FORD-SYNC3-TDC2 Ford Video Interface

רבם	МАЯЭОЯЯ	(EDAMI)	[WS_910	ו		
		FOR	D-SYN	C3 - TD	C2	
		VIDE	O INTERFA	CE with CA	N	
POW	ER/CAN	DIGITAL T	OUCH	NAVI	FRONT REAR	UVDS-OUT LVDS-IN

VIDEO INTERFACE

MODEL.	FS-PAS-170830
DATE.	2019.07.26



Korea Auto Parts

1. Input Spec. (MULTI VIDEO INTERFACE)

- 1 x Digital RGB Input (Navigation System source)
- 1 x Analog RGB Input (Navigation System source)
- 1 x CVBS(REAR CAMERA) Input (Rear camera source)
- 1 x CVBS(FRONT CAMERA) Input (Front camera source)
- 1 x LVDS Input (Car Command System)

2. Output Spec.

- 1 x LCD Output (LCD Operation)
- 1 x Virtual Analog Touch (Navigation System source)
- 1 x UART Digital Touch (Navigation System source)

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



External Appearance
LED PROGRAM IMAGE DIP S/W
DIP_S/W (IMAGE) PROGRAM LED
FORD - SYNC3 - TDC2 VIDEO INTERFACE with CAN FS - PAS - 170830
POWER/CAN DIGITAL TOUCH NAVI FRONT REAR LVDS-OUT LVDS-IN
Power/CAN Digital Touch NAVI FRONT REAR LCD LCD RGB



KA

Connector Pin Assignment



1 P	OWER Co	nnect (16P	Pin)	1	3	5	7	9	11	13	15	
			ſ	•	•	•	•	•	•		•	
				•	•	٠	٠	٠	٠	٠	•)	
				2	4	6	8	10	12	14	16	
No	1	3	5			7		9			11	13
Color												

Color							-	
	YELLOW	BROWN	GREEN				RED	BLACK
Connect	ACC	REAR DET	CAN-L	N.C	N.C	N.C	FRONT VCC	GND
No	2	4	6	8	10	12	14	16
Color								
		BLUE	ORANGE			RED	GREEN	BLACK
Connect	N.C	FRONT DET	CAN-H	N.C	N.C	REAR VCC	MODE	GND





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Product Composition



Interface



RGB NAVI Cable



Power Cable





OSD Board



LVDS IN Cable

Mode S/W



LVDS OUT Cable



Dip Switch Setting

OFF : ▲UP ON : ▼DOWN

PIN	FUNCTION	DIP S/W Selection
1	NAVI	ON : Not Used OFF : Used
2	DVB-T(AV1)	ON : Not Used OFF : Used
3	DVD(AV2)	ON : Not Used OFF : Used
4	N.C	
5	N.C	
6		
7	CAR type SEL	Bottom Picture
8		

Car Type Select



FORD F150 (2015~)



FORD F150 (Special Model)

Vehicles that do not function as basic DIP-SW among F150 models



FORD Mustang (2017~) Ranger (2018~) Lincoln MKX (2018~)



Mode Change

Steering Wheel Button Control – F150 Basic



Mode Change Button

- 1 LEFT
- Switch mode by pressing for 1.5 seconds
- Short press to switch OEM

2 VOICE

- Switch mode by pressing for 3 seconds Short press to switch OEM
- •

MENU	Steering Wh	neel NAVI
Config	FrontCam-Power	Auto
Option	FrontCam-Det	ExtWire
Image	FrontCam-RcvOpt	Os
Screen	Steering Wheel	Left Voice Off
Parking	Reset	Execute Cancel

You can set the mode change time of the 'LEFT' or 'VOICE' button in the OSD menu ٠ (Select "OFF" when the button is not used)

Steering Wheel Button Control – F150 Specific vehicle



Mode Change Button 1 LEFT

- Switch mode by pressing for 1.5 seconds
- Short press to switch OEM

2 VOICE

- Switch mode by pressing for 3 seconds
- Short press to switch OEM

- In this case, set DIP-SW as shown in the figure on the left.
- same as F150 but not distinguishable from • other vehicles

Mode Change Sequence

Home 12:05 Court GPS but Court Sea Court	NAVI	DVBT	DVD	Home 12:05 Part of all all all all all all all all all al
OEM	NAVI	AV1 (DVBT)	AV2 (DVD)	OEM

Mode Change

Steering Wheel Button Control – Mustang



Steering Wheel Button Control – Ranger





- Switch mode by pressing for 1.5 seconds •
- Short press to switch OEM

2 VOICE

- Switch mode by pressing for 3 seconds Short press to switch OEM

MENU	Steering Wh	eel NAVI
Config	FrontCam-Power	Auto
Option	FrontCam-Det	ExtWire
Image	FrontCam-RcvOpt	Os
Screen	Steering Wheel	Left Voice Off
Parking	Reset	Execute Cancel

You can set the mode change time of the 'LEFT' or 'VOICE' button in the OSD menu ٠ (Select "OFF" when the button is not used)

Mode Change Sequence



Mode Change

Steering Wheel Button Control – Lincoln MKX



Mode Change Button

- 1 LEFT
- Switch mode by pressing for 1.5 seconds •
- Short press to switch OEM

2 VOICE

- Switch mode by pressing for 3 seconds Short press to switch OEM
- •

MENU	Steering Wi	neel NAVI
Config	FrontCam-Power	Auto
Option	FrontCam-Det	ExtWire
Image	FrontCam-RcvOpt	Os
Screen	Steering Wheel	Left Voice Off
Parking	Reset	Execute Cancel

You can set the mode change time of the 'LEFT' or 'VOICE' button in the OSD menu • (Select "OFF" when the button is not used)

Mode Change Sequence





Touch Control

Touch Calibration / DVBT, DVD Control

Method 1



• Touch the screen for 11 seconds

Touch Calibration



Method 2



• + Touch according to the shape coordinates.

Press Touch (Anywhere)





Press Icon





OSD(On Screen Display) Control Board



MENU	The OSD screen can be switched ON/OFFReturn to previous menu
SEL	Select the currently active itemIf the OSD screen is off, mode changes can be made.
UP	Move up from the menuIncrease the selected item value
DOWN	Move down from the menuDecrease the selected item value

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

Mode State





Config

MENU	Config	NAVI
Config	NAVI-RGB	DIGITAL-INAVI
Option	DVB-T(DMB)	ELT_DVBT20
Image	DYD	ELT-980XU Slim
Screen	Reset	Execute Cancel
Parking		

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



Option

MENU	RearCam-1	Type NAVI
Config	RearCam-Type	OEM
Option	RearCam-Power	Auto
Image	RearCam-Det	GEAR
Screen	AV Mode	Off
Parking	FrontCam-Type	ExtDevice

First Menu	Second Menu	Third Menu	Description
		OEM	Original Camera
	RearCam-Type	ExtDevice	Equipped with external camera
		ON	+ 12V continuous supply
	RearCam-Power	AUTO	+ 12V supply only in Rear camera mode
		OFF	+ 12V off
	PoorCom Dot	CAN	Detected by CAN
	RealCall-Det	WIRE	Detected by Rear-Det Wire
Option	AV Mode	On	Video(CVBS) Input (If RearCam-Type is OEM)
	AV Mode	Off	Disable feature
	FrontCom Tuno	OEM	Original Camera
	FrontCam-Type	ExtDevice	Equipped with external camera
		ON	+ 12V continuous supply
	FrontCam-Power	AUTO	+ 12V supply only in Front camera mode
		OFF	+ 12V off



Option

MENU	FrontCam-Po	NAVI	
Config	FrontCam-Power	Auto	
Option	FrontCam-Det	ExtWire	
Image	FrontCam-RcvOpt		Os
Screen	SteeringWheelBtn	Left	
Parking	UI DVB-T(DMB)	On	

First Menu	Second Menu	Third Menu	Description
	FrontCom Dat	CAN	Detected by CAN
	FrontCam-Det	WIRE	Detected by Front-Det Wire
	FrontCam-	ON	After RearCam shows FrontCam and returns to the previous state
	RcvOpt	OFF	Disable feature
	Steering Wheel Btn	LEFT	Use the 'Left' button on the right side of the handle
Option		VOICE	Use the 'Voice' button on the right side of the handle
		OFF	Disable feature
		ON	DVB-T device control UI output function
	OLDAR-L (DMR)	OFF	Disable feature
		ON	DVD device control UI output function
	UIDVD	OFF	Disable feature



Option

MENU	UI DYD		NAVI
Config	UI DVD	On	
Option	ScrChg-Call	Off	
Image	ScrChg-Climate	Off	
Screen	ScrChg-Audio-Vol	Off	
Parking	NAVI COM	Off	
MENU	Reset		NAVI
MENU Config	Reset Reset	Execute	NAVI Cancel
MENU Config Option	Reset Reset	Execute	NAVI Cancel
MENU Config Option Image	Reset	Execute	NAVI Cancel
MENU Config Option Image Screen	Reset Reset	Execute	NAVI Cancel

First Menu	Second Menu	Third Menu	Description
	ScrChg-Call	ON	Switch to OEM screen when bluetooth phone comes in, return to original when phone terminated
		OFF	Disable feature
	ScrChg_Climate	ON	When there is a change of air conditioning, it switches to OEM screen for 2 seconds and then returns to original state
		OFF	Disable feature
Option	ScrChg-Audio-	ON	When there is a change in audio volume, it switches to OEM screen for 2 seconds and returns to original state
		OFF	Disable feature
	NAVI COM	HMS FINE :	Set up a manufacturer of woodworking device for UART Touch use
		OFF	Disable feature
	Reset	Execute	Option Menu all Reset





Option FrontCam-RcvOpt

Front Camera Auto Mode

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

0 second

FrontCam-RcvOpt Menu OFF

1~30 second FrontCam-RcvOpt Menu ON & time control



Option ► SrcChg-Call

Setup for switching from external screen to OEM phone mode screen automatically when phone rings



MENU	ScrChg-Ca	NAVI	
Config	UI DYD	On	
Option	ScrChg-Call	On	Off
Image	ScrChg-Climate	Off	
Screen	ScrChg-Audio-Vol	Off	
Parking	NAVI COM	Off	



• If you touch an arbitrary area of the OEM screen, it keeps the OEM screen

OSD Control Option ▶ SrcChg-Climate

Setup for switching from external screen to OEM mode screen automatically when changing climate value



MENU	ScrChg-Clin	NAVI	
Config	UI DVD	On	
Option	ScrChg-Call	Off	
Image	ScrChg-Climate	On	Off
Screen	ScrChg-Audio-Vol	Off	
Parking	NAVI COM	Off	

Option Audio-Vol

Setup for switching from external screen to OEM mode screen automatically when changing audio volume level



MENU	ScrChg-Audio	ScrChg-Audio-Vol		
Config	UI DVD	On		
Option	ScrChg-Call	On		
Image	ScrChg-Climate	On		
Screen	ScrChg-Audio-Vol	On	Off	
Parking	NAVI COM	Off		



• If you touch an arbitrary area of the OEM screen, it keeps the OEM screen



Image

NAVI – RGB Menu

First Menu	Second Menu	Third Menu	Description
	Brightness		Adjust the value of brightness
	Contrast		Adjust the value of contrast
	Color-RED		Adjust the value of RED
Image	Color-GREEN		Adjust the value of GREEN
	Color-BLUE		Adjust the value of BLUE
	Reset	Execute	Option Menu all Reset

DVD / DVBT / NAVI-AV, REAR, FRONT Menu

First Menu	Second Menu	Third Menu	Description
	Brightness		Adjust the value of brightness
	Contrast		Adjust the value of contrast
	Saturation		Adjust the value of Saturation
Image	Hue		Adjust the value of Hue
	Sharpness		Adjust the value of Sharpness
	Reset	Execute	Option Menu all Reset





Screen

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

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



Parking

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

First Menu	Second Menu	Third Menu	Description
	OPC Display	ON	Show OPS
	OPS Display	OFF	Do not show OPS
	Line Display	ON	Show parking line
	Line Display	OFF	Do not show parking lines
Parking	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

Parking Line ON Screen

MENU	Parking / Line	Display REAR
Config	OPS Display	On
Option	Line Display	On Off
Image	Warnings Lang	Россия
Screen	Horizontal	50
Parking	Vertical	50



Parking Line OFF Screen

MENU	Parking / Line	Display REAR
Config	OPS Display	On
Option	Line Display	On Off
Image	Warnings Lang	Россия
Screen	Horizontal	50
Parking	Vertical	50





Parking – Change warning message language

MENU	Parking / Warnings Lang		
Config	OPS Display	English	
Option	Line Display	中文	
Image	Warnings Lang <mark>:</mark> 한국어		
Screen	Horizontal _ 台灣		
Parking	Vertical	Россия	





Parking – Adjust the position of parking guideline

MENU	Parking		REAR
Config	OPS Display	Off	
Option	Line Display	On	
Image	Warnings Lang	English	
Screen	Horizontal	for a second second	50
Parking	Vertical	and the second second	50



- Pressing this Horizontal / Vertical menu, The OSD screen automatically disappears.
- Possible to adjust the position of parking guide line by Keypad in Horizontal / Vertical menu
- Please adjust from the parking line Screen.







OSD

MENU	Horizonta	al	DVB-T
OSD	Horizontal		50
IR-Ctrl	Vertical		50
Utility	Display Time		10s
	Transparency		- 30
	Language	English	
MEMIT	Deast		TUD T
MENU	Reset		DVB-T
MENU OSD	Reset Reset	Execute	DVB-T Cancel
MENU OSD IR-Ctrl	Reset Reset	Execute	DVB-T Cancel
MENU OSD IR-Ctrl Utility	Reset	Execute	DVB-T Cancel
MENU OSD IR-Ctrl Utility	Reset	Execute	DVB-T Cancel

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



Utility

MENU	Utility		NAVI
OSD	Factory Reset	Execute	Cancel
IR-Ctrl	Calibration	Execute	Cancel
Utility	Version	FDS302KR	X-171004

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





Installation Navigation (Digital) Connection

• OSD setting must be done before Navigation can be used

1 Screen Settings (Digital)

Config ► NAVI RGB ► DGT-0000

MENU	NAVI-RGB NAVI	
Config	NAVI-RGB	DGT-0000
Option	DVB-T(DMB)	
Image	DVD	
Screen	RearCam	
Parking	Reset	

- DGT = DIGITAL
- When DGT (DIGITAL) is selected, it is output to the screen.
- Select the product name of the connected navigation
- If NV-17 is not available, you can select any of DGT menu.

2 UART Touch Settings

Option ► NAVI COM ► Product Name

MENU	NAVI COM MAVI	
Config	UI DVD	NAVTEK
Option	ScrChg-Btn	NV17
Image	NAVI COM	
Screen	Reset	
Parking		

• Select the product name of the connected navigation



Installation ROiK Navigation Connection



- After completing the cable connection, OSD and device setting must be completed.
- See next page



Installation ROiK Navigation Connection

- After connecting the cables, you need to set the OSD to use the UART touch
- Since it is not touch yet, Interface controls OSD board / ROiK with Mouse Control

INTERFACE Settings (Control with OSD board)

1 Config > NAVI RGB > DIGITAL-ROIK

MENU	NAVI-RGE	NAVI
Config	NAVI-RGB	DIGITAL-G-NOM-A
Option	DVB-T(DMB)	DIGITAL-INAVI
Image	DVD	DIGITAL-GI7000A
Screen	RearCam	DIGITAL-ROIK
Parking	Reset	DIGITAL-NV100

2 Option ► NAVI COM ► GU

MENU	NAVI COM	NAVI
Config	UI DVD	Off
Option	ScrChg-Btn	GU
Image	NAVI COM	HMS
Screen	Reset	FINE
Parking		KD900

NAVIGATION Settings (Control with Mouse)

3 Device Setting → Select Interface→ **GU**





Installation Navigation Connection





Installation DVB-T Remote Control Connection





Installation DVD Remote Control Connection





Installation External Reverse(Rear) Camera Connection





Installation External Front Camera Connection





Installation LVDS connection





Q&A

1. Check the LED status first when interface failure

- If there is no abnormality after the power is applied, the green LED flashes in units of 1 second.
- If the red LED flashes for 1 second, there is no.
- If the red LED is on continuously, the interface itself is bad.
- If nothing turns on, check that the power and CAN signals are properly connected

2. When the screen turns black

- LVDS cable itself is bad or bad contact.
- 3. How to distinguish between FORD SYNC and SYNC3









4. If you find any symptoms with these symptoms, please contact your distributor







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