

NAV-TV

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COD-F43

Ford F-Series Camera Controller with 3 additional video inputs
NTV-KIT930



Moni
01/29/2021
NTV-DOC343

Overview

The COD-F43 (Camera-On-Demand) kit allows 2016+ Ford F150 and Raptor trucks equipped with OEM surround view cameras (4-camera system) to be displayed on demand, without lock-out restrictions. Additionally, with the F43 the user can add up to 3 composite video inputs (triggered via analog signal), easily force rear-cam/front cam and adds navigation control in motion. ***NOTE: This kit will NOT program any camera system. This module is only intended for use with trucks equipped with at least one OEM camera.***

Kit Content



COD-F43 Module Pin Out

Pin #	Description	Color
1	12V Constant Power (+)	Yellow
2	INPUT 1: (+) Enable external video 1	White
3	INPUT 2: (+) Enable external video 2	Blue
4	INPUT 3: (+) Enable external video 3	Red
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: <i>NOT USED</i>	White/Red
12	OUTPUT 2: <i>NOT USED</i>	White/Blue
13	OUTPUT 3: <i>NOT USED</i>	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

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COD-F43 Installation

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

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



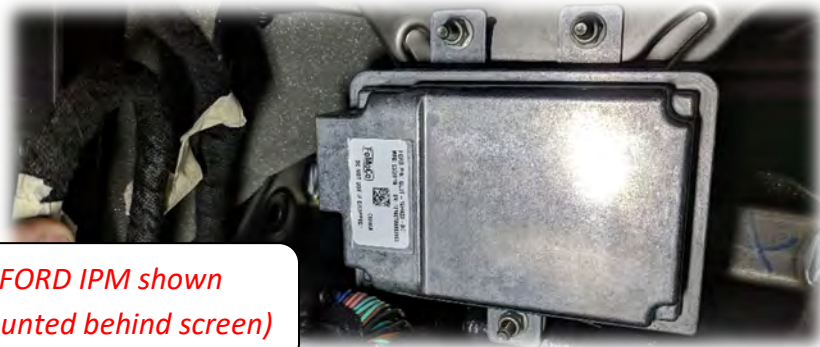
- b. Remove (2) 7mm bolts securing the top panel (previously hidden by the speaker grill).
- c. Remove the whole upper shelf panel, it should be held in by clips only, now. Disconnect the speaker lead. Set this panel assembly aside.



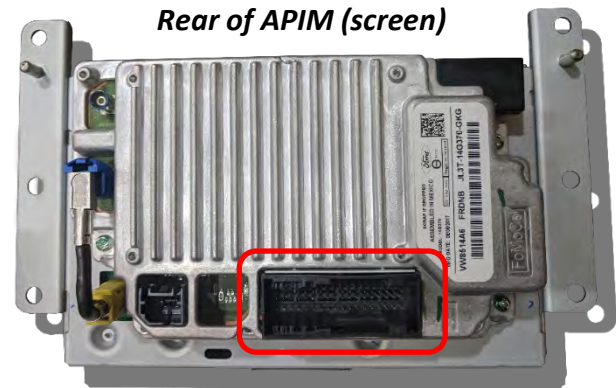
- d. Remove (2) 7mm screws on top of the climate/screen dash panel, and then pull panel straight towards you. Disconnect all harnesses and set the panel aside.
- e. Remove (6) 7mm screws securing the screen (APIM) to the sub-dash. Disconnect all harnesses and set the APIM aside.



2. Connect the provided (large, main) **T-Harness** between the vehicle harness and the APIM (screen).

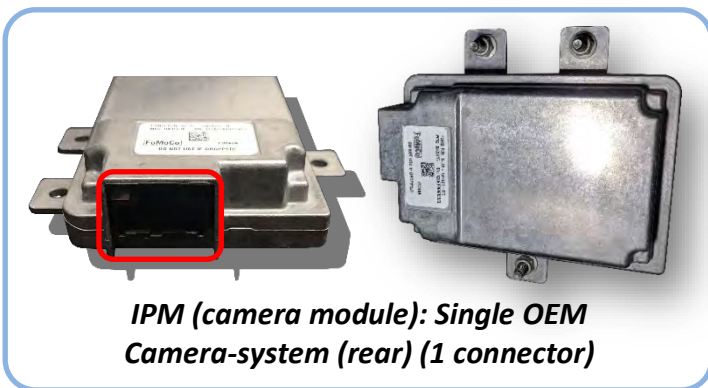


*FORD IPM shown
(mounted behind screen)*

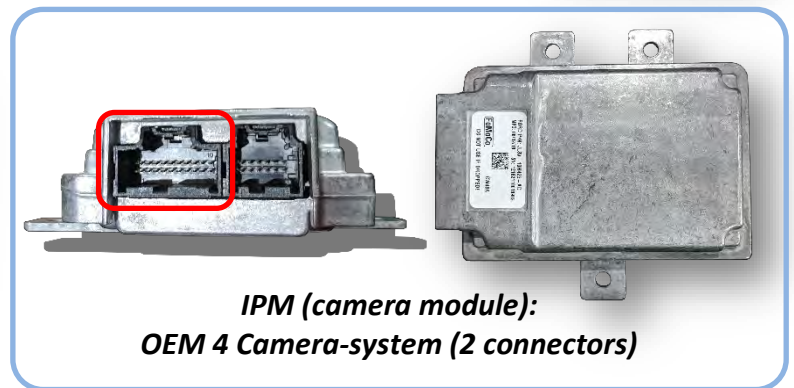


Rear of APIM (screen)

3. Connect the provided **SAT-switcher board/harness** to the IPM (directly behind screen, see below for both variants). Connect the (OE) IPM vehicle harness (previously removed 20-pin) to the SAT-switcher board.

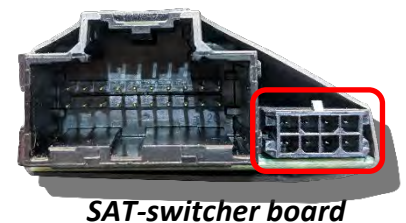


*IPM (camera module): Single OEM
Camera-system (rear) (1 connector)*



*IPM (camera module):
OEM 4 Camera-system (2 connectors)*

4. Connect the 8-pin harness from the main **T-Harness** to the SAT-switcher board's 8-pin port.
5. Connect the **single wire (white/purple) from the F43 data module** to the **SAT-Switcher board's** white/purple wire.

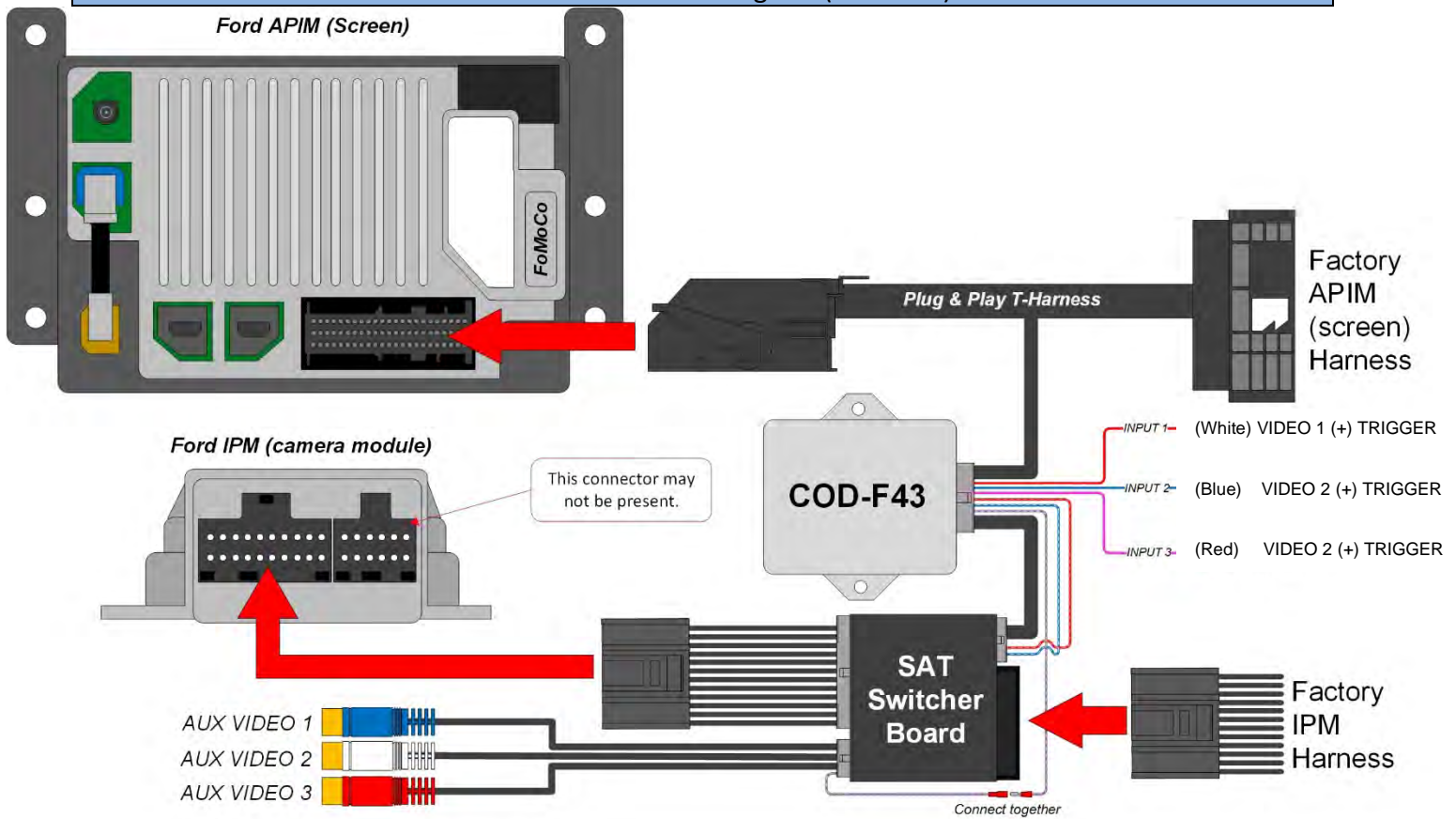


SAT-switcher board

6. Connect the 18-pin plug to the COD module and secure it to the sub-dash (up underneath the center-channel speaker) so that nothing rattles. **NOTE: No other wires from the main unit are used for this installation.**
7. Return the screen to the sub-dash and reconnect the climate/screen surround panel for testing.
8. **Proceed to 'COD-F43 Operation'.**

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COD-F43 Connection Diagram (universal)

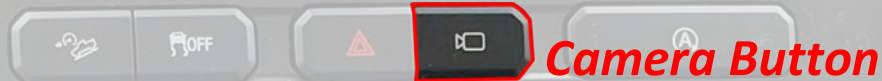


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COD-F43 Operation (360-camera systems, or trucks with camera button)

Once the COD-F43 module is connected properly, all added camera commands are performed through the factory camera button.

Added features are outlined below:



- Press the camera button **ONCE** to enter rear view modes, or:
- Press the camera button **TWICE** (double click) to enter front view modes.
- While in Front or Rear camera modes, any additional Camera press will advance the screen to the next view (360>Full>Panoramic)
- Press and **HOLD** the Camera button to clear out to the OEM menu at any time of rear camera or front camera operations.
- The cameras will no longer lock out while in motion – they are now accessible at any time and speed.

- Apply +12V to input #1 (White) to force external video 1 at any time.
- Apply +12V to input #2 (Blue) to force external video 2 at any time
- Apply +12V to input #2 (Red) to force external video 3 at any time

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



COD-F40 NOTES

- **SYNC 3 radio must be at least Version 3.0 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>
- If you suspect the COD module needs a software update, connect it to a Windows PC via USB (mini) cable and go to www.navtvdevice.com. All updates are available here.

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