



**EMERALD**  
MOBILE INTEGRATIONS

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# QPI BM12 V1.4

Specification & Installation

# Warning / Caution

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## Warning

- When installing the main unit, do not remove or alter existing vehicle fasteners, including nuts, bolts, screw, clips, and fittings. Never detach, move or alter existing vehicle wiring, including electrical grounds and straps. Alteration of existing vehicle components may make vehicle unsafe to operate. Should be no any electronic devices or magnetic pole around installation place.
- Air bags are vital part of a safety system. Never install main unit in a way which will alter air bag wiring or interfere with air bag deployment. Air bags must function properly in the event of an accident.
- Before installing, check the location of pipe, tank, electrical cables and others.
- Read and follow the instruction manual.
- Wiring location must not interfere driving, get in or out from car.
- Use electrical tape to insulate the ends of all wires, even if they are not used. Proper insulation prevents arcs, shocks and fires.
- When installation is complete, test all vehicle electrical systems to ensure they operate correctly, including lights, horn, brake lights, and emergency flashers.
- According to our sales policy, any problems caused by user's mistake, careless can not be guaranteed.



## Caution

- All steps of installation should be done by well-trained specialist.
- During installation ignition key should be taken off and after all installation finish connect power cable with interface for the last step.
- Do not install the main unit in places where it ma be exposed to dew condensation (around the air conditioning hose, etc), or in locations where it may come in contact with water, high levels of moisture, dust or oily smoke
- Install wiring in a manner in which cables will not come in contact with metal parts. The wiring may be damaged by contact with metal parts, resulting in fire and shocks. Avoid all contact with hot surfaces when wiring the main unit. High temperatures may damage wiring, causing shorts, arcing and fires.
- Kindly check all parts are in the box, when receiving the product, if anything missing, inform to the supplier or manufacturer.

# 1. Specifications

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## 1.1 Main Specifications

### 1. Car Compatibility

BMW New 1,3,5,7 series 6.5'' & 8.8'' & 10.2''

### 2. Components

Interface\* 1EA

### 3. MULTIMEDIA INTERFACE input specification

3 \* A/V input (video external input)

1 \* CVBS(Rear Camera) input

1 \* Analog RGB input (Navigation system output)

1 \* LCD input (Car system input)

### 4. MULTIMEDIA INTERFACE output specification

1 \* LCD output

### 5. Power specification

Input power : 8VDC ~ 18VDC

Consumed power : 5WATT

### 6. Switch input mode

- External display skip function : through DIP switch, can control each video input
- Through remote control, can change input mode
- Through CAN or rear lamp cable, rear camera can be detected

# 1. Specifications

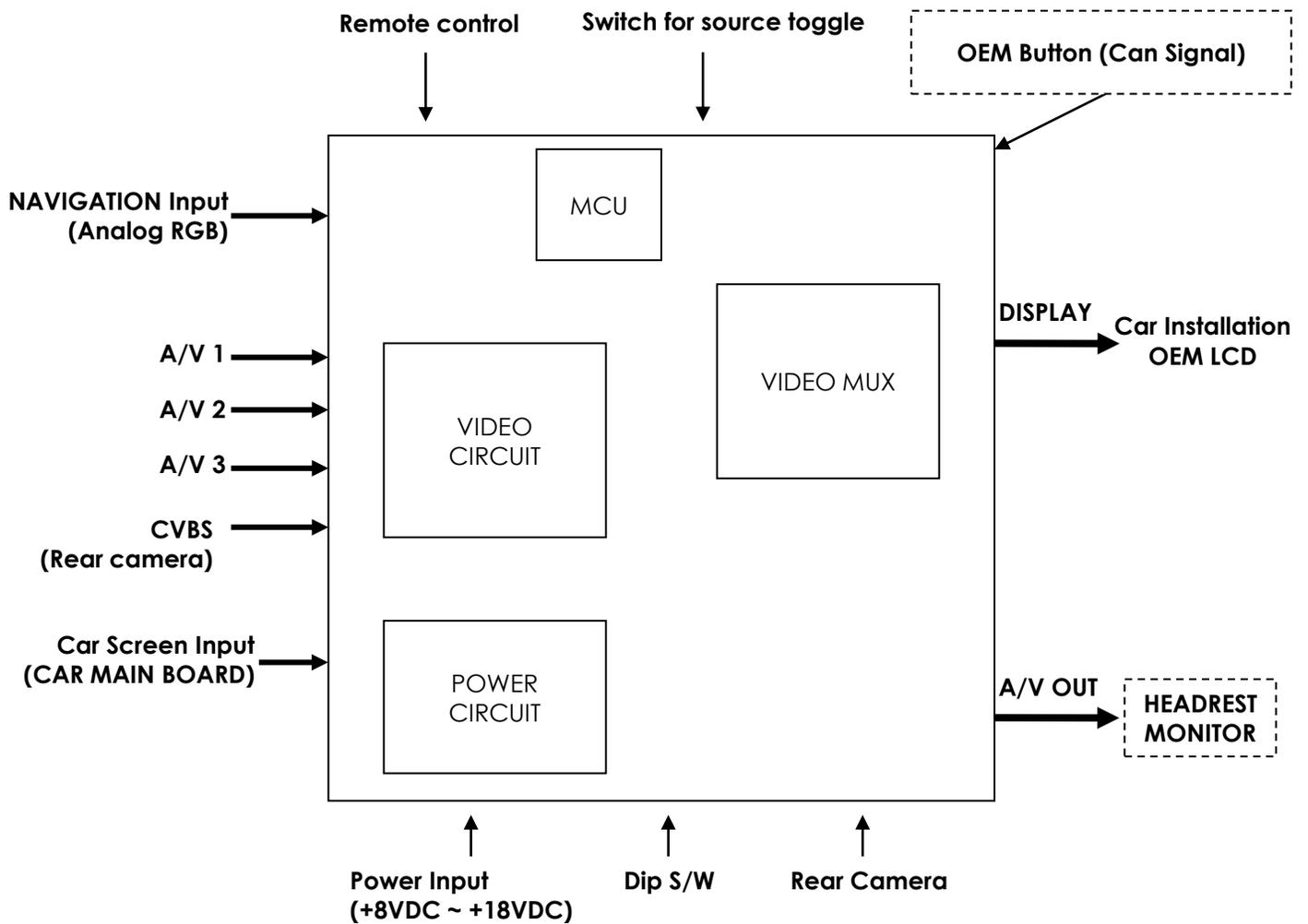
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## 1.2 Features

- Easy installation through connection with commander
- Able to control NAVI, DVD, DTV function by using I-Drive Controller
- Able to adjust DVD, NAVI display on screen
- Improved Screen Display (user-oriented interface)
- Mode change through original button (I-DRIVE MENU BUTTON)
- Provide power cable to connect with rear camera
- Support PIP display – show original Navi and other source display at the same time (Picture in Picture)
- Dynamic PAS(Parking assistance system), moving parking line according movement of steering wheel

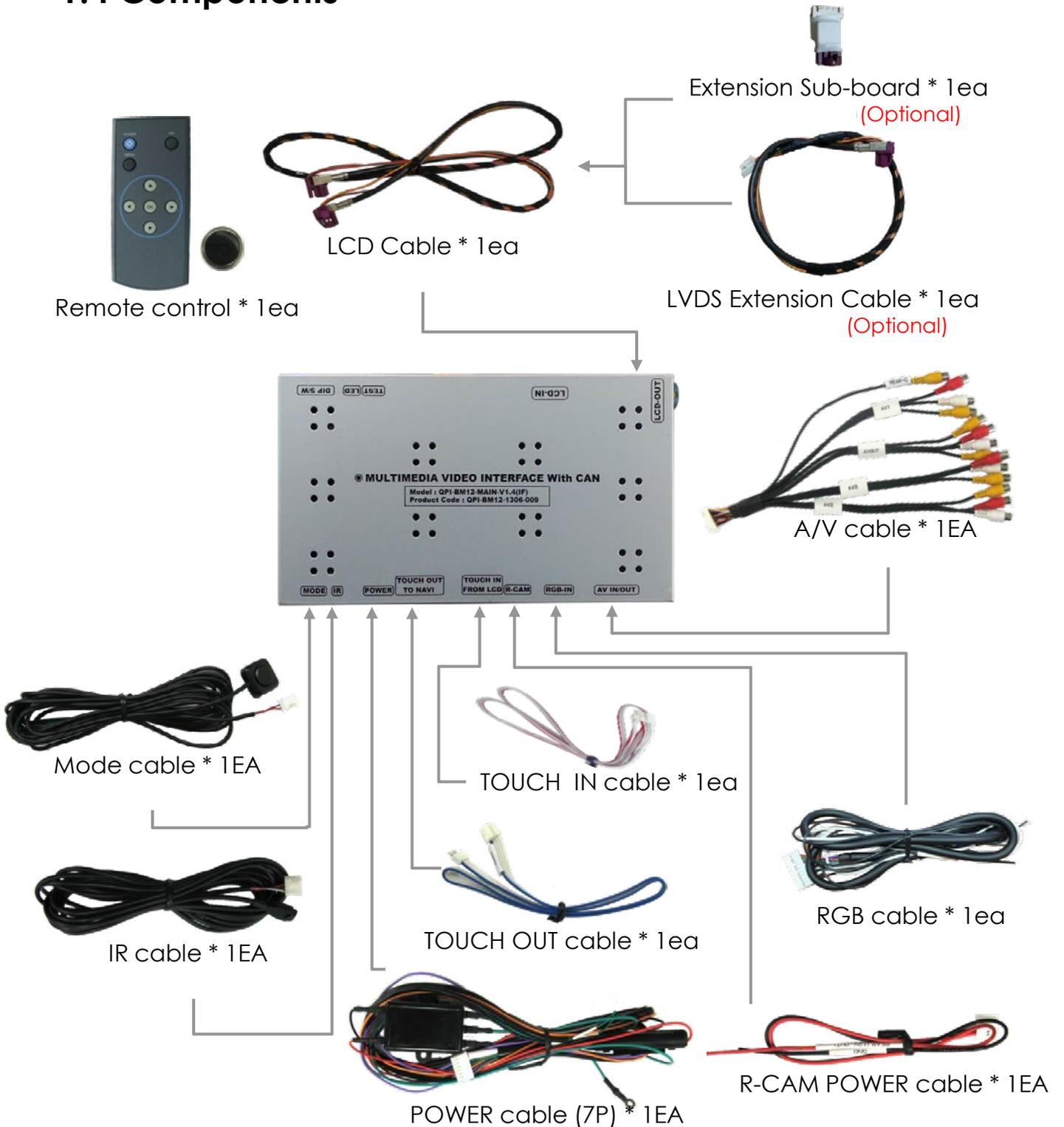
# 1. Specification

## 1.3 System Diagram



# 1. Specification

## 1.4 Components

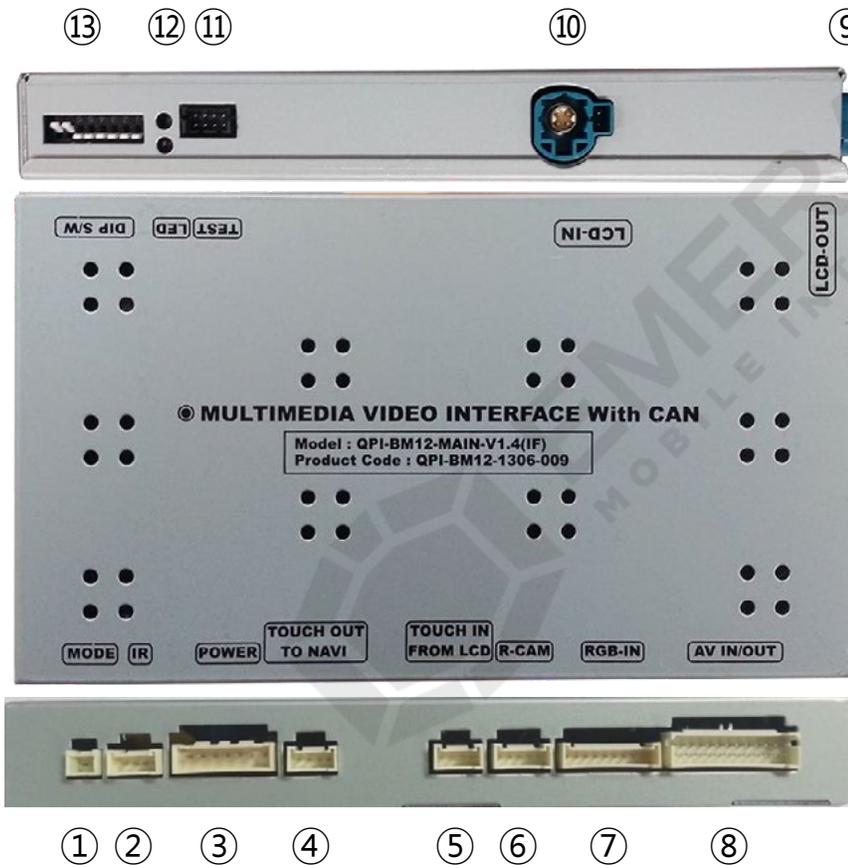


# 1. Specifications

## 1.5 Exterior

### Dimension

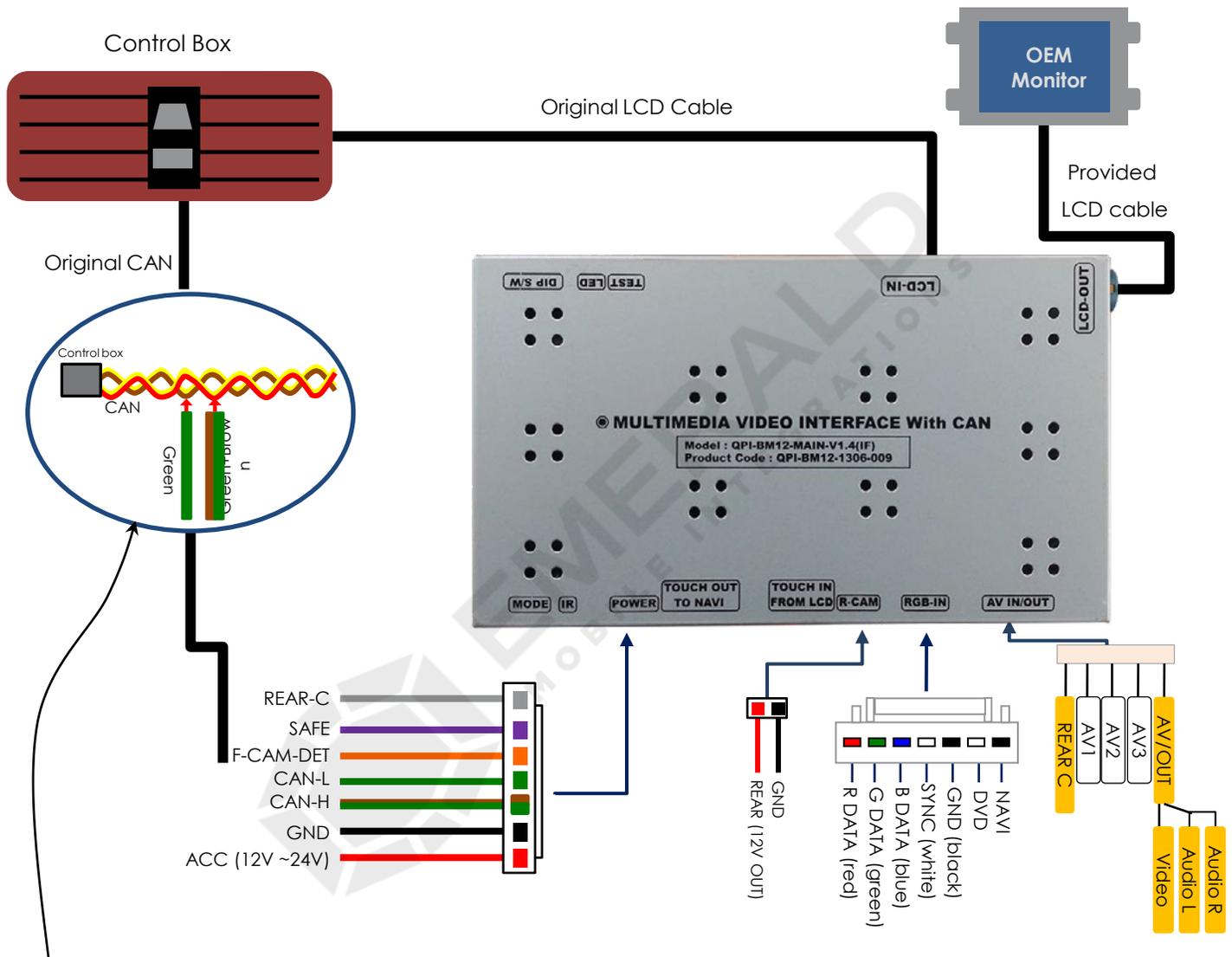
Width 150.4mm  
 Length 99.4mm  
 Height 2.3.2mm



- ① MODE
- ② IR
- ③ POWER
- ④ TOUCH OUT TO NAVI
- ⑤ TOUCH IN FROM LCD
- ⑥ R-CAM
- ⑦ RGB-IN
- ⑧ AV IN/OUT
- ⑨ LCD-OUT
- ⑩ LCD-IN
- ⑪ TEST
- ⑫ LED
- ⑬ DIP S/W

# 2. Installation

## 2.1 Installation Diagram

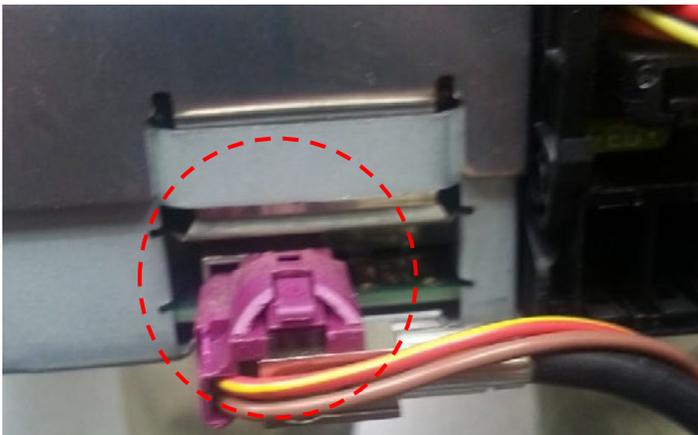


※ Connect Interface CAN High (green + brown) with car's yellow + red cable.

※ Connect Interface CAN Low (green) with car's yellow + brown cable.

# 2. Installation

## 2.2 Installation / Monitor and Interface connection



① See left picture. Remove original LCD cable from monitor and connect with provided LCD cable.

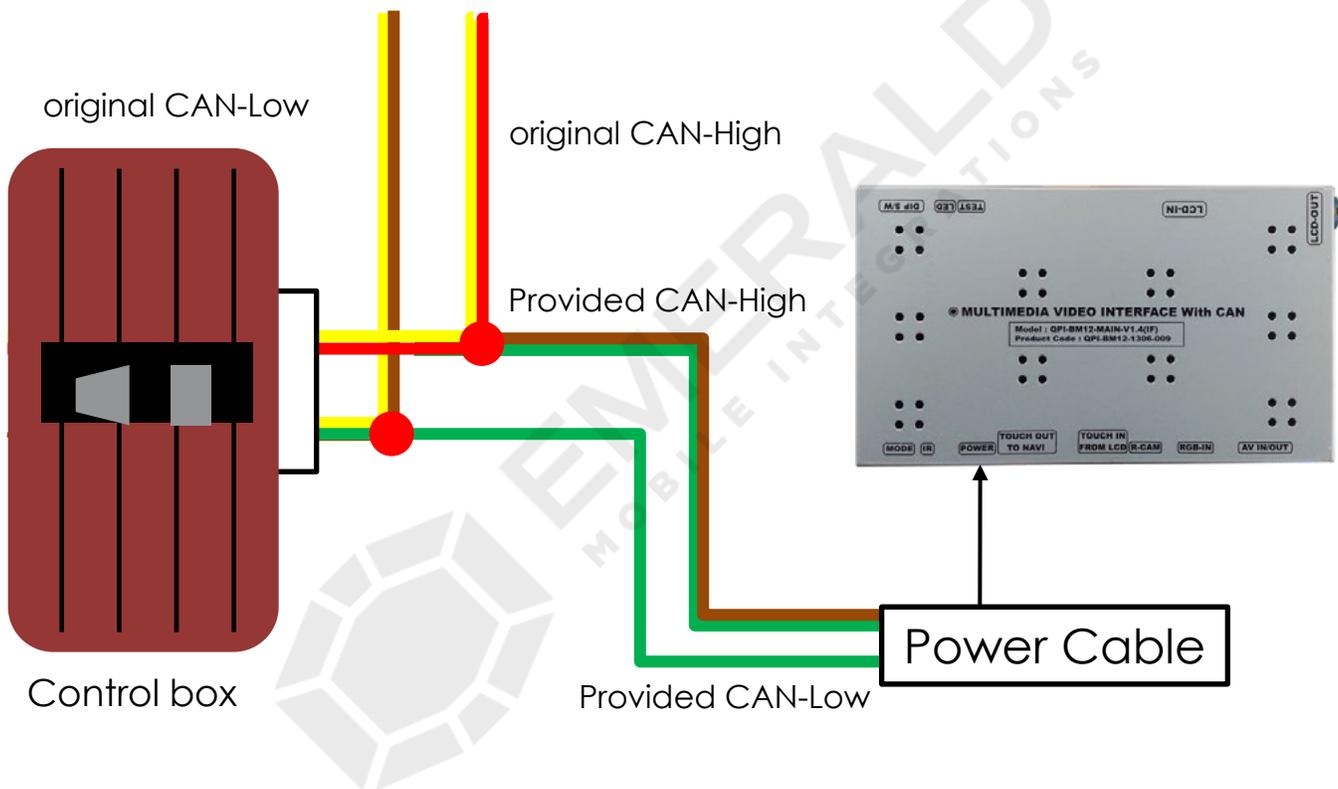


② Connect the original LCD cable with LCD-IN on the interface.

**\* Precaution : Do not connect power cable with accessory power, connect with backside of command or cigar jack.**

## 2. Installation

### 2.2 Installation / connect CAN cable



See picture above. Connect provided CAN-H cable (green + brown) with original CAN-H cable (yellow + red). Connect CAN-L cable (green) with original CAN-L cable (green + brown).

# 3. Settings

## 3.1 DIP Switch

- ※ Example DIP S/W usage
  - Use input mode : A/V2, A/V3
  - Use original navigation
  - External rear camera



※ ON : DOWN / OFF : UP  
 Default : DIP S/W 8 OFF

- ▷ DIP S/W : 1,2 → ON (hide INPUT MODE)
- ▷ DIP S/W : 3 → OFF (A/V2 display)
- ▷ DIP S/W : 4 → OFF (A/V3 display)
- ▷ DIP S/W : 5 → OFF (8.8" & 10.2")
- ▷ DIP S/W : 6 → OFF (Standard PDC model)
- ▷ DIP S/W : 7 → ON (display external rear cam)
- ▷ DIP S/W : 8 → OFF

PIN	Function	Dip S/W Selection
1	Displaying RGB input	ON : RGB mode skip OFF : RGB mode display
2	Displaying A/V 1	ON : A/V 1 mode skip OFF : A/V1 mode display
3	Displaying A/V 2	ON : A/V 2 mode skip OFF : A/V2 mode display
4	Displaying A/V 3	ON : A/V 3 mode skip OFF : A/V3 mode display
5	Setup of monitor size	ON : 6.5" OFF : 8.8", 10.2"
6	Setup of car type	ON : Solid GUI model OFF : Standard GUI model
7	Setup of rear camera use	ON : CVBS4 OFF : MAIN
8	Reset factory settings (not use for user)	ON : Product factory reset OFF : DEFAULT

# 3. Settings

## 3.2 Remote Control



### ▪ What is Hot Key function ?

You can use this function via pressing number “1” button next to the radio button. You can change audio source to the external AUX with this function. (original function of BMW) Our device let it change to an external video source for driver to use this function via this button. So, you can change sources (audio<->video) by pressing this button without any other install process.

<i>Key</i>	<i>Function</i>
POWER & PIP	Unavailable
MENU	Activating OSD menu
OK	Making a selection, changing image display
▲	Moving upward (If you press this button 2 seconds long, “Hot key” function will activate/ deactivate.)
▼	Moving downward
◀	Moving leftward (If you press this button 2 seconds long, you can access the factory mode.)
▶	Moving rightward (If you press this button 2 seconds long, you can reset all the data about user environment.)

# 3. Settings

## 3.3 Car Model and Navi Model

FACTORY mode – Press ◀ button 2 seconds long on the remote control.

### ▪ Setup for car model



### ▪ Setup for navigation

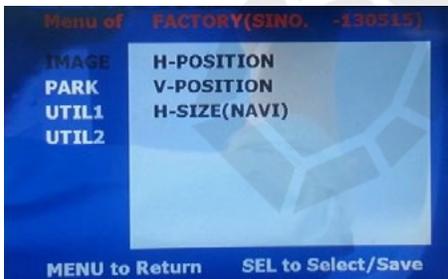


#### ☐ UTIL1 - CAR MODEL

Selecting model of the car

F20 : 1, 3, 5, 7 series 6.5" & 8.8"  
New UI 8.8" 10.2"

**\* Set pin#5 of DIP switch to the right size of the monitor after selecting model of the car. (Refer to page9.)**



#### ☐ IMAGE

Adjust navigation position and size

H-POSITION : Move display horizontally  
V-POSITION : Move display vertically  
H-SIZE : Adjust navi size horizontally

#### ☐ UTIL1 – NAVI MODEL

Definition of the navigation resolution

DEFAULT : default, 400X234, low resolution

KD-900(WVGA) : 800x480 in high resolution, for Chinese

LS-901 (WQVGA) : 800x480 in high resolution, for Chinese, Taiwan

WP9200(WVGA) : 800x480 in high resolution, for Israel

GI-8000N 3D(WVGA) : 800x480 in high resolution, for Korea

GI-5000A(WVGA) : 800x480 in high resolution, for Korea

I-ONE(WVGA) : 800x480 in high resolution, for Korea

HDMI (when SMI installed):  
800x480 in high resolution

**\* Go into FACTORY/ IMAGE (as shown right) and adjust the position and the size of the navigation after setting the definition of the navigation**

# 3. Settings

## 3.4 FACTORY Mode

FACTORY mode – Press ◀ button 2 seconds long on the remote control.



### ☐ UTIL1 – AVOUT SELECT

Selecting background sound  
After  
returning navigation or original  
mode

DEFAULT : Selecting AV sound  
just before changing  
navigation or original mode  
from the AV mode

AV 1~3 : Sound of the selected  
AV source 1~3

### ☐ UTIL1 - FACTORY RESET

FACTORY MODE RESET

# 3. Settings

## 3.4 FACTORY Mode

FACTORY mode – Press ◀ button 2 seconds long on the remote control.



**UTIL2 - I\_DRV REMOTE**

Choose DTV and navi model to be control I\_DRV function

- LI-1DISC
- NEC-6DISC
- USER(when using IR MEMORY)

- **Select navigation model:**  
Setting on RGB Mode
- **Select DVD model :** Setting on A/V mode

**UTIL2 - I\_DRV CONTROL**

Selecting whether to use I\_DRV function or not

ON / OFF

# 3. Settings

## 3.4 FACTORY Mode

FACTORY mode – Press ◀ button 2 seconds long on the remote control.



### UTIL2 – IR MEMORY

To register DVD, DTV remote control, the remote control value must be registered and can be control with I-Drive

※ To use this function, in I\_DRV- I\_DRV REMOTE select USER mode

DVD / DTV

### UTIL2 – HANDLE KEY

Whether to use voice button on handle for mode change

ON / OFF



### UTIL2 – MEMORY KEY

Whether to use car audio button #8 (mode change + aux change)

ON / OFF

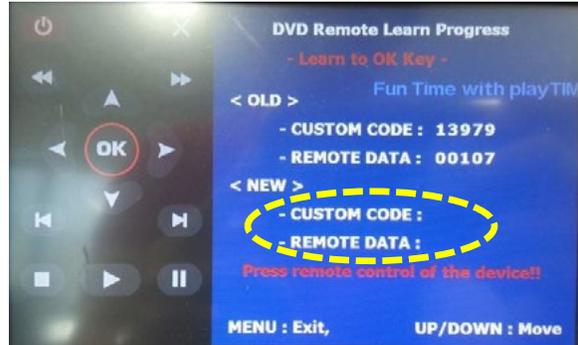
### UTIL2 – CALIBRATE

Touch Calibration

YES / NO

# 3. Settings

## 3.5 DVD, DTV I-DRIVE input



- ① First of all, press ◀ button on remote controller 2 seconds long or press UP→DOWN→UP→MENU button in order to access Factory mode. Choose IR MEMORY on I-DRV.

In IR MEMORY, you can choose AV source of DTV and DVD you want to use.

- ② Picture above shows DVD remote control button value input, select menu you want to save. (To register DVD remote control button value, select IR MEMORY – DTV and follow below instructions.

Example)

- a. After select OK button on OSD menu, press intended I-Drive button
- b. Indicated part above will flicker, and press POWER on DVD remote control.  
(continue to next page)

### What is IR-MEMORY Mode?

Is to allow I-Drive to control other DVD or DTV (besides the existing,; for example : SANYO, NECVOX) by register remote control value.

# 3. Settings

## 3.5 DVD, DTV I-DRIVE input



example) continued..

- c. The values that you registered will appear as green text in the marked area on pressing the button. And the values will be saved automatically.
- d. Register remain buttons' value in OSD menu like the above-mentioned.

- ③ After register, select "INPUT" in OSD menu and press "OK". Then you can see confirmation window as shown above. At the moment, if you choose "YES", all the values that you entered will be saved. If you select "NO", the values won't be saved.

(If data is saved, DVD TYPE and DTV TYPE will be changed to "USER" automatically.)

If you see "SUCCESS" on screen, the data is saved clearly and you can control DVD via touch screen. BUT, you MUST change the option in DVD(DTV)/UTIL/FACTORY to "USER".

# 3. Settings

## 3.6 Original Button Usage/ 6.5"



**I-Drive Button (6.5")**

<i>Mode</i>	<i>Key</i>	<i>Operation</i>	<i>Function</i>
Whole mode	TEL	Press longer	Change mode
		Press shorter	Go back to Original image
	MENU	Press shorter	Making Selection
		Press shorter	Change mode
	Audio Button #8	Press shorter	Change mode + Change Car Aux
Reverse mode	 (Steering wheel)	Press shorter	Operate PIP function

# 3. Settings

## 3.6 Original Button Usage / 8.8"



**I-Drive Button (8.8")**

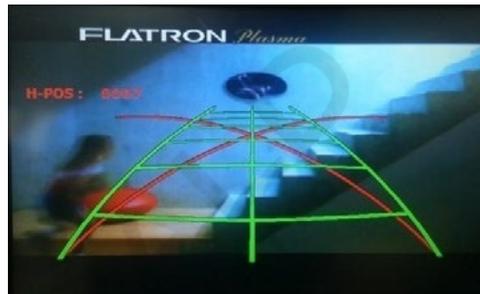
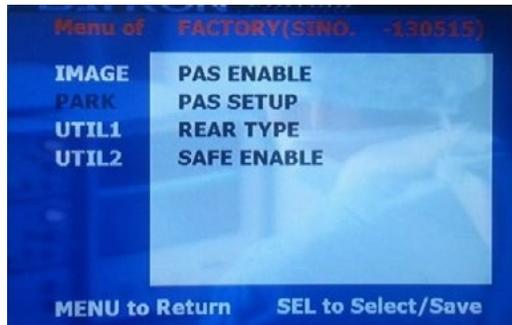
<i>Mode</i>	<i>Key</i>	<i>Operation</i>	<i>Function</i>
Whole mode	MAP	Press longer	Change mode
		Press shorter	Go back to Original image
	MENU	Press shorter	Select
		Press shorter	Change mode
	Audio Button #8	Press shorter	Change mode+ Change Car Aux
AV1 AV2 AV3	▽	Press this button in the direction of 6 O'clock	Activating PIP function
Reverse	▽	Press this button in the direction of 6 O'clock	Activating PIP function

# 3. Settings

## 3.7 Rear Camera

FACTORY mode – Press ◀ button 2 seconds long on the remote control.

※ After installing rear camera : DIP S/W #7 must be put down (ON). Refer to page 9.



### □ PARK

PAS ENABLE : Selecting whether to display the parking guide line or not on rear gear (default : ON)

PAS SETUP : Adjusting the position of the parking guide line (available in PARK SETUP-> V-POSITION, H-POSITION)

REAR TYPE : Choose rear camera recognition

- \* LAMP - Detecting the rear view camera via rear lamp (Installer must connect "Rear-C" cable of the power cable to the rear lamp of the car.)
- \*CAN - Detecting the rear view camera by CAN signal (Installer must connect "CAN" cable of the power cable to the "CAN" cable of the car.)

SAFE ENABLE : If your car is connected with CAN cable and it is in "ON" state, you can NOT watch DVD or A/V except original image or navigation while driving. At that time the screen get back to the main (default : OFF)

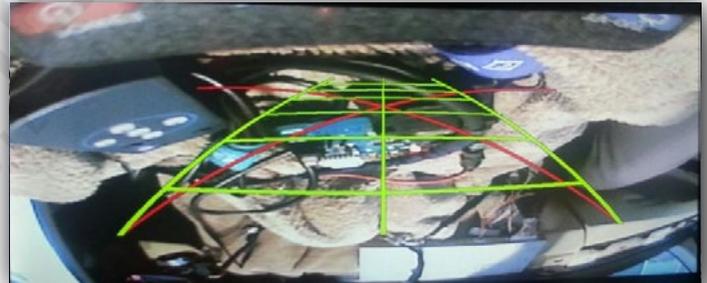
- a. If you want to get to the FACTORY mode, set the gear as rear state and press "LEFT" button 2 seconds long on the remote control or the keypad. (as shown left top)
- b. b. If you set 'PARK ENABLE' as "ON" state, there will be the rear view parking guide line. (as shown right top)

# 3. Settings

## 3.7 Rear Camera / 6.5"

### Rear display setting

1 series : Press shortly  on steering wheel, to select rear camera screen and PIP screen



< Rear camera full screen >



< PIP screen >

# 3. Settings

## 3.7 Rear Camera / 8.8"

### Rear display setting

1 series : Press  button about 2 seconds long on I-Drive and select one among 4 options.



< Rear camera full screen >



< PIP screen >

※ For PDC solid, set DIP S/W 6 ON



< Rear camera full screen >



< PIP screen >

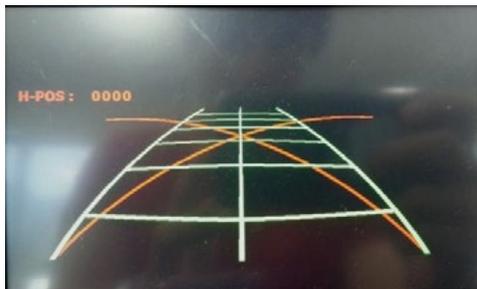
# 3. Settings

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## 3.8 Rear Parking Guidelines

Go to Factory Menu, choose PAS SETUP, by using OK button change H-POS → V-POS

### □ H-POS



In H-POSITION, use ◀, ▶ on remote control, to adjust parking guideline left and right.

### □ V-POS



In V-POSITION use ▲, ▼ on remote control, to adjust parking guideline up and down.

# 3. Settings

## 3.9 OSD (On Screen Display) / Analog RGB Mode



### ☐ IMAGE

- \* BRIGHTNESS
- \* CONTRAST
- \* SHARPNESS

### ☐ OSD

- \* LANGUAGE : Set OSD language (only support English and Chinese)
- \* TRANS : Adjust OSD transparency
- \* H-POSITION : Move OSD horizontally
- \* V-POSITION : Move OSD vertically



### ☐ UTIL

- \* FACTORY RESET  
: Factory reset only for OSD function (unable reset video position)

# 3. Settings

## 3.9 OSD (On Screen Display) / Video Mode

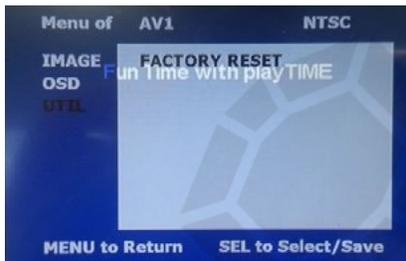


### □ IMAGE

- \* BRIGHTNESS
- \* CONTRAST
- \* SATURATION
- \* HUE
- \* SHARPNESS

### □ OSD

- \* LANGUAGE : Set OSD language (only support English and Chinese)
- \* TRANS : Adjust OSD transparency
- \* H\_POSITION : Move OSD horizontally
- \* V\_POSITION : Move OSD vertically



### □ UTIL

- \* FACTORY RESET  
 : Factory reset only for OSD function  
 (unable reset video position)

## 4. Trouble Shooting

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**Q. I cannot change mode**

- A. Check connection of Ground cable and IR Cable.  
Check LED lamp is on, if not check connection of POWER cable.

**Q. All I got on the screen is black.**

- A. .Check second LED lamp of the interface is on, if not, check A/V sources connected are working well.  
(Second lamp indicates AV sources connected works well.) Check interface connection has been done well.

**Q. Displayed image color is not proper (too dark or unsuitable color)**

- A. Try to select "INITIAL" in OSD menu, if it does not work, inform to manufacturer.

**Q. I cannot watch the rear camera on the screen**

- A. Set the DIP switch #7 as state "ON".

**Q. Set mode not appear**

- A. Check DIP Switch.

**Q. OEM image is not displayed.**

- A. Check interface's LCD In/Out cable connection. If the status keeps on, inform to manufacturer.

**Q. Screen only displays white color.**

- A. Check LCD out cable is connected well, if this status keeps, inform to manufacturer.

**Q. Show PIP function via handle button, and original screen appear half only.**

- A. This is not because of faulty interface, please check original monitor split function settings.

**Q. After connect CAN cable, set gear "P", video doesn't appear.**

- A. Go to "FACTORY MODE" and check "UTIL-Rear Select". Change "LAMP" settings to "CAN" with remote control.  
※ LAMP : In case of connecting "Rear-C" wire of Power Cable to Rear Lamp in vehicle.

## Customer Service

At Emerald we want to make sure that you are completely satisfied, therefore we have assembled qualified associates to assist you. Our normal operating hours are Monday - Thursday 8:00 AM - 6:00 PM and Friday 8:00 AM - 4:00 PM (Pacific Standard Time).

Call us Toll Free: 844-333-3903

Email us: [support@emeraldintegrations.com](mailto:support@emeraldintegrations.com)

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## Returns

At Emerald Integrations, we want to make sure that you are completely satisfied. If for some reason you aren't happy with an item on your order and want to return it, we make returns and refunds extremely simple. You can return most orders within 30 days of its shipment for a full refund, exchange, or store credit using our RMA process, for more details on returning a product check the Returns page under the Policies section. After your 30-Day Money-Back Guarantee, if your item is defective, rest assured items found to be defective or non functioning can easily be exchanged through the warranty department for a claim. Please check the Warranty Information page for details

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## Warranty

Emerald Integrations understands that there are minor chances that electronics can fail and defects happen, in the event that this occurs, Emerald Integrations is here to help you quickly resolve your defect for a full year of 1-Year Warranty Coverage. Unlike others who push you to a manufacturer service center that can be slow and unresponsive, we're here to help with the repair or replacement you need. To begin the process, follow the instructions on the returns page at [www.emeraldintegrations.com/returns](http://www.emeraldintegrations.com/returns).

The terms of the warranty are subject to the specific manufacturer and all expressed and implied warranties are provided solely by the manufacturer. Every item approved for a warranty claim is inspected by our team of qualified experts and professionally tested.

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