

Installation Manual

Multimedia Interface for BMW/MINI

ID6/ID7 System 2017~

BMW-MGU-HLI





Revision History

2024.10 : H/W revision to mgu-hli-a model for the mini ambient off issue and revised 1440x540 timing for the black issue. (applied from fw241021)

2024.11: Revise dip #4 setting; add AV input on and off on OSD menu; revise carplay module OEM idrive control (applied from fw241112)

2024.12: dip #4 setting optimized (fw241212)

Specification

Compatibility:

(MGU EVO ID7 / ID6) BMW / MINI 2017~ 6.5" / 8.8" / 10.2" / 12.3" Cap. T/S monitor

- Support Multi-Touch
- Support Jog Dial Control
- Support rear PDC PIP screen mode
- Support front obstacle recognition function

Interface Input / Output specification :

Input:

LVDS x1 A/V x2 CVBS(Front Camera) x1 CVBS(Rear Camera) x1

HDMI x2 [Optional]

Output:

Audio Out x1 Video Out x2

Components



MAIN BOARD QCPASS1738



LCD CABLE HLCDCA0049



AV CABLE HAVCAB0056



UART Cable HTOUCH0031



MULTI CABLE HARETC0240 REAR CABLE





REMOTE CTRL. REMOTE0001



IF Power Cable HPOWER0294 BUTTON CABLE HARETC0001

HIRCAB0002

IR CABLE

Components with Options



Components with Options





HD2P Connection



T/S OUT Pin #2 (middle) is used for touch data transmission (UART-TX) support@car-solutions.com

Cable Connection



- 1. **PWR/CAN:** Connect provided power/CAN cable
- 2. AV: Connect AV cable (Remote Control Use)
- 3. MULTI: Connect Multi cable
- 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. CT/S: for Capacitive touch panel connection
- 8. OEM IN: Connect OEM LCD cable coming from the OEM head unit
- **9. OEM OUT:** Connect one end of the supplied LCD cable and the other end to the OEM monitor
- 10. DIP S/W: DIP SWITCH setting

DIP Switch Settings



* ON: DOWN / OFF: UP

Please make sure to disconnect the power cable of interface and reconnect to apply dip switch setting whenever changing DIP switch.

PIN	FUNCTION	Dip S/W SELECT		
1	LVDS	OFF : LVDS Mode ON : LVDS Mode Skip		
2	OFF : OEM Screen Manual (Scaler) ON : OEM Screen Bypass (Relay) : when OEM screen is mismatched			
3	OFF : Use I-D ON : Use He	D <mark>rive Jack by Jack Optional Cable (CAN Bridge)</mark> ad Unit Jack by Jack Cable (CAN IN/OUT)		
4	OFF : Communication LINK - Auto switch ON : Communication LINK - ACC CAN check			
5	Front OFF : Ext. Front Camera Mode Camera ON : OEM Front Camera Mode			
6	CAN Data OFF : MGU ID7 System ON : NBT / EVO ID6 System			
7	Rear Camera	OFF : OEM Rear Camera Mode ON : Ext. Rear Camera Mode		
8				
9	Please	e refer to the next page for the car model settings.		
10				

• AV1, AV2, HD1, HD2 Input enable is set by OSD menu. Default setting is

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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.

DIP8	DIP9	DIP10	Resolution	Description
OFF	OFF	OFF	1020 x 720	12.3inch MGU
OFF	ON	ON	1920 X 720	12.3inch (NEW) X3, X4
ON	OFF	OFF	1440 × 540	10inch
ON	ON	ON	1440 x 540	10inch X1
OFF	ON	OFF		8.8inch
ON	ON	OFF	1280 x 480	8.8inch (INNLUX) 2019y MINI
ON	OFF	ON		8.8inch 2Series with I-Drive ID7
OFF	OFF	ON	800 x 480	6.5inch

 Yellow high lighted dip settings are default settings for each resolution car models. If these default settings not working properly, try with other settings afterwards.

Factory Settings



- 1. ◀ Long Press:
- 2. OK Short Press:
- 3. Long Press:
- 4. ▲ Short Press:
- 5. ▼ Short Press:
- 6. MENU Short Press:
- 7. PIP Short Press:

Access to the Factory Menu

- Selection or Mode Change
- Factory Reset
- Moving Upward
- Moving Downward
- Back
- Split Screen (RCAM/HDMI/AV)

IMAGE	PAS TYPE : PAS ON
A PARK	PAS SETUP
	REAR TYPE : CAN
	AUTO FCAM : OFF

PARK

PAS TYPE: Select parking line type.

- NOT USED: Not use parking lines
- PAS ON: Use Flexible Parking Lines
- PAS OFF: Use fixed parking lines

PAS SETUP: Move the position of parking line.

- H POS: Horizonal adjustment
- V POS: Vertical adjustment
- TYPE: (PAS1 / PAS2)

REAR TYPE: Choose rear camera recognition (CAN / LAMP / LAMP-HD)

AUTO FCAM: OEM or Ext. Front camera display setting from gear R to D (OFF / 3SEC / 5SEC / 10SEC / 15SEC)

Factory Settings

	CAR MODEL : BMW
PAPK	AUDIO OUT : DEFUALT
	LVDS MODEL : QROIX-FHD
S INTI	HD1 MODEL : NONE
	HD2 MODEL : NONE
	AV INPUT : NONE

FUNCTION

CAR MODEL: Select car model (BMW / F56 : mini cars with ambient)

AUDIO OUT: Select AUX out on OEM / LVDS mode (DEFAULT/AV1/AV2/HD1)

LVDS MODEL: Car-play, Navigation Model Setting

HD1/HD2 MODEL: DTV, Navigation Model Setting (NONE: Mode Skip,

If select other menu on HD1 and HD2, it will display automatically.)

AV INPUT: AV input selection (NONE / AV1/ AV2/ ALL)

	QROIX 🔷		
	SE NAV2		
	SECP	800 x 480	
	Z1/M2C		
	G-NOM		
	SE NAV3		
	KAZON	1000 × 700	
lvds model	KAZON+T	1920 x 720	
	SECP24	1280 x 480	
		1280 x 480, 1440 x 540, 1920 x 720	
	MIZCITID	Automatically fit the OEM screen	
	OROI-FHD	1280 x 480, 1440 x 540, 1920 x 720	
	GROITIB	Automatically fit the OEM screen	
	QROIX-HD	1280 x 720	
	SECP-HD	1280 x 480	
	NETPLAY	1280 x 480	
	QROIX-HD		
	I-VIEW-N	1280 x 720	
	I-VIEW		
HDT MODEL	KAZON		
	KAZON+T		
	NONE	HD1 Skip	
	QROIX-HD	1280 x 720	
TID ZUPPRUMENTER SOIL	NONE	HD2 Skip	

Factory Settings

IMAGE	RESET ALL : NO
🛓 PARK	VOICE KEY : OFF
🕸 FUNC	IDRV TYPE : 4WAY
😵 'υτιί 🖉	MEMORY KEY : MEM7
🕖 INFO 🖊	VIDEO GAIN : GAIN-1

UTIL

RESET ALL: Factory mode reset (YES/NO)

VOICE KEY: Steering wheel voice button use (ON/OFF)

IDRV TYPE: I-Drive number of arrow type selection (2WAY/4WAY)

MEMORY KEY: Memory button for mode change (OFF/MEM6/MEM7)

VIDEO GAIN: OEM screen shaking issue adjustment (GAIN-1~4)

IMAGE	INFORMATION
🚖 PARK	- SW: 240809
🕸 FUNC	- HW: Ver. A
🕉 UTIL	- SUB: 240726
🕖 INFO 🖊	

INFO

Version info.

Control OSD Menu by I-Drive



- I-Drive control OSD menu function is applied from FW240524
- Support all kinds of I-Drive including ID6 and ID7.

LCD Cable Connection



Head Unit Power Cable Connection_ID7





After make head unit power connector in and out as above, please connect supplied head unit power cable to the supplied IF cable and connect it to the main unit.



Head Unit Power Cable Connection_ID6



Pull out the bunch of cables from the backside of command and disconnect the marked optical fiber cable



Connect the provided power cable to the backside of monitor



Connect the optical fiber cable to the supplied power cable



Connect the bunch of original cables to the provided power cable (Female connector)

After make head unit power connector in and out as above, please connect supplied head unit power cable to the supplied IF cable and connect it to the main unit.



I-Drive Power Cable Connection_ID7





Disconnect original I-drive cable and connect it to the supplied female connector and connect supplied male connector to the I-drive.

After make IDRV power connector in and out as above, please connect supplied IDRV power cable to the supplied IF cable and connect it to the main unit.



I-Drive Power Cable Connection_ID6





Disconnect original I-drive cable and connect it to the supplied female connector and connect supplied male connector to the I-drive.

After make IDRV power connector in and out as above, please connect supplied IDRV power cable to the supplied IF cable and connect it to the main unit.



Original I-Drive Power Cable Pin Map

Car Model	#1	#2	#3	#4
ID6 I-Drive	ACC (Red/ White)	Ground (Grey)	CAN-High (Orange/ Green)	CAN-Low (Green)
ID7 I-Drive	ACC (Red/ White)	CAN-High (Orange/ Green)	CAN-Low (Green)	Ground (Grey)



OEM Button_ID7



- * Factory Menu -> UTIL -> IDRV TYPE: (2WAY/4WAY) -> 4WAY
- * PDC button: short press -> switch to OEM 360 camera on Ext. mode

	long press(3sec)	Mode change	
MENU	short press	Return to orignal	
	long press(3sec)	Mode change	
MAF	short press	Return to orignal	
OPTION	long press(7sec)	System Reset	
OPTION	short press	Return to OEM	
WHEEL DOWN (I-Drive 4way)	long press(3sec)	PIP Mode function	
WHEEL RIGHT (I-Drive 2way) long press(3sec)		PIP Mode function	
NAV			
MEDIA			
RADIO	short press	Return to OEM	
OPTION support@car-solutic COM	ns.com	car-solutions.com	

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OEM Button_ID6



* Factory Menu -> UTIL -> IDRV TYPE: (2WAY/4WAY) -> 4WAY

	long press(3sec)	Mode change	
IVIEINU	short press	Return to orignal	
	long press(3sec)	Mode change	
MAF	short press	Return to orignal	
OPTION	long press(7sec)	System Reset	
OFIION	short press	Return to OEM	
WHEEL DOWN (I-Drive 4way)	long press(3sec) PIP Mode function		
WHEEL RIGHT (I-Drive 2way)	long press(3sec)	PIP Mode function	
NAV		Return to OEM	
MEDIA			
RADIO	short press		
OPTION			
СОМ			

OEM Button_ Steering Wheel

* Factory Menu -> UTIL2 -> VOICE KEY: (ON/OFF)

* Handle voice button: long press (3Sec) -> PIP mode change on Ext. RCAM mode



OEM Button_ Memory

- 1. Factory Menu -> UTIL -> MEMORY KEY: (OFF/MEM6/MEM7)
- 2. Memory #6 & #7 button: short press -> mode change





QROIX Screen Ration Change on HDMI Mode

Please push jog downward for 3secs or short press PIP button on the remote control to change screen display ratio.





QROIX 4:3 ratio screen display



QROIX Demo_Mini F56

Please push jog downward for 3secs or short press PIP button on the remote control to change screen display ratio.





* Factory Menu -> FUNC -> LVDS MODEL : QROIX-HD (1280x720)

Split Screen on Front Camera/AV Mode

Please push jog downward for 3secs or short press PIP button on the remote control to change screen display ratio.





Ext. Video + Original Screen



Split Screen on Rear Camera Mode_ ID6 6.5"/8.8"

Please push jog downward for 3secs or short press PIP button on the remote control to change screen display ratio.









Ext. Rear Camera + OEM PDC





Split Screen on Rear Camera Mode_ ID6 10.2"

Please push jog downward for 3secs or short press PIP button on the remote control to change screen display ratio.





OEM PDC Full Screen Mode



OEM PDC + Ext. Rear Camera









Split Screen on Rear Camera Mode_ ID7 12.3"

Please push jog downward for 3secs or short press PIP button on the remote control to change screen display ratio.





OEM PDC Full Screen Mode



OEM PDC + Ext. Rear Camera









Split Screen on HDMI Rear Camera Mode_ Mini

Please push jog downward for 3secs or short press PIP button on the remote control to change screen display ratio.





Original Rear Full Screen

Original PDC + Ext. Rear Camera



Ext. Camera Full Screen Resized





QROIX Connection by LVDS Input



- Factory Settings -> FUNC -> LVDS MODEL : QROIX

QDISPLAY Connection by LVDS Input



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

Control QDISPLAY by OEM Button

- * To control CARPLAY box by IDRV need to select OSD menu as below.
- OSD menu -> UTIL -> IDRV Type -> 2 way or 4way
- OSD menu -> FUNC -> LVDS Model -> SE-CP



4 KEY TYPE IDRIVE (have IDRV Up/Down)



2 KEY TYPE IDRIVE (no IDRV Up/Down)

Key	<mark>Status</mark>	Description	
WHEEL LEFT	turn	LEFT ROTATION	
WHEEL RIGHT	turn	RIGHT ROTATION	
	short press (Audio JBJ)	ENTER	
VVNEEL FUSN	long press (Audio JBJ)	SIRI/VOICE	
IRDV BACK	short press	ESCAPE	
	short press	UP	
	long press (iDrv JBJ)	SIRI/VOICE	
idrv down	short press	1) DOWN 2) Moving to Android Auto Menu Bar	
	long press	ESCAPE	
60	short press	PREV	
IDRV LEFT	long press (iDrv 4way)	1) LEFT 2) Moving to Android Auto Menu Bar	
	long press (iDrv 2way)	SIRI/VOICE	
	short press	NEXT	
<mark>iDR∨ RIGHT</mark>	long press (iDrv 4way)	RIGHT	
	long press (iDrv 2way)	ESCAPE	
	short press	HOME	
support@car-sol	short press (iDrv JBJ)	ENTER car-solutions.com	

QDISPLAY Demo







QROIX Demo





IF Power Cable Drawing



ID6 Head Unit Power Cable Drawing



1. P1->P2,P3

P1	연결	P2,P3	COLOR	SIGNAL
1 -	Å	A-15	RED	ACC
2 ·	-	A-12	BLACK	GND

2. P1->P3

P1	연결	P3(IN)	COLOR	SIGNAL
3 .		A-11	WHITE	CAN-IN-H
4 .	-	A-9	YELLOW	CAN-IN-L

3. P1->P2

P1	연결	P2(OUT)	COLOR	SIGNAL
5	Å	A-11	BLACK/WHITE	CAN-H
6	4	A-9	BLACK	CAN-L

3. P2,P3->RCA PLUG

P2,P3	연결	RCA	COLOR	SIGNAL
B2 ·	4	- 1	RED	AUDIO R
B7 ·	support	@car ¹ solut	ions.comTE	AUDIO L
B8 ·	-	- 2	BLACK	AUD-GND

ID6 IDRV Power Cable Drawing



P1	연결	P2	COLOR	SIGNAL
1.		1	RED	ACC
2	ļ	2	BLACK	GND
3.	ł	3	WHITE	CAN-H
4 •	ļ	4	YELLOW	CAN-L
5	N.C			
6	N.C			

ID7 Head Unit Power Cable Drawing



ID7 IDRV Power Cable Drawing



P1	연결	P2	COLOR	SIGNAL
10		1	RED	ACC
2 ·	1	4	BLACK	GND
3 ·	ļ	2	BLACK/WHITE	CAN-H
4 ·	ļ	3	BLACK	CAN-L
5	N.C			
6	N.C			

AV Cable Drawing

NO	DESCRIPTION	NO	COLOR	T
	R-CAM		RCA YELLOW	
2	F-CAM	2	RCA YELLOW	
3	R,F-CAM GND	3		
4	VIN I	4		s ann <u>nnn</u> d
5	VIN I GND	5	RCA TELLOW	
6	AL-IN I	6	RCA WHITE	
7	AR-IN	7	RCA RED	
8	AL,R-IN GND	8		A I H HH
9	VIN 2	9	RCA VELLOW	
10	VIN 2 GND	10	NCA TELEOW	
NO	DESCRIPTION	NO	COLOR	
	AL-IN 2		RCA WHITE	
12	AR-IN 2	12	RCA RED	
13	AL,R-IN2 GND	13		
14	V-OUT I	14	RCA YELLOW	
15	V-0UT 2	15	RCA YELLOW	
16	V-OUTI,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		
	rent la			AQUER AQUER
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Multi Cable Drawing

