MB2019-NTG6.0-TC2
User Manual

Index

1. Main Spec.

1. Input Spec. (MULTI VIDEO INTERFACE)
   - 1 x Digital RGB Input (Navigation System output)
   - 2 x A/V Input (External video source).
   - 1 x CVBS(REAR CAMERA) Input. (Rear camera source)
   - 1 x CVBS(FRONT CAMERA) Input. (Front camera source)
   - 1 x Analog RGB Input (Navigation System output)
   - 1 x LVDS Input. (Car Command System)
   - 1 x Capacitive Touch Screen

2. Output Spec.
   - 1 x LCD Output (LCD Operation)
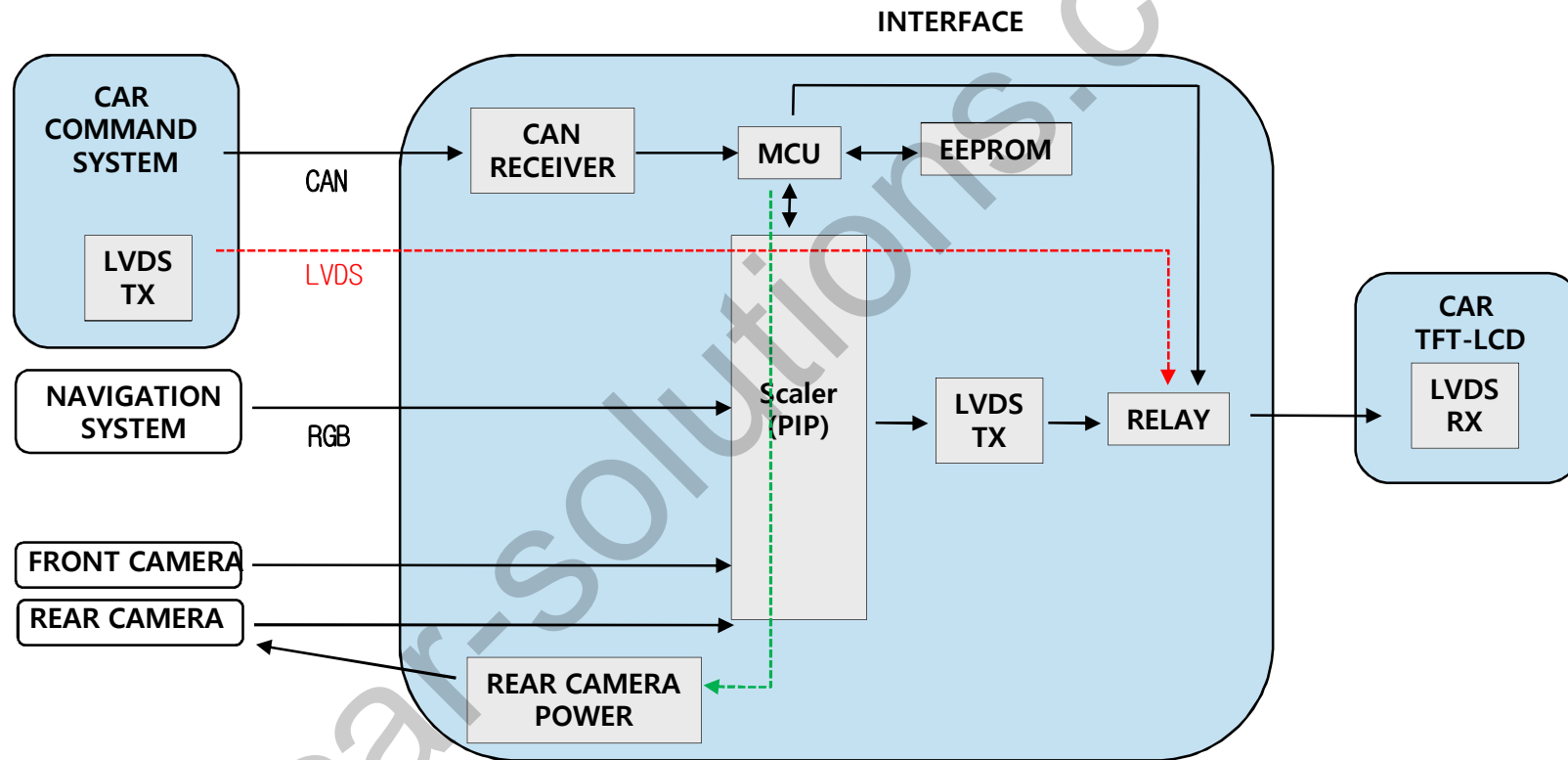   - 1 x Resistive Touch

3. Power Spec.
   - Input Power : 8VDC ~ 24VDC
   - Consumption Power : 12Watt, Max

4. Switch Input mode
   - Possible to select CAR model while switching mode by DIP S/W
   - By button on the Commander in the car via CAN
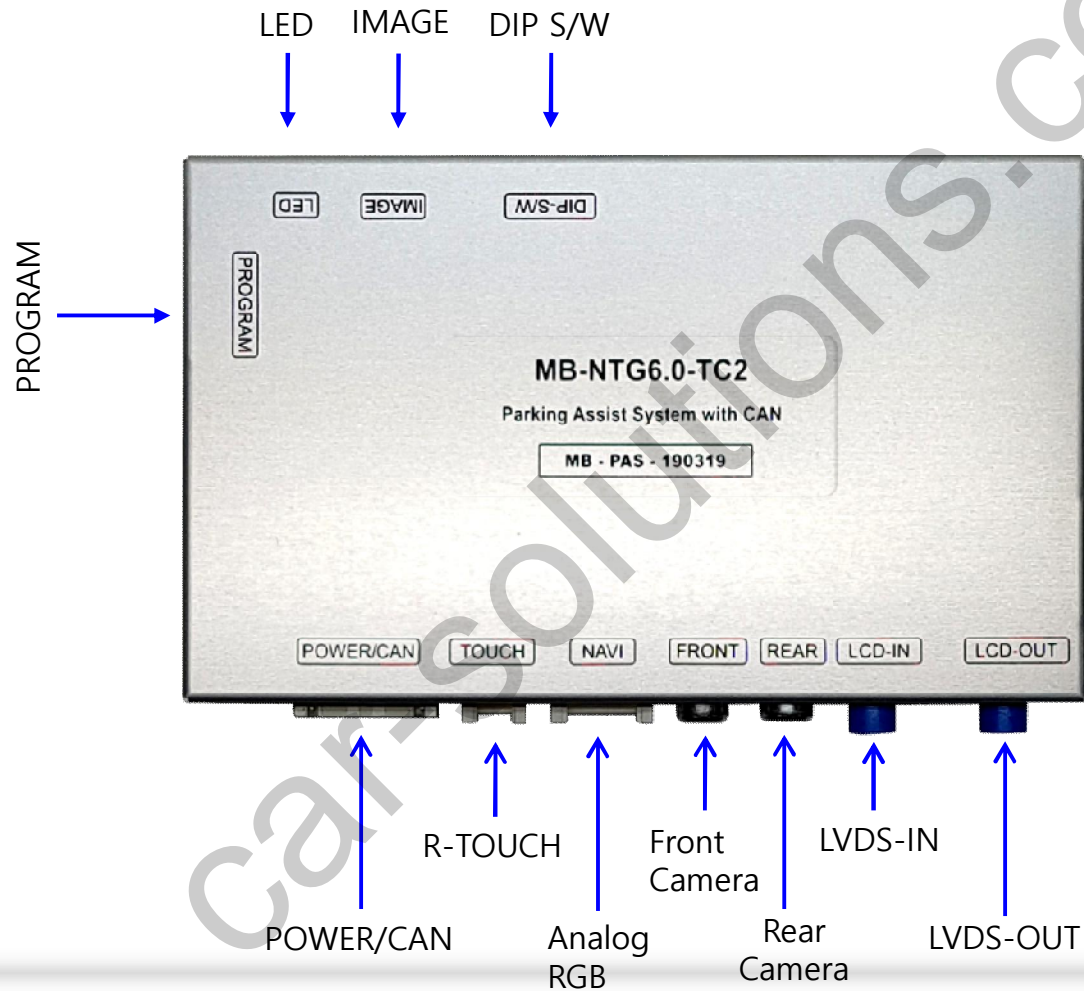
2. Block Diagram

INTERFACE

CAR COMMAND SYSTEM
LVDS TX

CAN

CAN RECEIVER → MCU ↔ EEPROM

LVDS

NAVIGATION SYSTEM

RGB

Scaler (PIP) → LVDS TX → RELAY

FRONT CAMERA

REAR CAMERA

REAR CAMERA POWER

CAR TFT-LCD
LVDS RX

3. Dimension

138mm * 83mm * 24mm

138mm

24mm

83mm

* This can change under manufacturer's circumstance

4. External Appearance

LED   IMAGE   DIP S/W

PROGRAM

MB-NTG6.0-TC2

Parking Assist System with CAN

MB - PAS - 190319

POWER/CAN   TOUCH   NAVI   FRONT   REAR   LCD-IN   LCD-OUT

R-TOUCH   Front Camera   LVDS-IN

POWER/CAN   Analog RGB   Rear Camera   LVDS-OUT

4. External Appearance

DIP S/W   IMAGE   LED

R-TOUCH

Front Camera

LVDS-IN

POWER/CAN

Analog RGB

Rear Camera

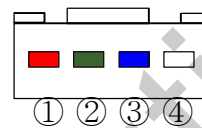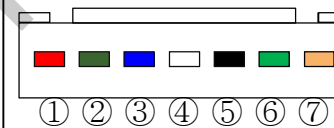LVDS-OUT
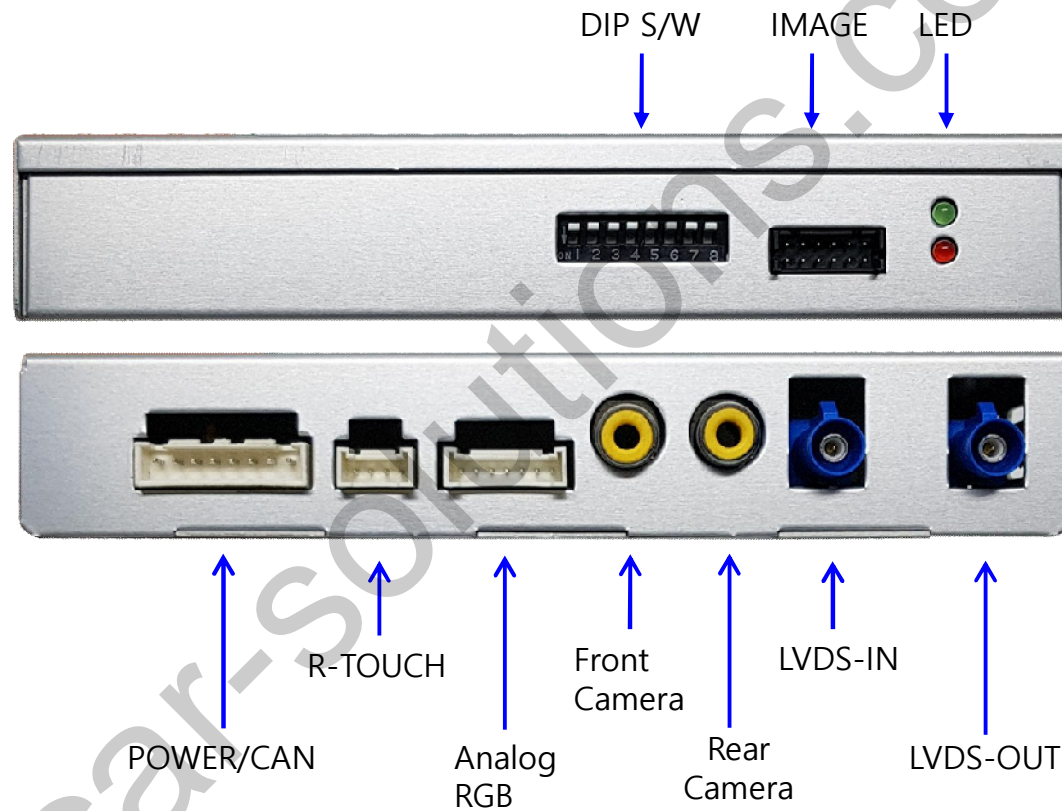
5. Connector Pin Assignment

*POWER Connect

① ② ③ ④ ⑤ ⑥ ⑦ ⑧
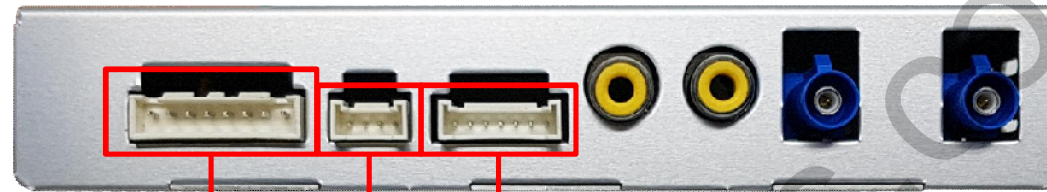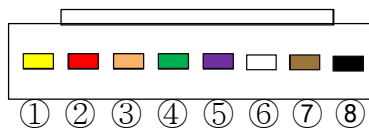
① ACC(Yellow)
② REAR_POWER (Red)
③ CAN-HIGH (Orange)
④ CAN-LOW (Green)
⑤ CAN-HIGH (Purple)
⑥ CAN-LOW (White)
⑦ REAR_DETECT (Brown)
⑧ GND (Black)

*Touch Connect

① ② ③ ④

① Y-
② X-
③ Y+
④ X+

*NAVI Connect

① ② ③ ④ ⑤ ⑥ ⑦

① R DATA (Red)
② G DATA (Green)
③ B DATA (Blue)
④ SYNC (White)
⑤ GND (Black)
⑥ DMB IR (TX)(Green)
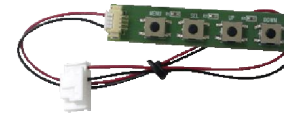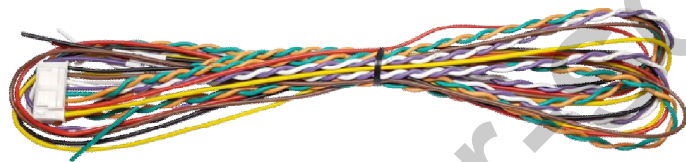⑦ DVD IR (RX) (Orange)

6. Product Composition

Interface 1 EA

RGB Navi Cable 1 EA

OSD Board 1 EA

Power cable 1EA

LVDS Cable
Connector 1 EA

LVDS Cable 1 EA

SPRINTER 8" / 12.3" / A-class 8"

6. Product Composition

* Cable Sales(option)

LVDS Cable A-class 12.3″

7. DIP S/W Setting

* ON : DOWN , OFF : UP

PIN	FUNCTION	DIP S/W Selection
1	NAVI	ON : Not Used OFF : Used
2	DVB-T	ON : Not used OFF : used
3	DVD	ON : Not used OFF : used
4	N.C	
5	N.C	
6		
7	CAR type SEL	Right Picture
8		

* DIP S/W Example
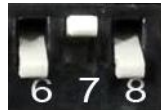
A class 8.0" Model
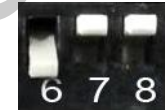
SPRINTER 8.0" Model

A class 12.3" Model

SPRINTER 12.3" Model

8. Mode Change

A-CLASS 12.3"

A-CLASS 8.0"

8. Mode Change

SPRINTER 12.3"/ 8.0"

9. Touch Control

Touch control - Calibration

Press and hold for more than 11 seconds on NAVI, DVB-T, DVD screen.
(Note that it only works the first time after switching screens)

OR

MENU	Calibration	NAVI
OSD	Factory Reset	Execute Cancel
IR-Ctrl	Calibration	Execute Cancel
Utility	Version	FDSHOOKRX-180112

OSD menu -> Utility -> Calibration
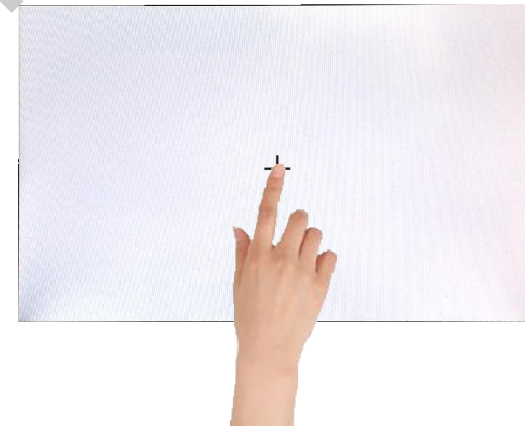
+ Touch according to the shape coordinates.

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9. Touch Control

DVB-T/DVD Control

DVB-T

DVD

Press Touch(Anywhere)

Press Icon
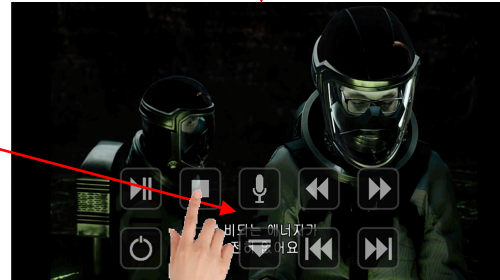
10. OSD(On Screen Display) Control

OSD Control Board
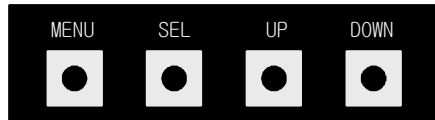
MENU	When there is no OSD screen, pressing OSD ON When OSD screen is displayed, press OSD EXITT
SEL	Item Selection, Value Selection
UP	Item up Increase selected value
DOWN	Item down Decrease selected value

Mode State

First Menu   Second Menu   Third Menu

10. OSD(On Screen Display) Control

OSD Config

First Menu	Second Menu	Third Menu	Description
Config	NAVI-RGB	DIGTAL-INAVI :	Setting the Connected NAVI Model
	DVB-T(DMB)	ELT_DVBT20 :	Setting the Connected DVB-T Model
	DVD	ELT_980XU Slim :	Setting the Connected DVD Model
	Reset	Execute	Reset to default value of Config menu

10. OSD(On Screen Display) Control

OSD Option

First Menu	Second Menu	Third Menu	Description
Option	RearCam-Type	OEM	Original Camera
		ExtDevice	Equipped with external camera
	RearCam-Power	ON	+ 12V continuous supply
		AUTO	+ 12V supply only in Rear camera mode
		OFF	+ 12V off
	RearCam-Det	GEAR	Detected by CAN
		WIRE	Detected by Rear-Det Wire
	FrontCam-Type	OEM	Original Camera
		ExtDevice	Equipped with external camera
	FrontCam-Power	ON	+ 12V continuous supply
		AUTO	+ 12V supply only in Front camera mode
		OFF	+ 12V off
	FrontCam-Det	CAN	Detected by CAN
		WIRE	Detected by Front-Det Wire

MENU	RearCam-Type	NAVI
Config	RearCam-Type	OEM
Option	RearCam-Power	Auto
Image	RearCam-Det	GEAR
Screen	AV Mode	Off
Parking	FrontCam-Type	ExtDevice

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10. OSD(On Screen Display) Control

OSD Option

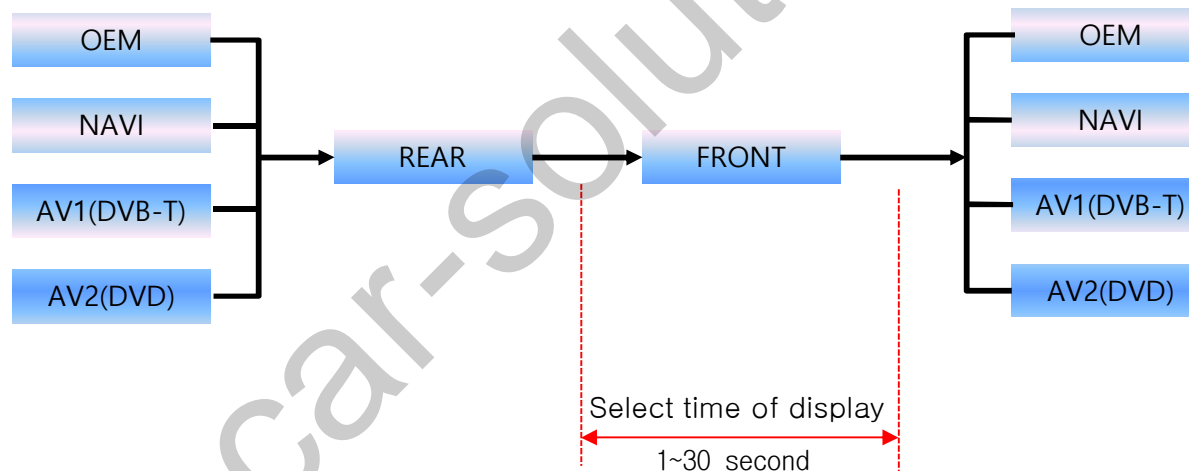| First Menu	Second Menu	Third Menu	Description
Option	FrontCam-RcvOpt	ON	After RearCam shows FrontCam and returns to previous state
		OFF	Disable feature
	SteeringWheelBtn	ON	Select to use the "RETURN" button.
		OFF	Disable feature
	NAVI COM	HMS FINE :	Set up manufacturer of woodworking device for UART Touch use
		OFF	Disable feature
	Reset	Execute	Option Menu all Reset

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10. OSD(On Screen Display) Control

OSD Option -> FrontCam-RcvOpt

Front Camera Auto Mode

    0 second = FrontCam-RcvOpt menu OFF
  1~30 second = FrontCam-RcvOpt menu ON & time control

MENU	FrontCam-RcvOpt	NAVI
Config	FrontCam-RcvOpt	0s
Option	SteeringWheelBtn	On
Image	UI DVB-T(DMB)	On
Screen	UI DVD	On
Parking	ScrChg-Climate	On

MENU	FrontCam-RcvOpt	NAVI
Config	FrontCam-RcvOpt	30s
Option	SteeringWheelBtn	On
Image	UI DVB-T(DMB)	On
Screen	UI DVD	On
Parking	ScrChg-Climate	On

OEM
NAVI
AV1(DVB-T)
AV2(DVD)
→ REAR → FRONT →
OEM
NAVI
AV1(DVB-T)
AV2(DVD)

Select time of display
1~30 second

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10. OSD(On Screen Display) Control

OSD – Screen Menu

First Menu	Second Menu	Third Menu	Description
Screen	Horizontal		Output screen horizontal movement
	Vertical		Output screen vertical movement
	Scale X Up		Reduce / increase output screen width
	Scale X Down		
	Scale Y Up		Reduce / Increase Output Screen Height
	Scale Y Down		
	Reset		Screen menu all reset

MENU	Horizontal	NAVI
Config	Horizontal	50
Option	Vertical	50
Image	Scale X Up	50
Screen	Scale X Down	50
Parking	Scale Y Up	50

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10. OSD(On Screen Display) Control

OSD – Parking Menu

First Menu	Second Menu	Third Menu	Description
Parking	Line Display	ON	Show parking line
		OFF	Do not show parking lines
	Warnings Lang		Set warning text language
	Horizontal		Moving a parking line horizontally
	Vertical		Moving a parking line vertically
	Transparency		Parking line transparency
	Reset		Parking menu all reset

MENU	OPS Display	REAR
Config	OPS Display	Off
Option	Line Display	Off
Image	Warnings Lang	English
Screen	Horizontal	50
Parking	Vertical	60

10. OSD(On Screen Display) Control

OSD – OSD Menu

First Menu	Second Menu	Third Menu	Description
OSD	Horizontal	*value*	OSD Menu Horizontal Shift
	Vertical	*value*	OSD menu vertical Shift
	Display Time	*value*	OSD Menu Display Time (in seconds)
	Transparency	*value*	OSD menu transparency
	Language		OSD menu display language
	Reset	Execute	Initialize OSD settings

10. OSD(On Screen Display) Control

OSD Utility

First Menu	Second Menu	Third Menu	Description
Utility	Factory Reset	Execute	Initialize all settings
	Calibration	Execute	Run Calibration mode
	Version		FDS302KRX-171004 **(Check for future upgrades)**

Last Source : FDS302KRX-171004

→ Software Version

→ Software Month

→ Software Year

→ Special Version

→ National : CN=CHINA, KR=KOREA, JP=JAPAN, US=United States

→ Hardware Version

→ PIP model : S3=Sync3, PP=PIP, LV=LVDS

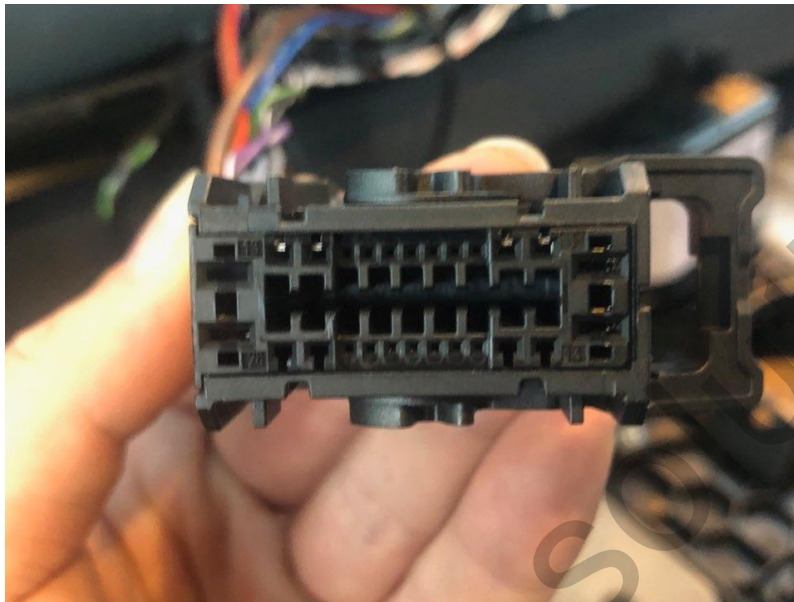→ Motor model : FD=FORD, BM=BMW, BE=BENZ, MA=MASERATI, LX:LEXUS

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11. Install Manual

1. Installation Diagram

MB2019-NTG 6.0-TC2
INTERFACE

POWER/CAN   R-TOUCH   RGB   LCD-IN   LCD-OUT

RED
GREEN
BLUE
SYNC
GND
DMB IR
DVD IR

Monitor
LVDS

Comander
LVDS
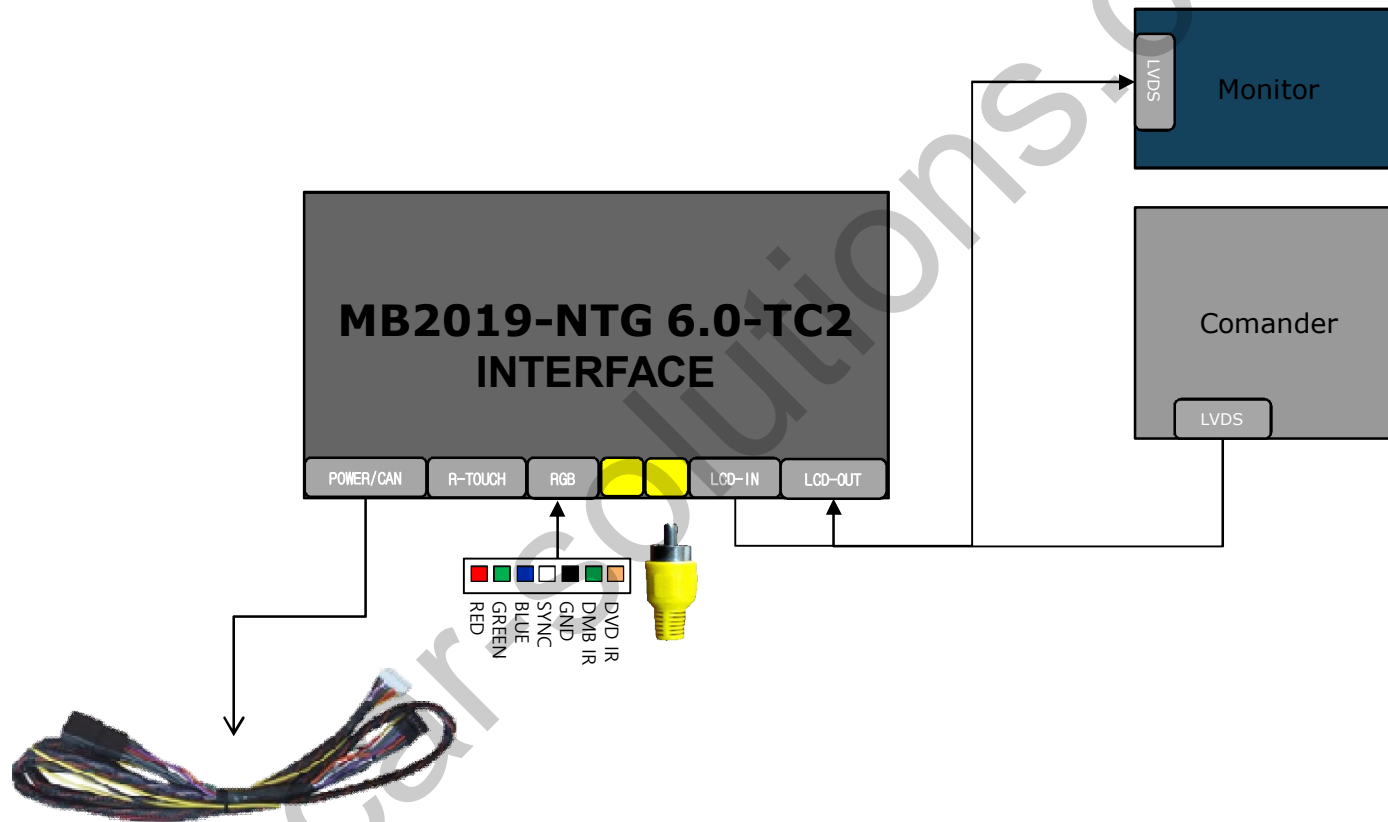
11. Install Manual

2. Power / LVDS connection

SPRINTER 12.3"
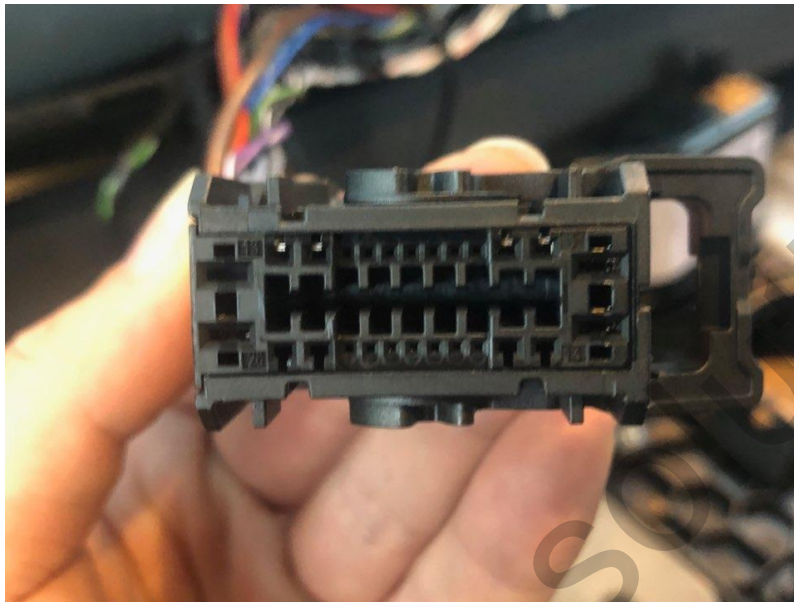
11. Install Manual

2. Power / LVDS connection

SPRINTER 8.0"

11. Install Manual

2. Power / LVDS connection

A-class 12.3"

11. Install Manual

2. Power / LVDS connection

A-class 8.0"

12. Q & A

FAQ

1. Not possible to switch mode
   - Check connection of OSD Key pad wire
   - Check CAN connection
2. Display wrong size of picture
   - Check Dip s/w setting
3. Display black screen in OEM mode
   - Check connection of LVDS/LCD cable
4. Not possible to switch to rear screen
   - Check the packing setting (OSD Menu – option – RearCam-Det)

Caution

1. The device must not be installed in where it interferes driving
   (close to brake pedal, steering wheel, airbag etc.)
2. LVDS cable must be connected correctly according to the manual
3. Insulate the end of wire by using electrical tape
4. The installation should be done by expert
5. GU electronic does not take any responsibility for any problem caused by wrong installation