Installation Manual

Multimedia Interface for Mercedes Benz

NTG5.5 & NTG6.0

W177-Y19-HLI

Revision History

2024.11 :   remove sprinter 7inch monitor from compatibility

Specification

Compatibility: **E-Class 8.4"/12.3" 2016~**

                                    S-Class 12.3" 2018~

                                    Sprinter 10" 2019~

                                    C class 7"/10" 2019~

                                    A Class 7"/10" 2019~

- **Support Multi-Touch Function**
- **Support rear PDC PIP screen mode**
- **Not available on sprinter 7inch monitor**
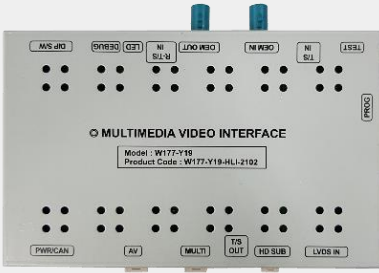
Interface Input / Output specification:

          Input: LVDS x1

                                    A/V x2

                                    CVBS(Front Camera) x1

                                    CVBS(Rear Camera) x1

                                    HDMI x2 [Optional]

          Output: AUDIO OUTPUT x1

                                    VIDEO OUTPUT x2

Components

MAIN BOARD

QCPASS1534

LCD DUAL FAKRA

HLCDCA0058

Power Cable

HPOWER0279

AV CABLE

HAVCAB0056

MULTI CABLE

HARETC0240

UART CABLE

HTOUCH0031

REAR CABLE

HARETC0002

BUTTON CABLE

HARETC0001

IR CABLE

HIRCAB0002

REMOTE CTRL.

REMOTE0001

Components

Power/CAN Jack by Jack NTG6.0

NTG6.0 Jog/Gear CAN
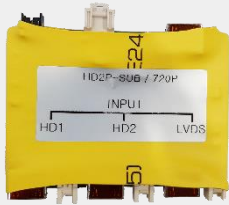
HPOWER0272

Power/CAN Jack by Jack NTG5.5

NTG5.5 Gear CAN

HARETC0388

NTG5.5 Jog CAN

HARETC0389

Components with Options

HD2P-SUB

QCPASS1547

HD2P-SUB Cable

HARETC0365

HDMI Cable

HARETC0367

UART Cable*2

HTOUCH0031
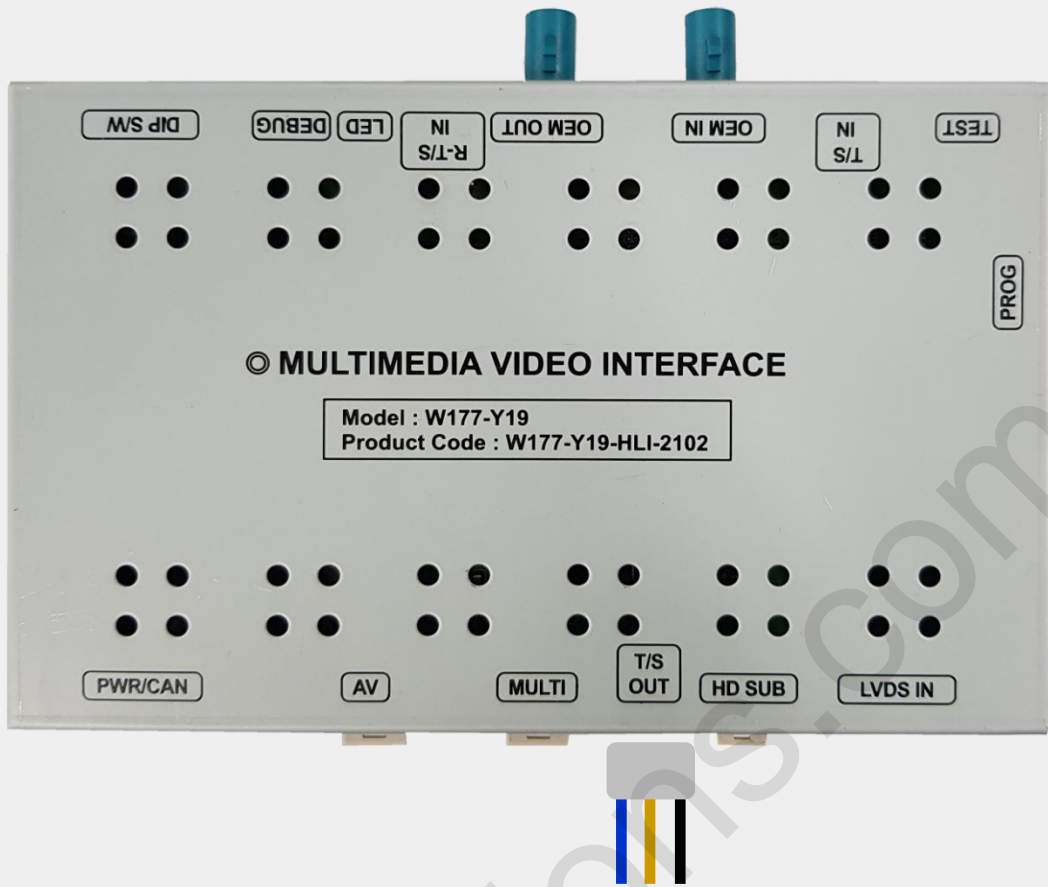
HD2P Connection

MULTIMEDIA VIDEO INTERFACE

| DIP S/W | LED DEBUG | R-T/S IN | OEM OUT | OEM IN | T/S IN | TEST |

PROG

Model : W177-Y19
Product Code : W177-Y19-HLI-2102

| PWR/CAN | AV | MULTI | T/S OUT | HD SUB | LVDS IN |

HD2P-SUB Cable

HDMI Cable

HD2P-SUB / 720P

INPUT

HD1   HD2   LVDS

HD1 T/S OUT

HD2 T/S OUT
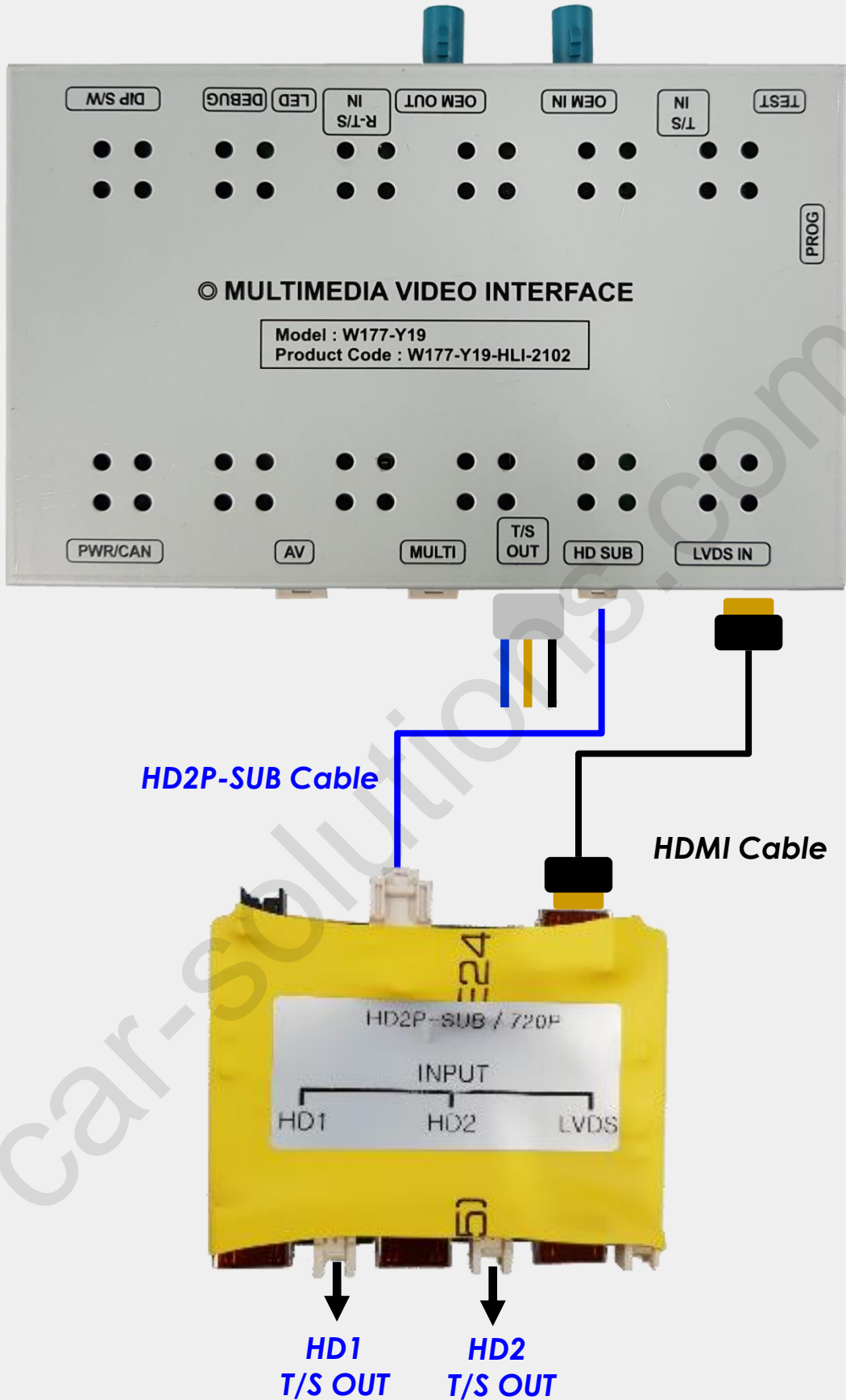
T/S OUT Pin #2 (middle) is used for touch data transmission (UART-TX)

Cable Connection

1. **PWR/CAN:** Connect provided power/CAN cable

2. **AV:** Connect A/V cable

3. **MULTI:** Connect Multi cable

4. **T/S OUT:** Connect UART 3P cable, Pin #2 (middle) used for touch data transmission *[UART-TX]*

5. **HD SUB:** for HD2P Option Board connection

6. **LVDS-IN:** LVDS Input (QROIX)

7. **T/S IN:** for Capacitive touch panel connection

8. **OEM IN:** Connect the OEM LCD cable coming from the OEM monitor

9. **OEM OUT:** Connect one end of the supplied LCD cable and the other end to the OEM head unit

10. **R-T/S IN:** for resistive touch panel connection

11. **DIP S/W:** DIP SWITCH setting

DIP Switch Settings

* ON : DOWN / OFF : UP

Please make sure to disconnect the power cable of the interface and reconnect the power cable again to apply the dip switch changes.
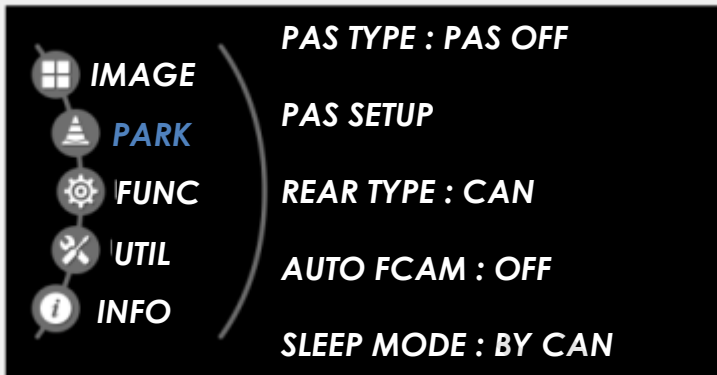
PIN	FUNCTION	Dip S/W SELECT
1	LVDS	OFF : LVDS MODE ON : LVDS MODE SKIP
2	AV1	OFF : AV1 MODE ON : AV1 MODE SKIP
3	AV2	OFF : AV2 MODE ON : AV2 MODE SKIP
4	Front Camera	OFF : Ext. Front Camera Mode ON : OEM Front Camera Mode
5	Monitor Type	5 OFF, 6 OFF : 10.2"/12.3" Normal Type
6		5 ON, 6 OFF : 7"/8"/9" Normal Type
7	Rear Camera	OFF : OEM Rear Camera Mode ON : Ext. Rear Camera Mode
8	Touch Pad In/Out	OFF : Bypass ON : In/Out
9	Gear and Jog CAN Use	OFF : Jog CAN + Gear CAN ON: Jog CAN (when instrument shows CAN error, plz unplug Gear CAN wire from the provided power cable) refer to the page #29 * This function added from FW240904
10	OEM Touch Screen	OFF : Not to use OEM Touch Screen ON : Use OEM Touch Screen on Ext. Mode

* HD1/HD2 enable is set by OSD menu. *Default setting is NONE (Mode Skip). If select other menu, it will display automatically.*

Factory Settings

1. ◀ Long Press: Access to the Factory Menu
2. OK Short Press: Selection or Mode Change
3. ▶ Long Press: Factory Reset
4. ▲ Short Press: Moving Upward
5. ▼ Short Press: Moving Downward
6. MENU Short Press: Back
7. PIP Short Press: Split Screen (RCAM/HDMI/AV)

IMAGE

PARK

FUNC

UTIL

INFO

PAS TYPE : PAS OFF

PAS SETUP

REAR TYPE : CAN

AUTO FCAM : OFF

SLEEP MODE : BY CAN

PARK

PAS TYPE: *Select parking line type (PAS OFF / PAS ON / NOT USED)*

PAS SETUP: *You can move the position of parking line*

(H-POS 0~255; V-POS 0~255)

REAR TYPE: *Choose rear camera recognition. (CAN / LAMP)*

AUTO FCAM: *Front camera display time setting after gear from R to D*

(OFF, 3Sec, 5Sec, 10Sec, 15Sec)

SLEEP MODE: *In case connect pin#1 to the car B+*

- **BY CAN:** *when connect interface power to the Car B+ only*
- **BY ACC:** *when connect power pin#1 connect to Car B+ and pin#10 connect to Car ACC*

* In usual, connect supplied power pin#1 to Car ACC(Recommended)

Factory Settings

```
┌─────────────────────────────────────────────┐
│  ▦ IMAGE      CAR MODEL : SPRINTER           │
│  ▲ PARK       LVDS MODEL : QROIX-HD          │
│  ⚙ FUNC       HD1 MODEL : NONE               │
│  ✕ UTIL       HD2 MODEL : NONE               │
│  ⓘ INFO                                       │
└─────────────────────────────────────────────┘
```

FUNCTION

CAR MODEL: *Select for touch and CAN (SPRINTR / E-CLASS / V-CLASS / CLS)*

LVDS MODEL: *Car-play, Navigation Model Setting*

(SE-CP HD : 960 x 540, SE-CP 800 x 480)

HD1 / HD2 MODEL: *See below chart*

OSD	Default	Value
LVDS MODEL	QROIX	SENAV2
		SECP(F)
		SECP(M)
		SUNE10
		QROIX
		Z1/M2C
		QROI-HD
		SECP-HD
		QROI-FHD
		M2C+ FHD
		KAZON
		KAZON+T
HD1 MODEL	NONE	NONE
		SUME10
		QROIX-HD
		SETV
		UART2USB
		I-VIEW
		KAZON
		KAZON+T
HD2 MODEL	NONE	NONE
		SUNE10
		QROIX-HD
		SETV
		UART2USB

Factory Settings

```
IMAGE          RESET ALL : NO
PARK           AUDIO OUT : DEFAULT
FUNC           AV1 IR : SE TV
UTIL           AV2 IR : NOT USED
INFO           CAP TOUCH : SE 12.3"
               MODE KEY : BACK
```

UTIL

FACTORY RESET: *Factory mode reset (YES/NO)*

AUDIO OUT: *Select audio channel transmitted through AUX (Default / AV1 / AV2 / HD1 / HD2)*

AV1/AV2 IR: *Able to control UI remote by touch*

CAP TOUCH: *Select capacitive touch screen model*

(SE 12.3" / C 10" / E 9" / SE 24" 5077 24")

MODE KEY: *Mode change button selection (BACK / NAVI / HOME)*

LCD IN/OUT connection_ NTG6.0

* NTG6.0 10inch Monitor

1. Disconnect the OEM LVDS cable from the backside of head unit and connect it to the female connector of supplied LVDS Fakra cable

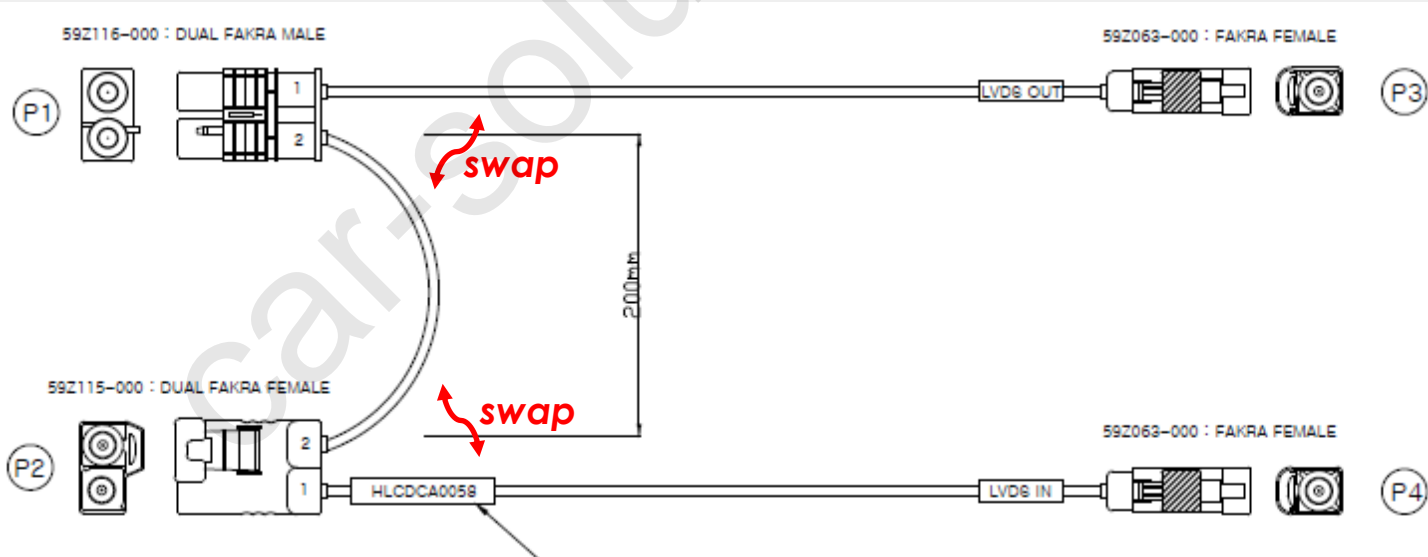2. Connect the male connector of supplied LVDS cable to the backside of monitor
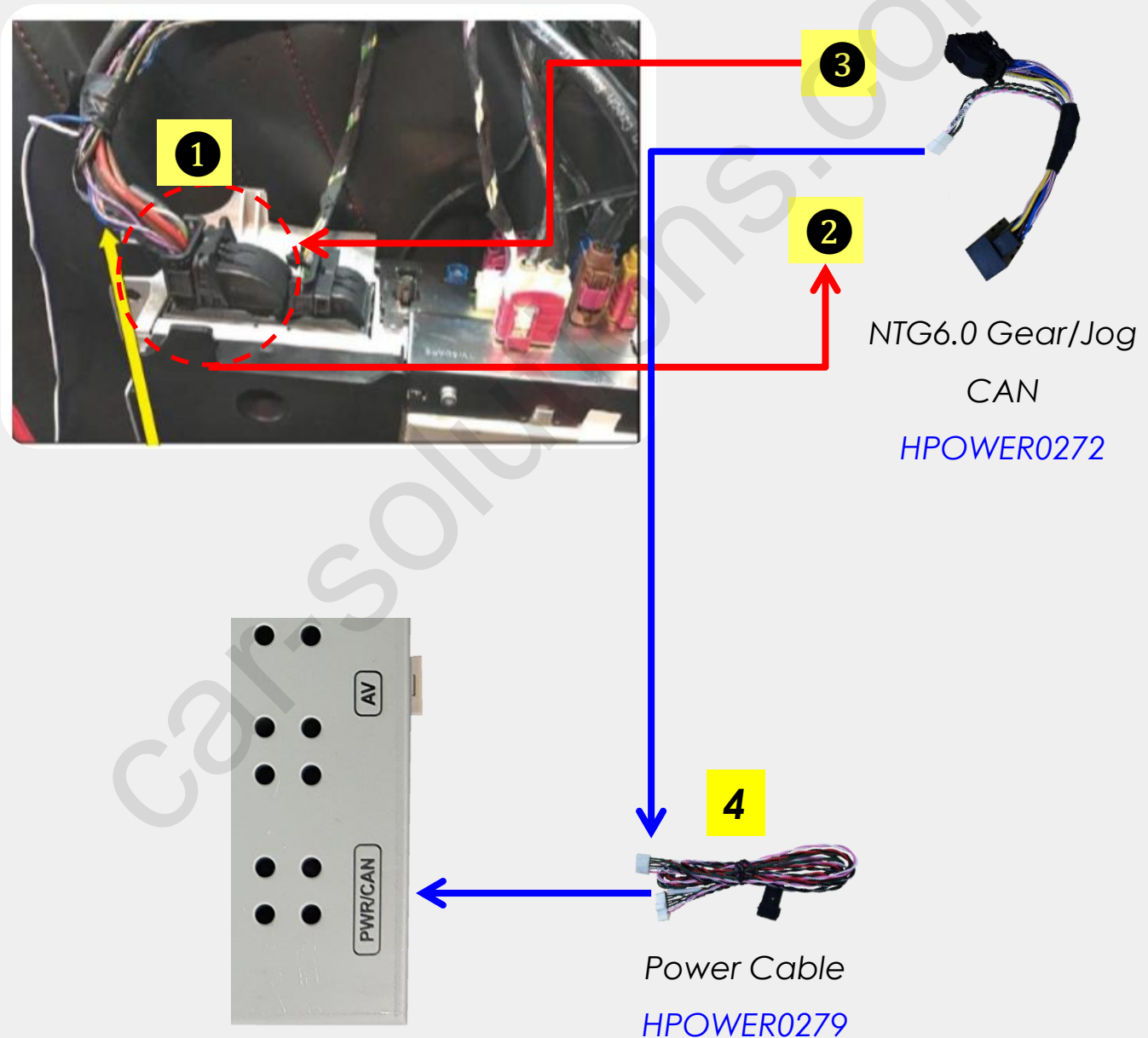

OEM LCD Cable

LCD DUAL FAKRA

HLCDCA0058

OEM Head Unit

OEM OUT   OEM IN

LCD DUAL FAKRA

HLCDCA0058

* NTG5.5 10inch / 12.3inch monitor

1. Disconnect the OEM LVDS cable from the backside of head unit and connect it to the female connector of supplied LVDS Fakra cable

2. Connect the male connector of supplied LVDS cable to the backside of monitor

LCD DUAL FAKRA
HLCDCA0058

* NTG5.5 7" / 8.4"

1.   please modify the pin location of provided LVDS cable, otherwise, screen display will be black.

2.   Swap location #1 and #2 both in male terminal and female terminal.

Power/CAN connection_ NTG6.0

1. *Disconnect the OEM power cable from the backside of the command*
2. *Connect the OEM cable to the supplied female CAN connector*
3. *Connect the supplied male CAN connector to the backside of the monitor*
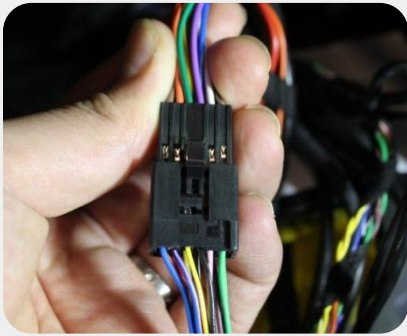4. *Connect supplied CAN cable to the supplied power cable and connect it to the Interface*

❶ **❷** **❸**

NTG6.0 Gear/Jog

CAN

HPOWER0272

4

Power Cable

HPOWER0279

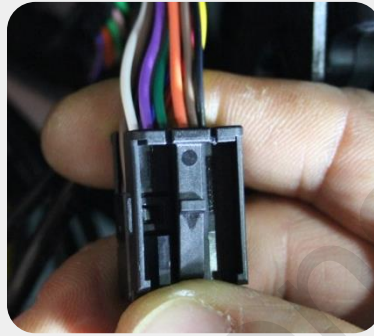*1) Find a bunch of cables behind the head unit*
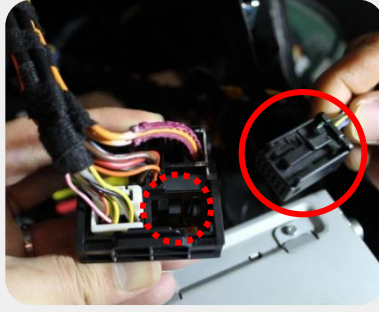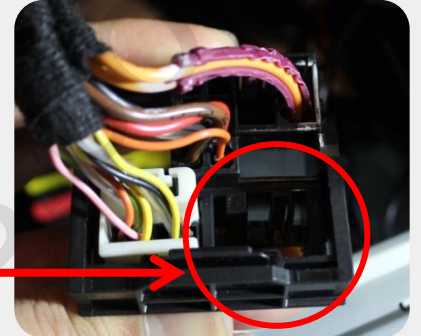
2) Remove the black connector
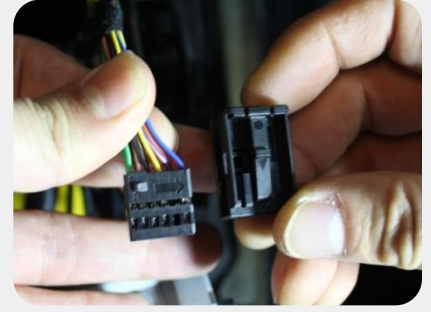
3) Take away the black connector cover

4) Connect the OEM connector to the female connector of supplied Gear CAN cable

5) Put the black connector cover to the male connector of Gear CAN cable
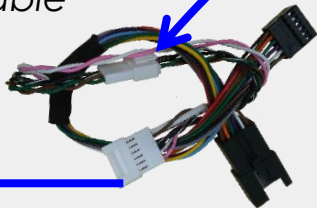
6) Connect the male connector to the bunch connector

NTG5.5 Gear CAN

HARETC0388

7) Please unplug marked original connector and connect it to the supplied Jog CAN female connector.
Plug in supplied Jog CAN male connector to the marked place.

Connect supplied Jog CAN cable and Gear CAN cable

NTG5.5 Gear CAN

HARETC0388

NTG5.5 Jog CAN

HARETC0389

PWR/CAN

AV

Power Cable

HPOWER0279

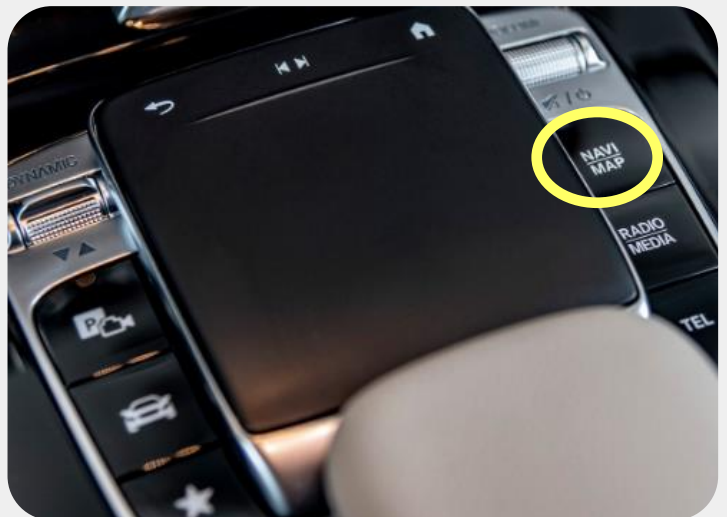*Lastly, connect supplied gear CAN Cable to the supplied power cable and connect it to the Interface*

OEM Button Use

NTG5.5

NTG6.0

* Please short press 360 camera button in the external mode to switch OEM 360 camera screen.

And short press again this button to switch back to previous mode.
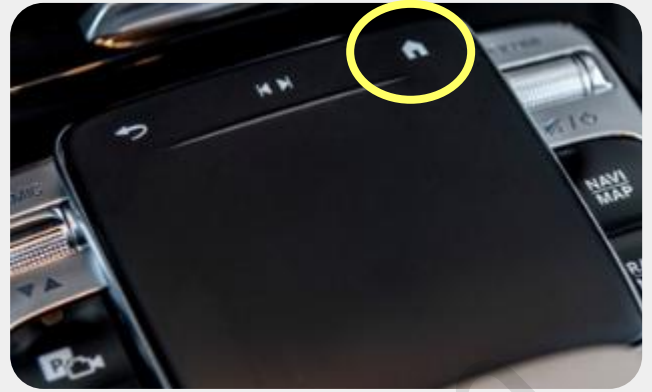
OEM Button Use_ NTG6.0

1. Switch to OEM in Rear Camera Mode : *Short press below high lighted button in Ext. rear camera mode to switch OEM screen*

2. DVD, DTV OSD Control : *Slide arrow button right and left for DTV and DVD channel up(+) and down(-)*
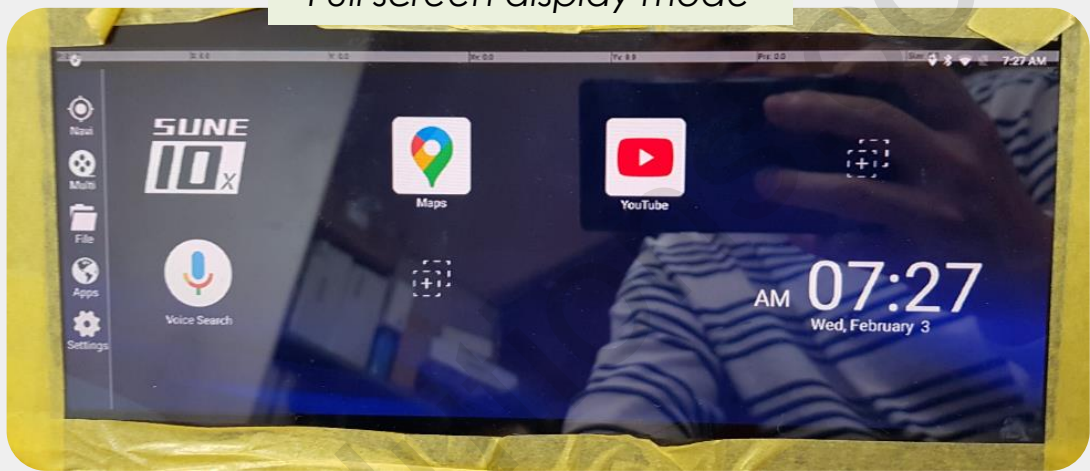
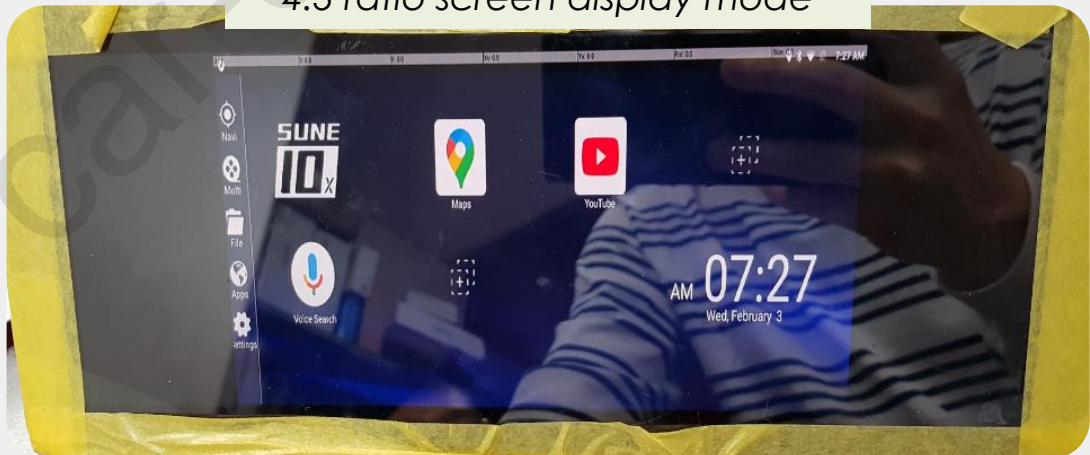# HD/AV Screen Ratio Change_ NTG6.0

Please press high lighted button for 3secs long to change screen display ratio. [HDMI / AV Mode]

Full screen display mode

4:3 ratio screen display mode

Rear Camera Split Screen

*Please press original Jog Dial Return or Navi button for 3secs long
Or short press remote control PIP button to change rear camera split
screen mode.*

Ext. Rear Camera Full Screen
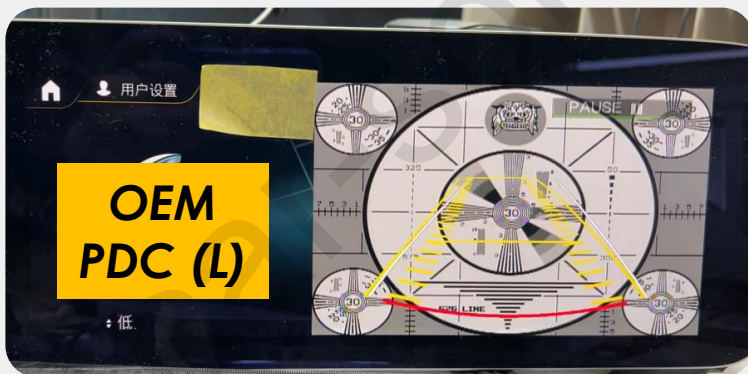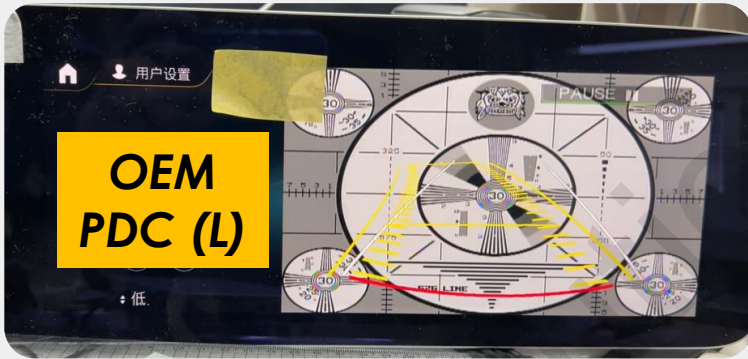
OEM PDC (L)

OEM PDC (L)

<- This OEM PDC screen is a

little bigger (W205 2020)

* Added on FW240206
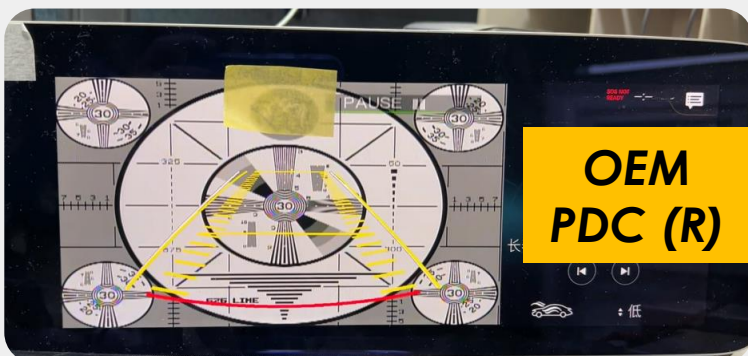
OEM PDC (R)

<- This OEM PDC screen is for

right steering wheel.

* Added on FW231213

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Rear Camera Demo_ A Class 7inch

QROIX Demo

QROIX Connection by LVDS Input

MULTIMEDIA VIDEO INTERFACE

DIP S/W   LED DEBUG   R-T/S IN / OEM OUT   OEM IN   T/S IN / TEST

PROG

◎ MULTIMEDIA VIDEO INTERFACE

Model : W177-Y19
Product Code : W177-Y19-HLI-2102

PWR/CAN   AV   MULTI   T/S OUT   HD SUB   LVDS IN

HDMI Cable

USB2.0 / DIP S/W   OPTION   USB2.0   DEBUG   USB3.0   LVDS OUT   HD OUT

LED

Q·ROIX ANDROID SYSTEM
PRODUCT CODE | QROIX-202009

LED

GPS   RESET   SET   MULTI   POWER   R TOUCH   TF CARD   C TOUCH   DEBUG
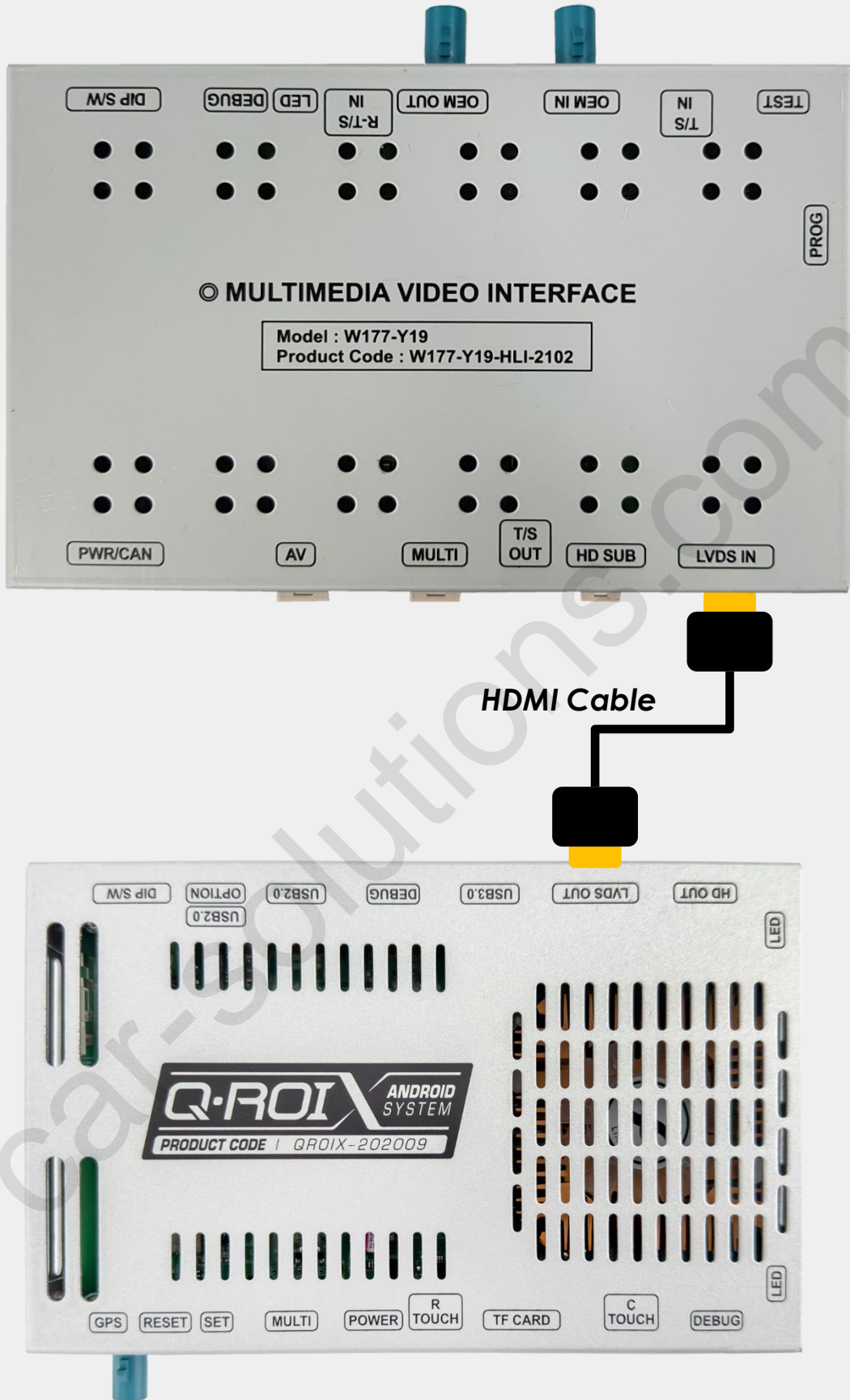
- **Factory Settings -> FUNC -> LVDS MODEL : QROIX**

- **QROIX power and audio cable connect to the car.**

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QDISPLAY Connection by LVDS Input

HDMI Cable

LVDS OUT
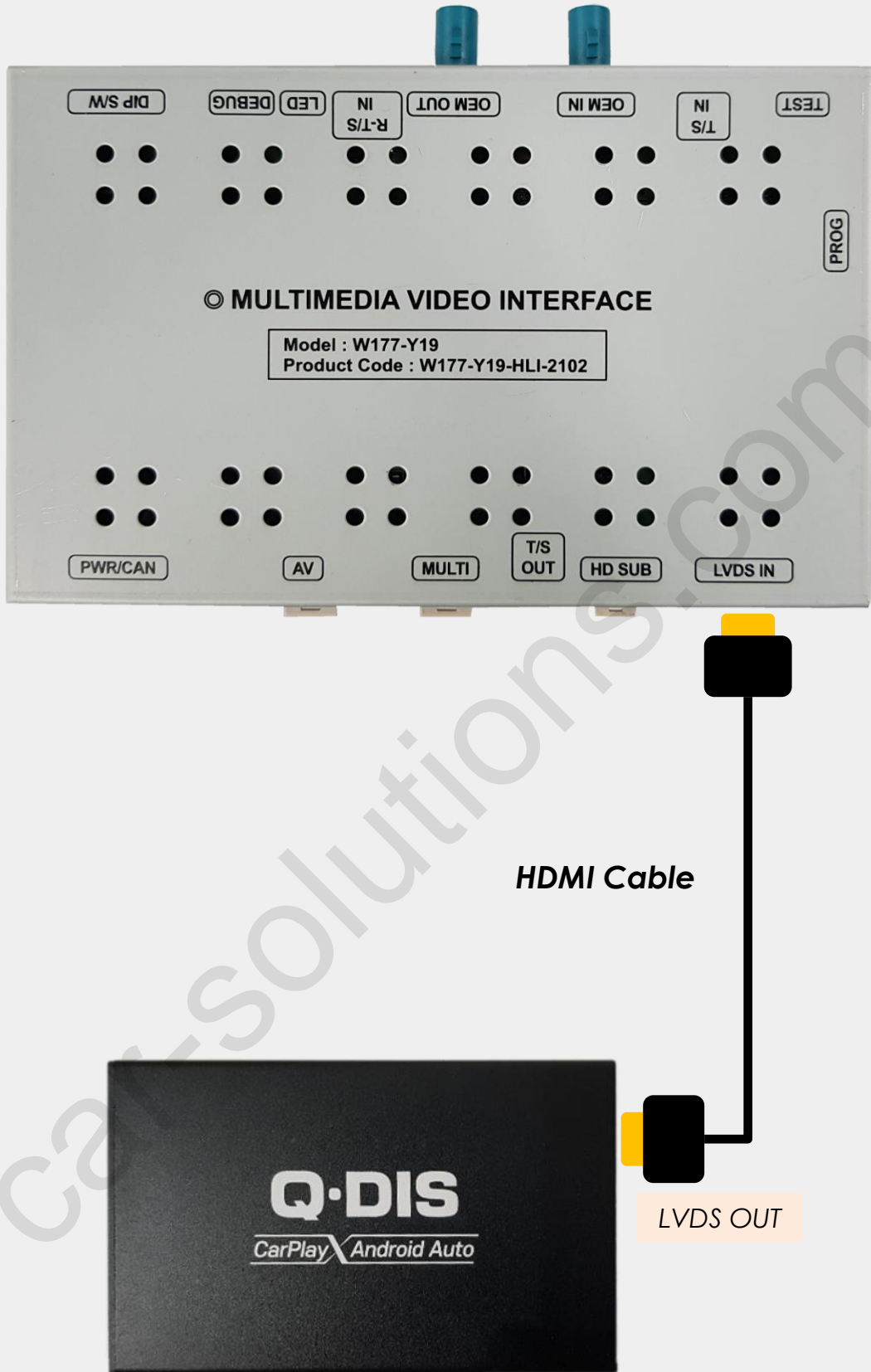
- **Factory Settings -> FUNC -> LVDS MODEL : SE-CP**
- **QDISPLAY power and audio cable connect to the car.**

Control QROIX by OEM Button

NTG5.5

NTG6.0

Button	Operation	Function
Touch Pad	Rotation	Mouse Function
	Push	Select/Confirm
	2 Point Drag Up / Down	Page Up/Down
BACK	Short press	Back to previous page
HOME	Short press	Back to main launcher
◁▷	Short press	Show recent apps to make split screen

Control QDISPLAY by OEM Button

* These functions can be used when NAVI MODEL selected as QDISPLAY or SE-CP.

1. **Return button short press : selection**
2. **Home button long press : si-ri**
3. **Wheel up/down : Next/Previous track**
4. **Wheel left/right : Moving left/right**
5. **Wheel up long press: Home Menu**
6. **Wheel down long press : Going to the bottom menu on Android Auto**

IF Power Cable Drawing

Connect provided power wire pin#1 to car ACC. ←
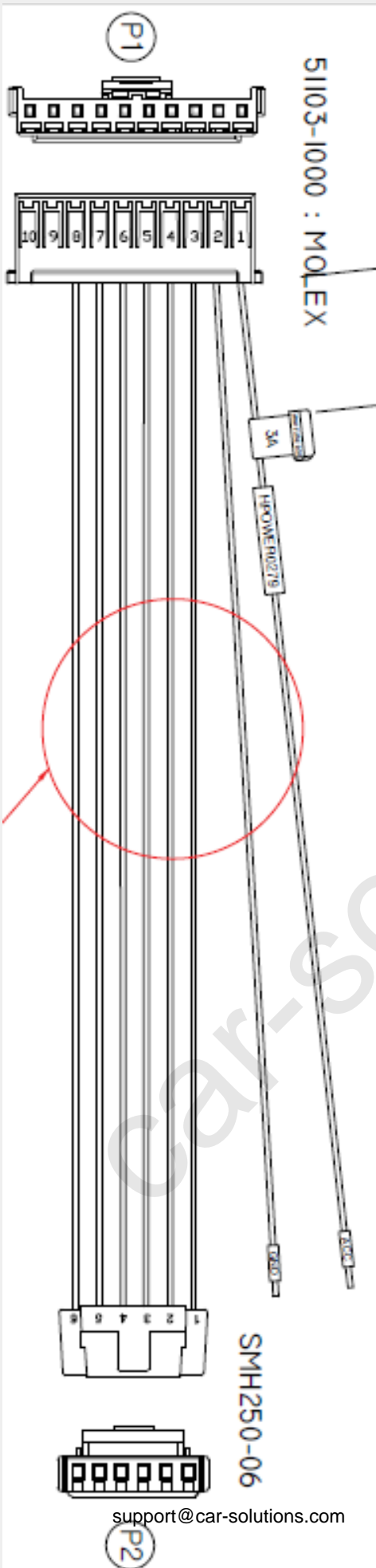
P1	연결	P2	COLOR	SIGNAL
1	X		RED	ACC
2	X		BLACK	GND
3	→	1	GREEN	JOG-H(IN)
4	→	2	BROWN	JOG-L(IN)
5	→	3	BLACK/WHITE	JOG-H(OUT)
6	→	4	BLACK	JOG-L(OUT)
7	→	5	WHITE	GEAR-H
8	→	6	PINK	GEAR-L
9	X		N.C	
10	X		N.C	

- *When CAN error shows on instrument, plz pull out gear CAN wire (P1 #7 and #8)*
- *and set Dip #9 ON to use both gear and jog CAN data from jog CAN wire connection*
- *This function added from FW240904*
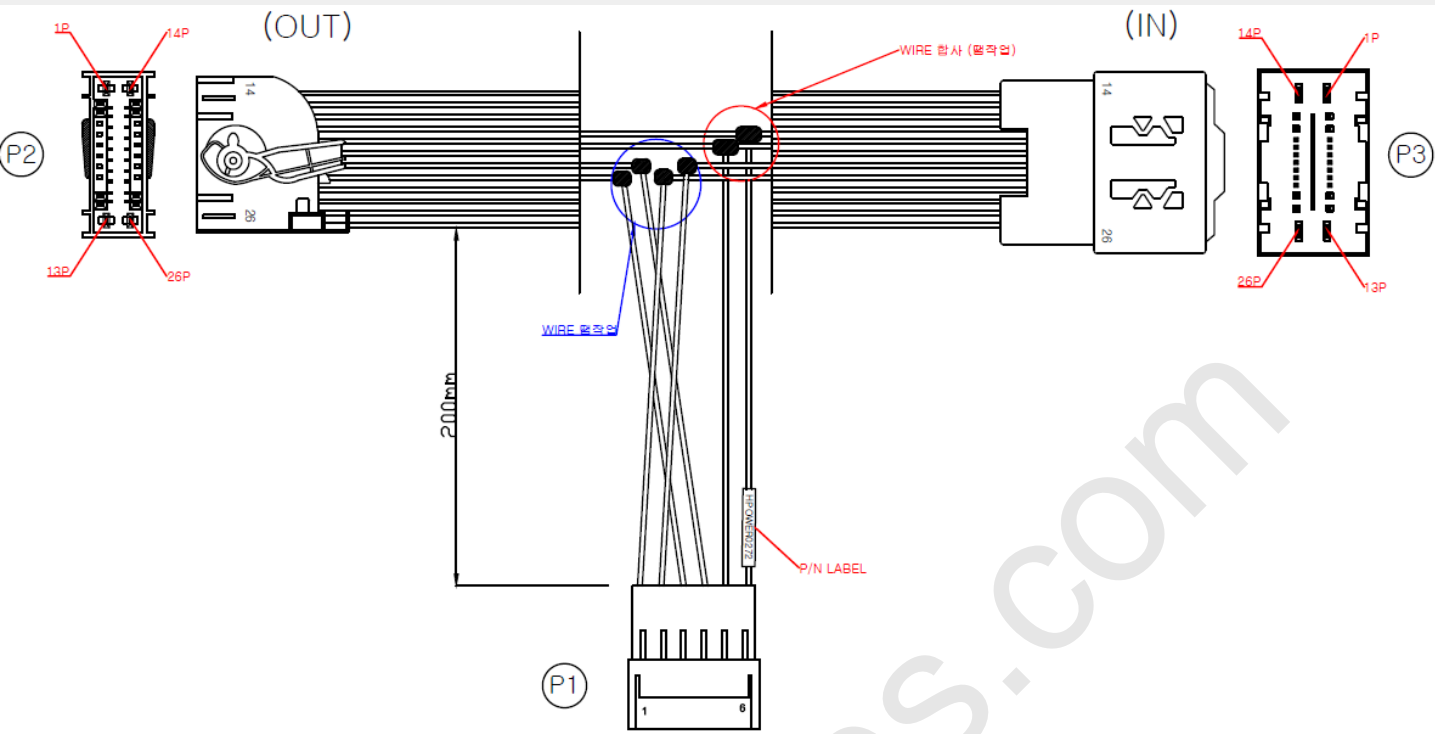
1. P1 -> P2

P1	연결	P2	COLOR	SIGNAL
1	X			하기 표 참조
2	X			
3	→	8	BLACK/WHITE	JOG-H(OUT)
4	→	21	BLACK	JOG-L(OUT)
5	→	7	WHITE	GEAR-H
6	→	20	PINK	GEAR-L

2. P1 -> P3

P1	연결	P3	COLOR	SIGNAL
1	→	8	GREEN	JOG-H(IN)
2	→	21	BROWN	JOG-L(IN)

NTG5.5 Gear CAN Cable Drawing

P4,P5 12PIN 모두 1:1 BYPASS

(P4) (OUT)   (IN) (P5)

SMP250-04P (P3)

SMH250-04P (P2)

P/N LABEL

H4RETC0388

100mm

200mm

SMP250-06P

(P1)
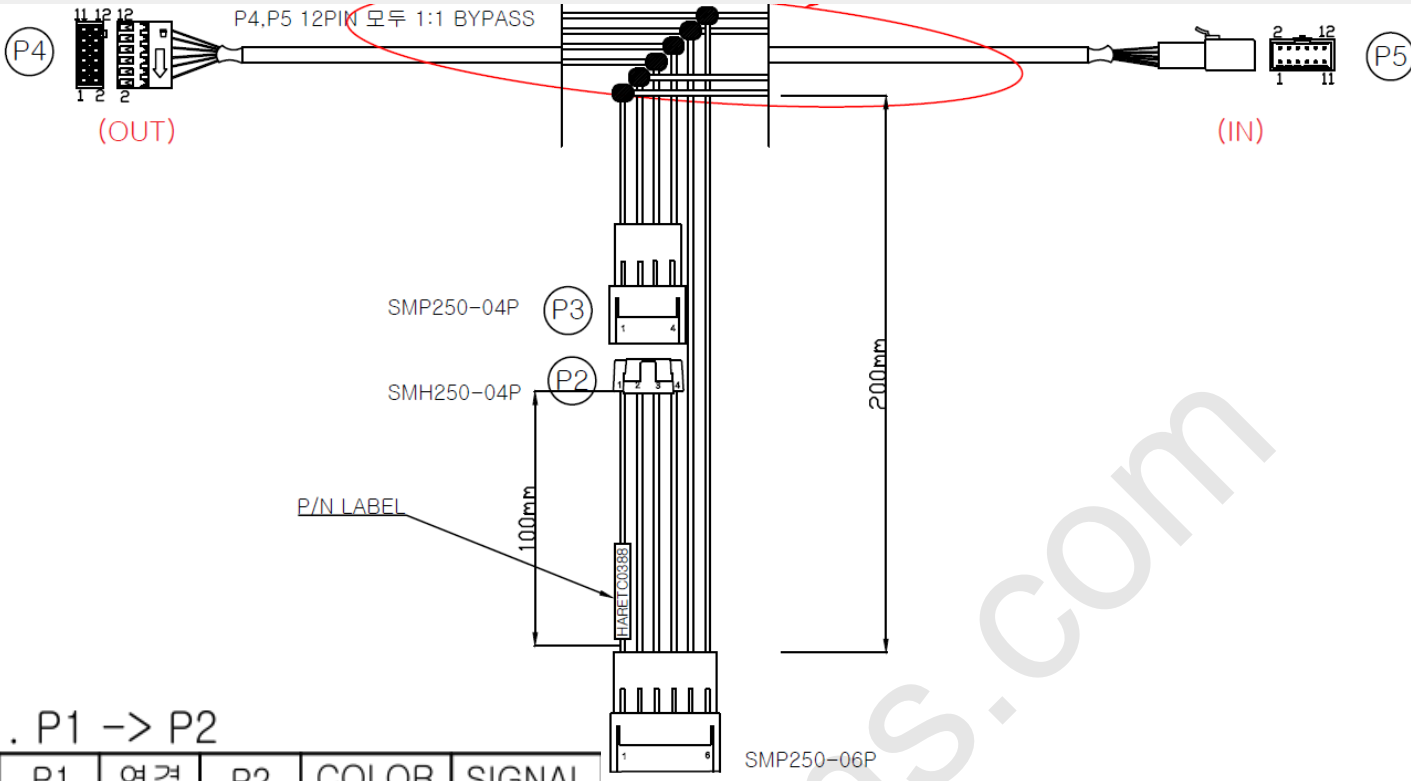
1. P1 -> P2

P1	연결	P2	COLOR	SIGNAL
1	→	1	GREEN	JOG-H(IN)
2	→	2	BROWN	JOG-L(IN)
3	→	3	BLACK/WHITE	JOG-H(OUT)
4	→	4	BLACK	JOG-L(OUT)
5	X			
6	X			

2. P1 -> P4,P5

P1	연결	P4.P5	COLOR	SIGNAL
1	X			
2	X			
3	X			
4	X			
5	→	5	WHITE	GEAR-H
6	→	6	PINK	GEAR-L

3. P3 -> P4,P5

P3	연결	P5	COLOR	SIGNAL
1	→	7	GREEN	JOG-H(IN)
2	→	8	BROWN	JOG-L(IN)

P3	연결	P4	COLOR	SIGNAL
3	→	7	BLACK/WHITE	JOG-H(OUT)
4	→	8	BLACK	JOG-L(OUT)

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NTG5.5 Jog CAN Cable Drawing

P4,P5 12PIN 모두 1:1 BYPASS

(P2) (OUT)

(P3) (IN)

150mm

P/N LABEL

HARETC0389

SMP250-04P

(P1)
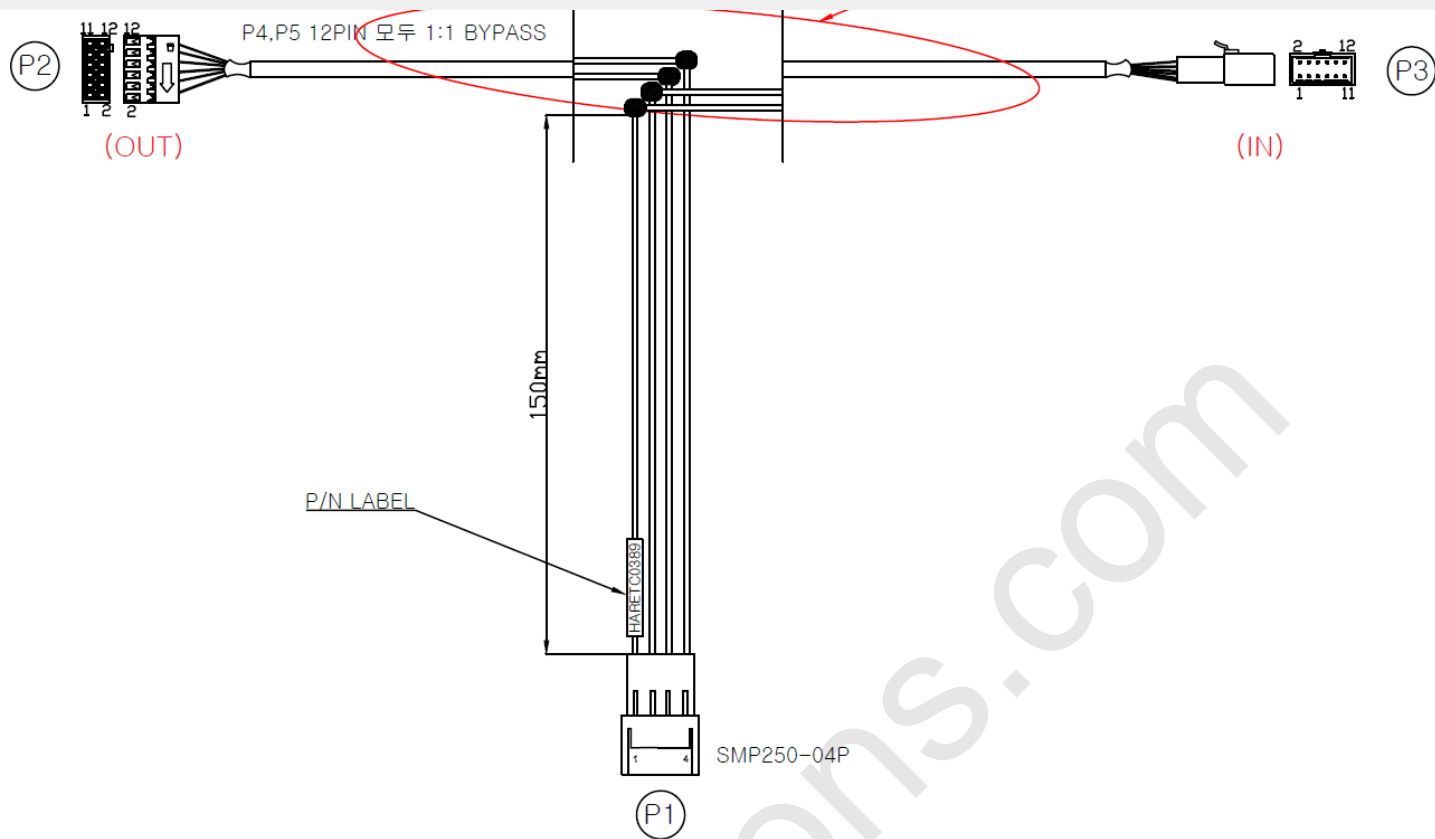
1. P1 -> P2,P3

P1	연결	P3	COLOR	SIGNAL
1	→	11	GREEN	JOG-H(IN)
2	→	12	BROWN	JOG-L(IN)

P1	연결	P2	COLOR	SIGNAL
3	→	11	BLACK/WHITE	JOG-H(OUT)
4	→	12	BLACK	JOG-L(OUT)

AV Cable Drawing

NO	DESCRIPTION	NO	COLOR
1	R-CAM	1	RCA YELLOW
2	F-CAM	2	RCA YELLOW
3	R,F-CAM GND	3	
4	VIN 1	4	RCA YELLOW
5	VIN 1 GND	5	
6	AL-IN 1	6	RCA WHITE
7	AR-IN 1	7	RCA RED
8	AL,R-IN GND	8	
9	VIN 2	9	RCA YELLOW
10	VIN 2 GND	10	

NO	DESCRIPTION	NO	COLOR
11	AL-IN 2	11	RCA WHITE
12	AR-IN 2	12	RCA RED
13	AL,R-IN2 GND	13	
14	V-OUT 1	14	RCA YELLOW
15	V-OUT 2	15	RCA YELLOW
16	V-OUT1,2 GND	16	
17	A-OUT L	17	RCA WHITE
18	A-OUT R	18	RCA RED
19	A-OUT L,R GND	19	
20	N.C	20	

20:MOLEX

HAVCAB005d

수축튜브로 마감처리
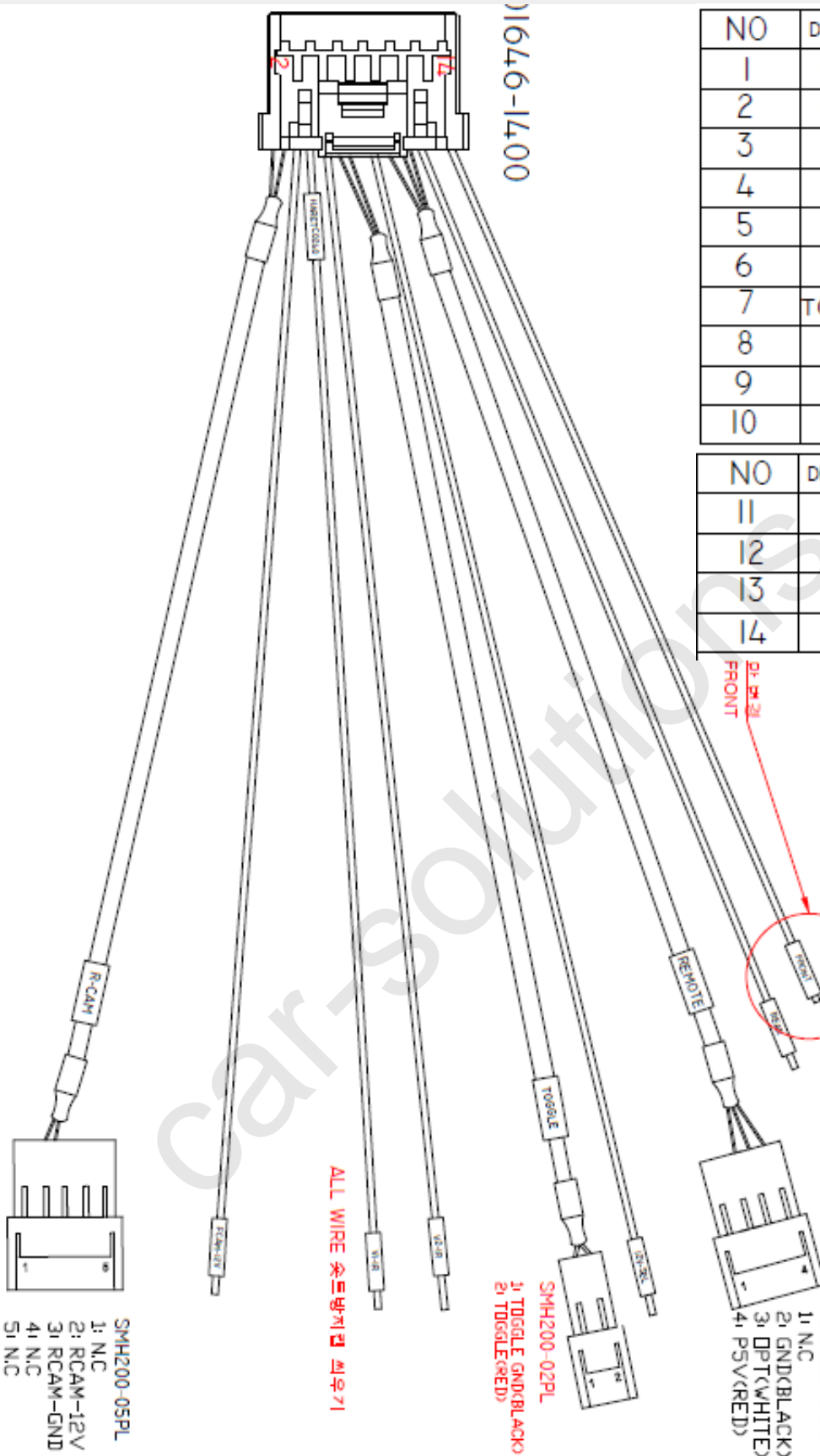
NO	DESCRIPTION	NO	COLOR
1	RCAM-12V	1	SMH200-05PL
2	RCAM-GND	2	
3	FCAM-12V	3	BLUE
4	V1-IR	4	GREEN
5	V2-IR	5	ORANGE
6	TOGGLE	6	SMH200-02PL
7	TOGGLE GND	7	
8	12V-SEL	8	RED
9	P5V	9	SMH200-04PL
10	OPT	10	

NO	DESCRIPTION	NO	COLOR
11	GND	11	SMH200-04PL
12	REAR	12	GRAY
13	FRONT	13	VIOLET
14	N.C	14	

0)1646-1400

FRONT

R-CAM

REMOTE

FRONT

TOGGLE

ALL WIRE 숏트방지 씌우기

SMH200-02PL
1: TOGGLE GND(BLACK)
2: TOGGLE(RED)

SMH200-05PL
1: N.C
2: RCAM-12V
3: RCAM-GND
4: N.C
5: N.C

1: N.C
2: GND(BLACK)
3: OPT(WHITE)
4: P5V(RED)