

# VL2-UCON8-AO interface installation manual\_v130720

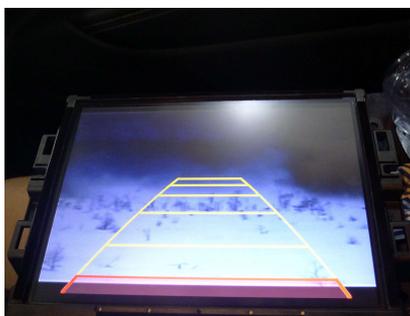
[product type: FV-Chrysler2014\_INT]

This interface can insert RGB,CVBS video onto Dodge, Chrysler like commander, Ram and other car screens, which uses 8-inch 4/3 LCD with OEM touch. The features of this interface are:

- Daughter board is used, to insert navigation and other video onto the OEM screen, all connectors are plug and play, the installer does not need to cut any wires.
- Oem key on the steering wheel is used to switch the video input(the volume decrease key). the reverse signal can also be generated based on CAN bus processing, also guide lines can be shown when in reverse state.
- The OEM touch screen can be used for inserted navigation, the touch switch board will switch the oem touch while in inserted video mode.

Attention: has other interfaces which is needed for Dodge/Chrysler/Fiat cars, although they all use 8-inch 4/3 LCD with OEM touch :

- (1) FV-300C interface : for the version with LCD and CD split structure , video is inserted on the cable connecting them, the Dodge SUV uses this LCD also.[up-picture on the left.]
- (2) FV-Chrysler2014: for the version that Radio and CD are together, but the car has OEM reverse camera, this interface has internal simulator on CAN bus to trigger external video in.[Down-picture on the left.]
- (3) FV-Chrysler2014-INT: for the version that Radio and CD are together, no matter there is OEM reverse video or not, this interface can insert video in by daughter board.



(4)

Reverse video+guideline

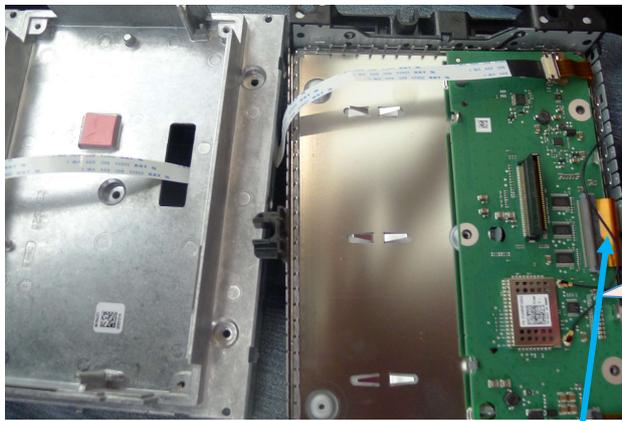
CVBS

navigation HD RGB

## 1. DIP settings

| DIP   | =ON side (DOWN)  | =OFF side (UP)  |
|-------|--|---|
| 1     | RGB Enabled  | RGB disabled  |
| 2,    | AV1 enabled  | AV1 disabled  |
| 3     | AV2 enabled  | AV2 disabled  |
| 4     | RGB=High definition RGB<br>The recommended definition for this interface:<br>800X480 | RGB=Normal definition NTSC                            |
| 5     | Reverse signal ( green wire=12V ) switch to CAM video                                | Reverse signal ( green wire=12V ) switch to OEM video |
| 6,7,8 | These 3 DIPs should be set OFF[=up]  |   |

## 2. system connection.



The red ribbon to LCD should be inserted to the daughter PCB's top connector marked "Panel-out" .

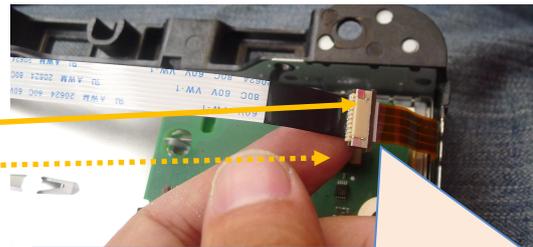
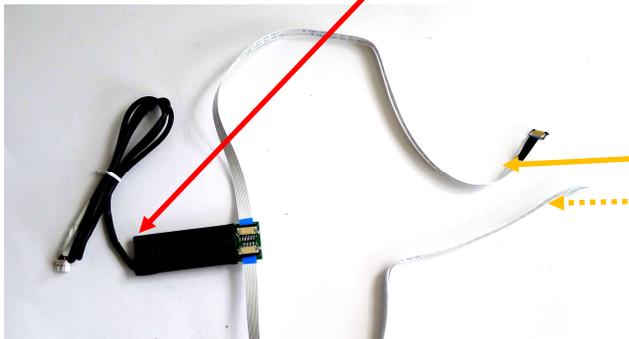
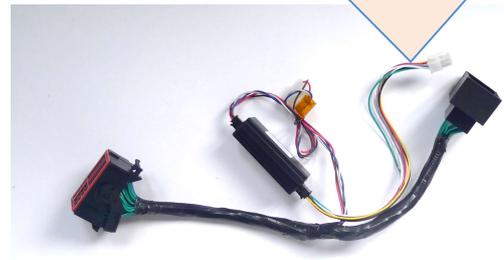
The white ribbon on daughter PCB's Below-side connector should be inserted onto OEM PCB.

Thus video can be inserted.

This CAN wire should be inserted in between the monitor's power supply cable, so channel-switch, reverse, and guideline signals can be generated.



RGB, CVBS and power



If RGB navigation is inserted, the touch daughter board should be used and ribbon should be wired through like this.

#### The Wire Description of 6p to interface:

**Yellow:** constant power of 12V. **Black:** to GND.

**Red: ACC (key power):** When screen is on the line voltage is 12V and when it is off the line voltage is 0V.

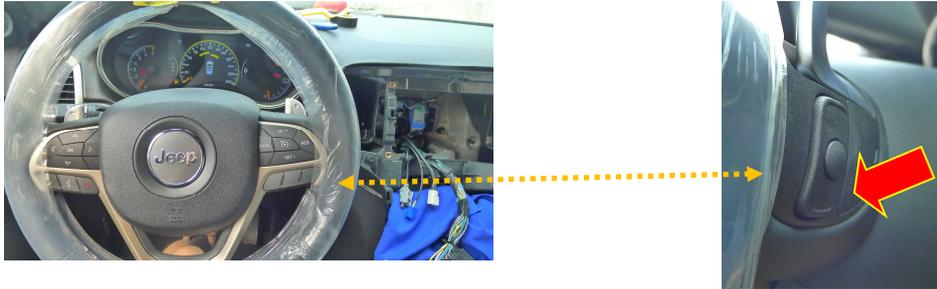
**Green:** Reverse signal wire [=12V when in reverse] or 1A, with auto switch for reverse. It can also be connected to the reverse light to trigger reverse video.

**White:** witch signal wire, when = 12V or 5V, this interface switches. Also can connect to the external keypad to switch.

**Gray:** CAN box dedicated data signal to the interface box. This wire carries guideline values from the can box to interface box.

### 3. OEM keys to switch

- The user can use the external key to switch the input.
- The user can also press the “Vol-”key on steering wheel to switch the input.



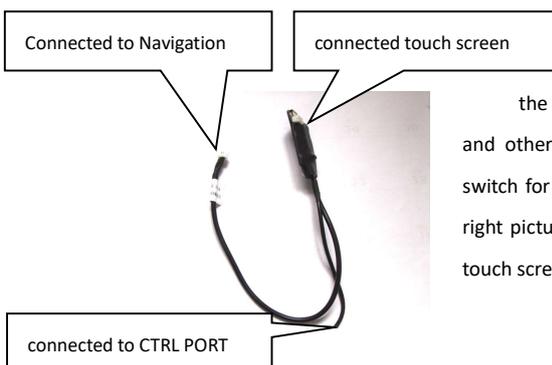
### 4. The 3 keys on steering wheel

- When menu key is pressed, OSD strings will pop up on screen, and the installer may adjust the value through +/-.
- The first 3 options can be used to tune the picture.
- The menu Pos.H, Pos.V: Users can set the position of the image on the screen, Continue to adjust until achieve optimal screen position
- The Reverse Guideline settings can be used to switch the guide ON/OFF.
- The DVD/TUNER/NAVI is to set the IR code output, there is already different AV codes inside the interface, through which can use OEM key to control.
  - When **not** set to “none”, the DVD/TV control icons will pop up, and the installers may use OEM key to control installed devices.
  - When set to **“none”**, the DVD control icons will not pop up.
  - When set to **“Prog”**, the installer can use DIP6=DOWN to program the IR code into the interface. So DVD can be controlled by OEM keys.

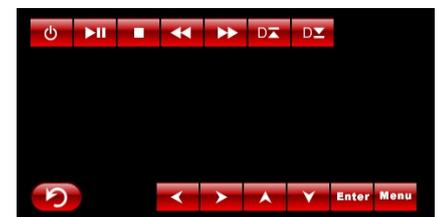


### 1. CTRL PORT:

This is an 8-pin extra CTRL port on the interface, usually does not need to use in normal situation. But users can also use it to get extra functions. For example connecting to the daughter touch board would use OEM touch screen to control installed DVD or other devices.



the CTRL port can be connected to the left touch cable, so DVD and other devices can be touch controlled. There is a touch signal switch for 2 options. When touch the screen in AV1, it will show like right picture, can control DVD and when in other inputs, can use the touch screen for installed RGB navigation.



#### Ctrl port signal definitions:

|         |  |  |
|---------|--|--|
| Pin 1,2 | +5V output voltage for relay(Max 3A output)<br>When AV1 is selected=5V, AV2 is selected=0V                     | Car AUX input, can insert external sound directly, if use 2 or more sound channel inputs, can switch by the +5V voltage relay. |
| 3:      | Constant +5V   | Max output 2A  |
| 4, 8    | GND  |  |
| 5:      | Dedicated control bus. Useful when converting the OEM touch screen to control the installed DVD or digital TV. | Should not be connected to GND, otherwise CPU will halt.   |
| 6:      |  |  |
| 7       | =5V when in RGB or AV(inserted video mode), otherwise =0V  | ( Max 3A )   |

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2. Parameters:

| 3. No. | name                      | parameter   |
|--------|---------------------------|---|
| 1      | RGB map resolution        | 800X480 HD suggested.   |
| 2      | Av1, , cam video          | 0.7Vpp with 75 ohm impedance<br>NTSC/PAL/SECAM automatic switch                       |
| 3      | GPS antenna               | 5V active antenna from the golden finger connector.                                   |
| 4      | Reverse Control wire      | >5V will force into camera mode.<br>All these wires can tolerate 12V for <10 seconds. |
| 5      | Normal Power consumption  | 4.8W  |
| 6      | Standby current           | < 10uA  |
| 7      | Reverse trigger threshold | >5V trigger   |
| 8      | Work temperature          | -40 ~ +85C  |
| 9      | Size                      | 15.8 * 9 * 2CM  |
|        |                           |   |
|        |                           |   |
|        |                           |   |

