NAV-TV
INTERFACING THE FUTURE

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C.O.D.-F50

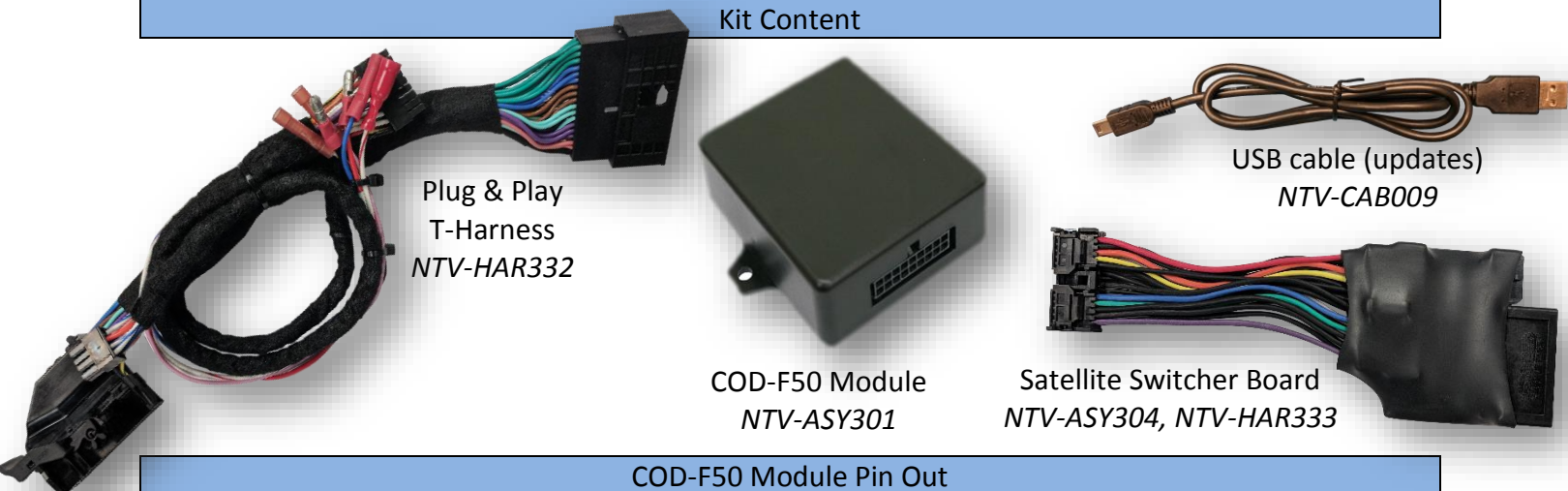**Ford OEM 360 Surround-View Camera Controller**
NTV-KIT899

Overview

The COD-F50 (Camera-On-Demand) kit allows Ford SuperDuty trucks equipped with OEM (5-camera system) surround view cameras to be displayed on demand, without lock-out restrictions. Additional features include turn signal cameras, easy force rear cam & force front cam & last known camera retention (from hard camera button press). *NOTE: This kit **will NOT program any camera system**. This module is only intended for use in SuperDutys equipped with the OEM trailer package (5-camera system).*

Kit Content

Plug & Play
T-Harness
NTV-HAR332

USB cable (updates)
NTV-CAB009

COD-F50 Module
NTV-ASY301

Satellite Switcher Board
NTV-ASY304, NTV-HAR333

COD-F50 Module Pin Out

Pin #	Description	Color
1	12v Constant Power (+)	Yellow
2	INPUT 1: *NOT USED*	Red
3	INPUT 2: *NOT USED*	Blue
4	INPUT 3: *NOT USED*	Pink
5	RX (OE camera button – button side)	Blue
6	CAN-3 HIGH (camera module)	Blue
7	CAN-2 HIGH (CAN gateway)	Blue
8	CAN-1 HIGH (APIM)	Yellow
9	CAN-0 HIGH (CAN gateway)	Yellow/Black
10	Ground (-)	Black
11	OUTPUT 1: *NOT USED*	White/Red
12	OUTPUT 2: *NOT USED*	White/Blue
13	OUTPUT 3: *NOT USED*	White/Purple
14	TX (OE camera button – module side)	Purple
15	CAN-3 LOW (camera module)	Purple
16	CAN-2 LOW (CAN gateway)	Purple
17	CAN-1 LOW (APIM)	Orange
18	CAN-0 LOW (CAN gateway)	Orange/White

Wire side

COD-F50 Installation

1. Remove the 8" SYNC 3 screen (radio):

   a. Remove the center channel speaker cover on the top (middle) of the dash (4 clips only) *NOTE: this panel is very tight*.
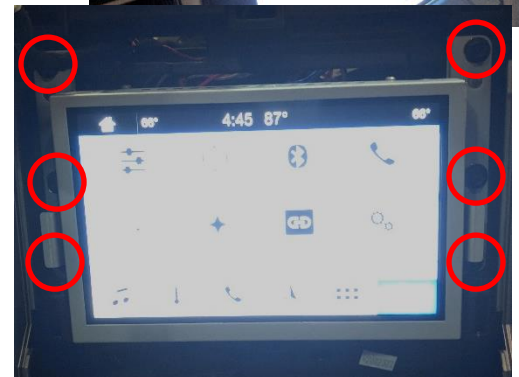

   b. Remove (2) 7mm bolts securing the top panel (previously hidden by the speaker grill).
   c. Remove the whole upper shelf panel, it should be held in by clips only, now. Disconnect the speaker lead. Set this panel assembly aside.
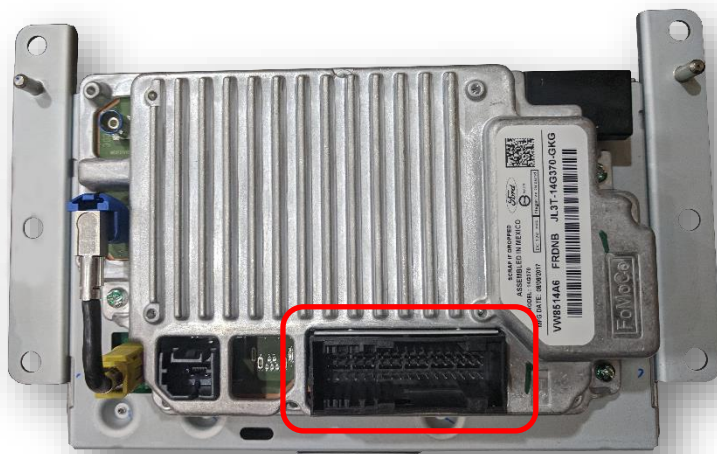

   d. Remove (2) 7mm screws on top of the climate/screen dash panel, and then pull panel straight towards you. Disconnect all harnesses and set the panel aside.

   e. Remove (6) 7mm screws securing the screen (APIM) to the sub-dash. Disconnect all harnesses and set the APIM aside.
   f. *NOT SHOWN:* the IPM (camera module) is bolted to the sub-dash directly behind the screen with 7mm screws. Remove it to connect the T-Harness properly. *Do not attempt to connect to the IPM while it is still connected to the sub-dash.*

2. Connect the provided T-Harnesses between the vehicle harness and the APIM (screen), and from the vehicle harness and the OEM camera module (directly behind screen).
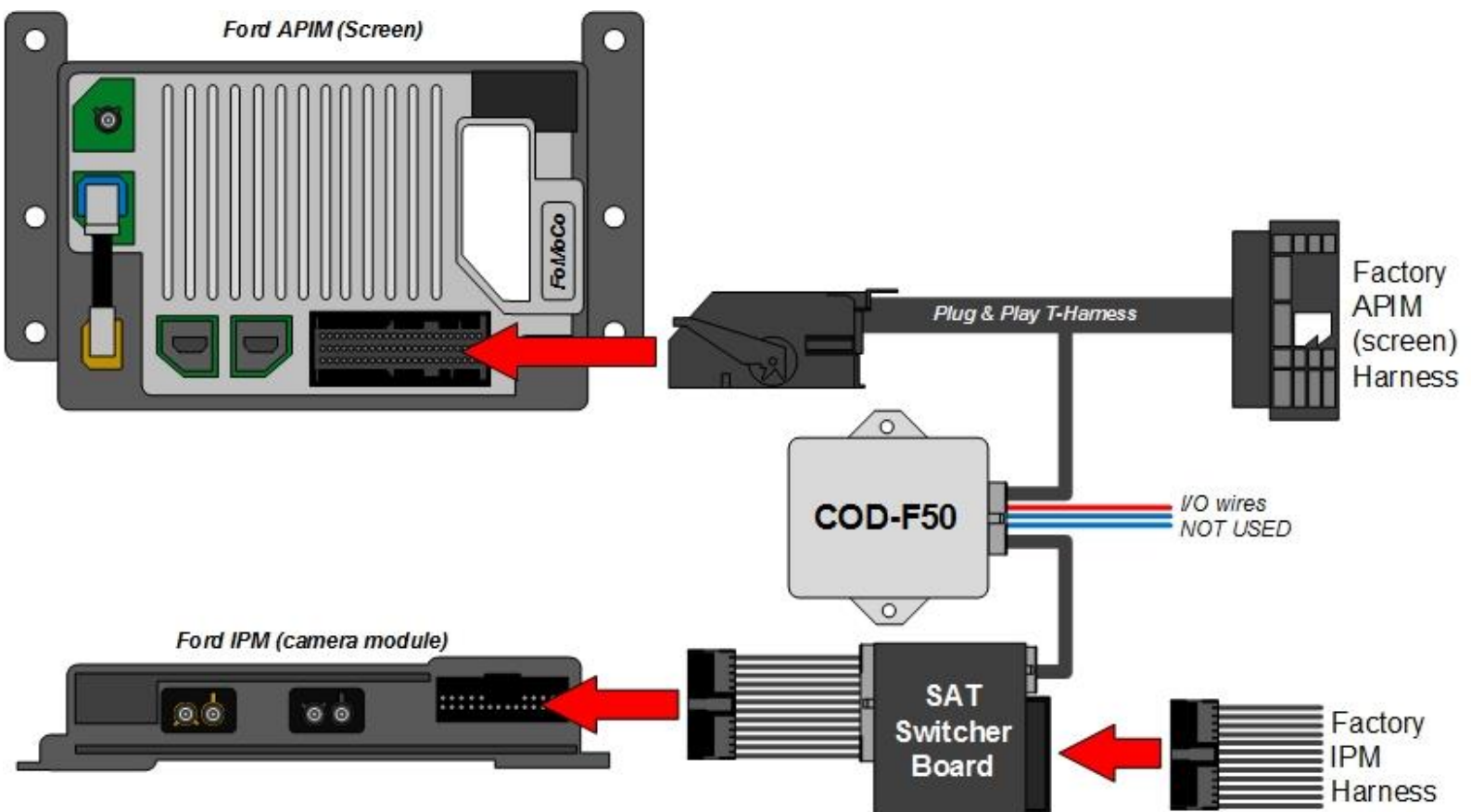

Rear of APIM (screen) *IPM (camera module)*

3. Connect the 18-pin plug to the COD module and secure it in the sub-dash so that nothing rattles. *NOTE: No other wires from the unit are used for this installation.*
4. Return the screen to the sub-dash and reconnect the climate/screen surround panel for testing.
5. ***Proceed to 'COD-F50 Operation'.***

Ford APIM (Screen)

Plug & Play T-Harness

Factory APIM (screen) Harness

COD-F50

I/O wires NOT USED

Ford IPM (camera module)
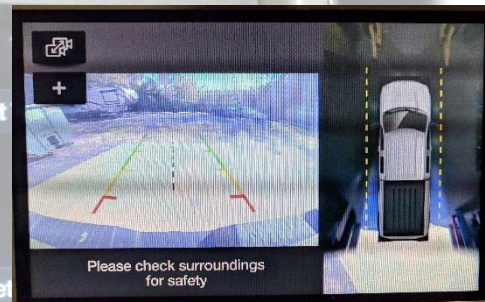
SAT Switcher Board

Factory IPM Harness

COD-F50 Operation (SuperDuty)

Once the COD-F50 module is connected properly, all added camera commands are performed through the factory camera button. Added features are outlined below:

Camera Button

- ***Single-Press camera button shows rear camera and rear cam options**** (default after ignition), press and release once again to clear

- ***Double-Tap camera button shows <u>front camera</u> and front cam options,** press and release once again to clear*

- ***Last used camera image (whether front, rear, cargo or surround view) is retained when switching back and fourth from radio screen to camera screen via camera button*** (instead of default surround view only with each press)

- ***Turn signals switch to corresponding side view**** (left or right, panned 100%)

    *NOTE: to disable turn signal camera activation, press and HOLD the camera button for 20 seconds (wait for tone). Once complete, turn signal cameras will deactivate. Repeat this process to reactivate TSC at any time.

    ***NOTE: forcing the **rear camera** may affect NAV guidance temporarily. This is a factory limitation.*

COD-F50 NOTES

- SYNC 3 radio *must be at least Version 3* for all features to work properly. Under SETTINGS, then GENERAL SETTINGS, look for the SYNC version. The radio system can be updated over the air if the vehicle is connected to a local WiFi connection. For more detail information, watch this video: https://www.youtube.com/watch?v=No8fJ7V21Y8
- The IPM T-Harness (camera module T-harness, smaller one) has delicate pins. If the unit is acting erratically, reseat this T-Harness *after checking for bent pins*.
- If your unit came with a USB cable and has a serial number, *then it is updateable.* If you suspect the unit needs a software update, connect the module to a Windows PC via USB and go to www.navtvdevice.com. All updates are available on that web page.