors of AV2 display.
- Screen position & size
= Entry Disabled / Not applicable.

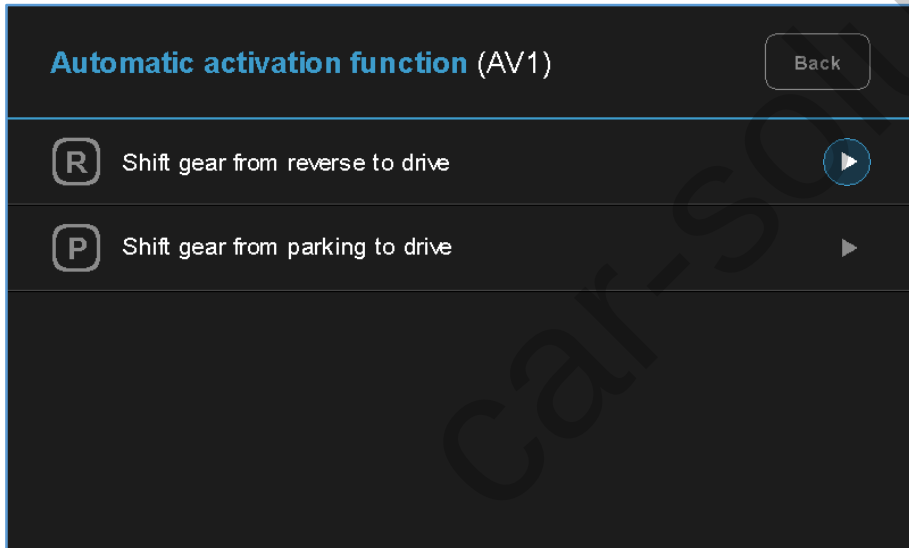
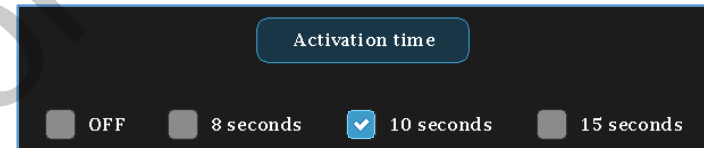
Settings (SURROUND VIEW OPTION)



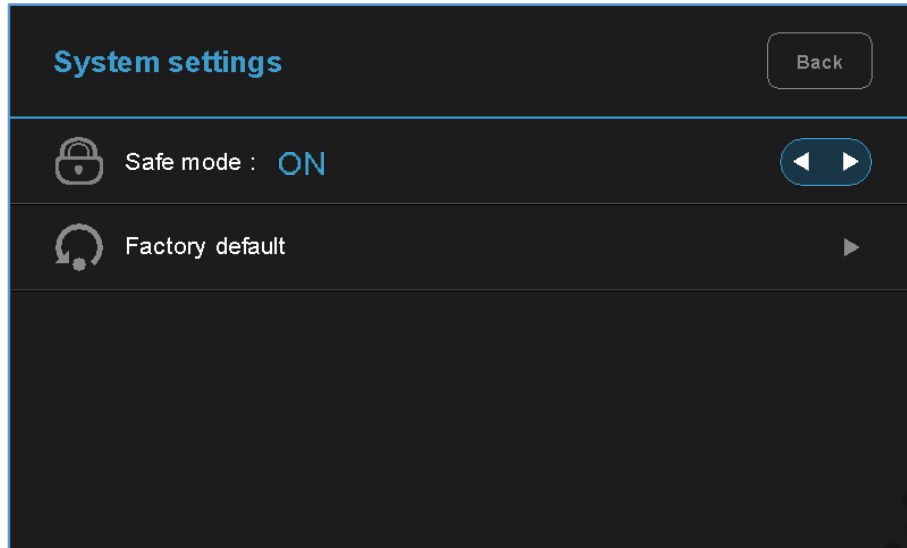
Keep the rear camera view

- Shift gear from reverse to drive
- Shift gear from parking to drive

* When you shift gear 'from reverse to drive' or 'from parking to drive', it just works during the activation time you selected.



Settings

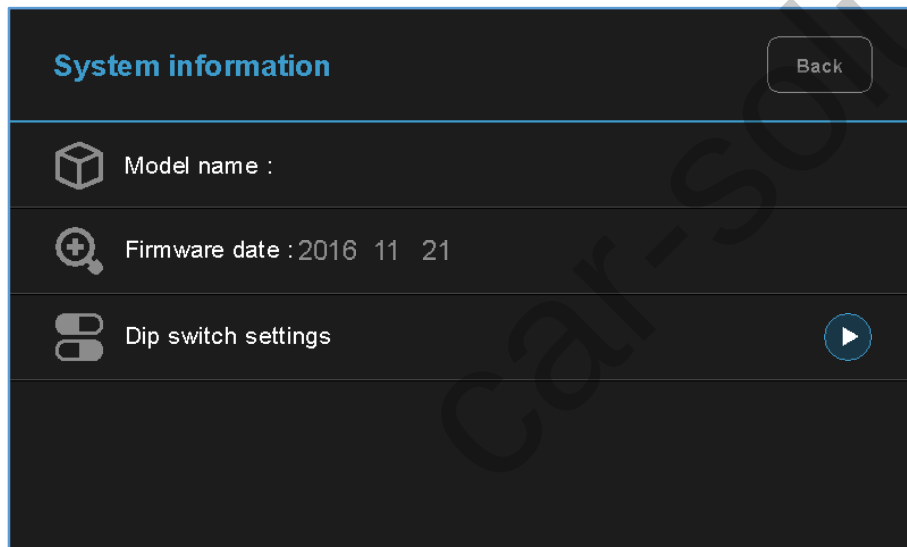


8. System settings

- Safe mode
= Select the one of two between 'ON and OFF'.

* If you select 'ON', 3 modes(HDMI, NAVI and AV2) will be faded out when the car is driven.

- Factory default
= Reset all setting values to factory default setting.



9. System information

- Firmware date : 2016 – 11 – 21 (Latest firmware date)
- = You can check the current firmware version date.
- Dip switch settings
= You can check the current positions of dip switch settings.

Settings

System information - Dip switch settings

Back

ON

OFF

1

2

3

4

5

6

7

8

8

9

10

No. 1

HDMI

ON

No. 2

Navigation

ON

No. 3

External rear view camera

ON

No. 4

AV1

ON

No. 5

AV2

OFF

No. 6

Selection of car model

ON

No. 7

OFF

No. 8

OFF

No. 9

OFF

No. 10

ON

ex 1)
Actual DIP switch values. (→)



Appears on the setting menu. (↓)

No. 1	HDMI	ON
No. 2	Navigation	OFF
No. 3	External rear view camera	ON
No. 4	AV1	ON
No. 5	AV2	OFF
No. 6	Selection of car model	OFF
No. 7		ON
No. 8		OFF
No. 9		ON
No. 10		OFF

10. Information of Dip switch settings

* You can check the current positions of dip switch settings.

ex 2)
Actual DIP switch values. (→)



Appears on the setting menu. (↓)

No. 1	HDMI	ON
No. 2	Navigation	ON
No. 3	External rear view camera	OFF
No. 4	AV1	ON
No. 5	AV2	OFF
No. 6	Selection of car model	ON
No. 7		OFF
No. 8		OFF
No. 9		OFF
No. 10		OFF