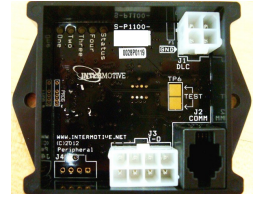




Upfitter Interface Module® 4-530

A-UIM4-530-A 2017-2018 Ford Interceptor Sedan
B-UIM4-530-A 2017-2020 Ford Interceptor Utility



Introduction

The Upfitter Interface Module® 4-530 provides four 12 volt outputs which include Police Engine Idle, passenger door, rear doors and the rear hatch. The Ford Police Engine Idle allows the officer to lock the vehicle in park with the engine running and take the key out of the ignition. The UIM4-530 offers an output intended disable the gun lock release button. The output activates 10 seconds after the key is removed to provide the officer time to operate the gunlock. The three door outputs will be 12 volts when the specific door is open.

Installation Instructions

Disconnect vehicle battery before proceeding with installation

CAUTION

All electronic products are susceptible to damage from Electrostatic Discharge or ESD. Ground yourself before handling or working with the module and harnessing by first touching chassis ground, such as the barrel of the cigarette lighter.



IMPORTANT—READ BEFORE INSTALLATION

It is the installer's responsibility to route and secure all wiring harnesses where they cannot be damaged by sharp objects, mechanical moving parts and high heat sources. Failure to do so could result in damage to the system or vehicle and create possible safety concerns for the operator and passengers.

Avoid placing the module where it could encounter strong magnetic fields from high current cabling connected to motors, solenoids, etc. Avoid radio frequency energy from antennas or inverters next to the module. Avoid high voltage spikes in vehicle wiring by always using diode clamped relays when installing upfitter circuits.

UIM4 Module

Remove the lower dash panel below the steering column area and find a suitable location to mount the UIM4 module. Locate the module in an area away from any high heat sources (engine heat, heater ducts, etc.). Do not mount the module until all wire harnesses are routed and secure. The last step of the installation is to mount the module.

Data Link Harness 2017-2018 Ford Interceptor Sedan (A-UIM4-530)

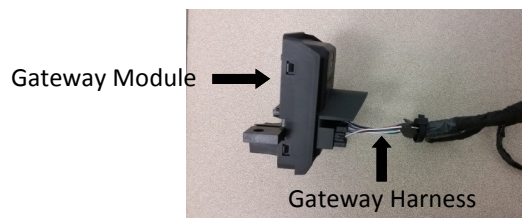
The provided UIM4 Data Link harnesses vary from model to model, depending on which chassis the UIM4 is being installed.

1. Locate the vehicles OBDII Data Link Connector. It will be located below the lower left dash panel.
2. Remove the OEM Data Link connector, and mate it to the UIM4 Data Link harnesses red connector. Ensure the connection is fully seated and secure with the supplied wire tie.
3. Mount the pass-through connector from the UIM4 Data Link Harness in the former location of the vehicle's OBDII connector.
4. Secure the UIM4 Data Link harness so that it does not hang below the lower dash panel.

NOTE: Do NOT plug the Data Link harness into the 4-pin connector on the UIM4 module. This will be done at a later step.

Gateway Plug and Play Harness 2017-2019 Ford Interceptor Utility (B-UIM4-530)

1. Locate the vehicles Gateway Module (C2431). It will be mounted below the lower left dash panel.
2. Remove the harness behind the Gateway module by pressing the locking tab and pulling outward.
3. Plug the Female side of the InterMotive Gateway Harness into the back of the Gateway module. Ensure the connection is fully seated and secured by the locking tab.
4. Plug the Male side of the InterMotive Data Link Harness into Gateway harness.
5. Secure the BOM Gateway harness so that it does not hang below the lower dash panel.



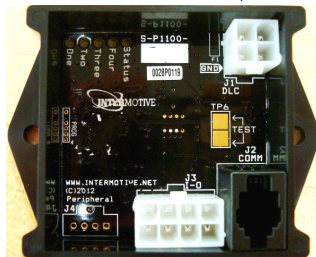
InterMotive Plug and Play Gateway Harness

Gateway Plug and Play Harness 2020 Ford Interceptor Utility (B-UIM4-530)

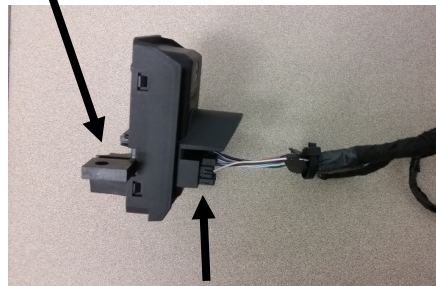
1. Locate the vehicles Gateway Module (C2431). It will be mounted below the lower left dash panel behind the BCM.
2. Remove the harness behind the Gateway module by pressing the locking tab and pulling outward.
3. Plug the Female side of the InterMotive Gateway Harness into the back of the Gateway module. Ensure the connection is fully seated and secured by the locking tab.
4. Plug the Male side of the InterMotive Data Link Harness into the Gateway harness.
5. Secure the UIM4-530 Gateway harness so that it does not hang below the lower dash panel.
6. Plug the UIM4-530 4-Pin connector into the mating 4-Pin connector on the UIM4-530 module.



Data Link Harness
plugs in here



Gateway Module



Gateway Harness



InterMotive Plug and Play Gateway Harness

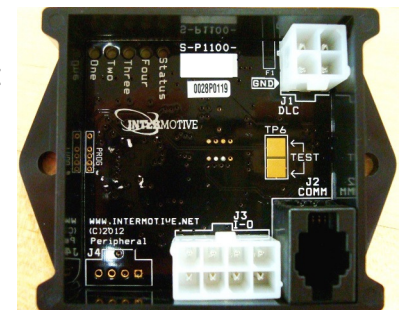
8-Pin UIM4 Connector Pin-Out Definition

This connector contains the UIM4's 4 output pins. Each output is 12 volts rated at 1/2A and is intended to drive relay coils or other low current loads. **Note: when driving relays, a diode-protected type must be used. InterMotive recommends DigiKey #PB682-ND Relay.**

The pins are defined as follows:

- Pin #1 (Orange wire) Police Engine Idle Output, +12V with 10 sec delay
- Pin #2 (Purple wire) Passenger Door Open Output, +12V
- Pin #3 (Yellow wire) Rear Driver or Rear Passenger Door Output, +12V
- Pin #5 (Red wire) fixed jumper to pin 6
- Pin #6 (Red wire) fixed jumper to pin 5
- Pin #7 (Green wire) Rear Hatch, +12V

Connect the desired outputs to vehicle equipment as needed. Tape up unused leads. When connecting to relays, use relays with appropriate kick-back suppression, such as Digikey #PB682-ND. Unsuppressed relays will induce very high voltage spikes throughout modern vehicles sensitive computer electronics and should not be used, per Ford, GM, SAE, etc.



Reconnect the vehicle battery

Initial Installation Power-Up

When the UIM4 module is first plugged in, it attempts to acquire the vehicles VIN to interpret vehicle data on the OBD network for five minutes. If Vin is not received then the module will go to sleep. The key must be in the Run position for network traffic to be present (engine off is OK).

1. Turn the ignition switch to the Run position.
2. Plug the 4 pin data link connector into the module
 - If the module LEDs "scroll" , then it has NOT acquired a recognized VIN. The chassis may be a new Model Year which the module does not recognize, or the chassis has an unrecognized engine. Ensure your chassis is listed at the top of page one of these instructions. Contact InterMotive Tech Support for assistance.
 - If no LEDs come on when the module is plugged in and powered up, it is working properly. Proceed to post installation testing.

UIM4 Module Mounting

Ensure all the harnesses are properly connected and routed, and are not hanging below the dash area. Mount the UIM4 module using screws or double sided tape. Reinstall the lower dash panel.

UIM4 Post Installation Testing

1. Turn the ignition ON to wake up and initialize the UIM4 module.
2. The Police Engine Idle output is on Pin1 (Orange Wire). Verify Pin 1 is 0 volts when Police Engine Idle is not enabled. Turn on Police Engine Idle and verify the output is 12 volts 10 seconds after removing the key.
3. Close the passenger door verify Pin 2 (Purple wire) is 0 Volts. Open the passenger door and verify Pin 2 is +12 Volts
4. Close the rear driver door verify Pin 3 (Yellow wire) is 0 Volts. Open the rear driver door and verify Pin 3 is +12 Volts
5. Close the rear passenger door verify Pin 3 (Yellow wire) is 0 Volts. Open the rear passenger door and verify Pin 3 is +12 Volts
6. Close the rear hatch door verify Pin 7 (Green wire) is 0 Volts. Open the rear passenger door and verify Pin 7 is +12 Volts

The UIM4 is properly installed only if it passes the above tests. If any irregular operational issues persist, recheck the condition set configuration. Contact InterMotive at 530-823-1048 for technical assistance.

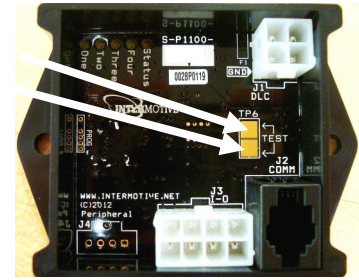
Diagnostics

To enter diagnostic mode, momentarily short the two test pads together on the module (look for "Test" on the printed circuit board) with the ignition on. There are eight 'pages' of diagnostic data. Each time the test pad is momentarily grounded the module will advance to the next 'page'. The Status LED will flash the page number (e.g. the Status LED will flash 5 times when in 'page' 5).

Page 1

The on-board LED's will light when a corresponding load is active:

- LED1 = Output #1 Police Engine Idle active
- LED2 = Output #2 Passenger Door open
- LED3 = Output #3 Rear Driver or Rear Passenger Door open
- LED4 = Output #4 Rear Hatch open



Page 5

The on-board LED's will light when corresponding vehicle data is detected:

- LED1 = Driver Door
- LED2 = Passenger Door
- LED3 = Rear Driver Door
- LED4 = Rear Passenger Door

Page 6

The on-board LED's will light when corresponding vehicle data is detected:

- LED1 = Rear Hatch
- LED2 = Police Engine Idle
- LED3 = N/A
- LED4 = N/A

Page 7

The on-board LED's will light when corresponding vehicle data is detected:

- LED1 = VIN PnR Active

Diagnostics (Continued)

Page 8

Output Trouble Codes

If there is an issue with one of the UIM4 outputs, the status LED will flash a two digit code while in diagnostic mode, page 8. A 1-1 code means everything is working properly. The first digit flashed will correspond to the output number and the second digit will indicate the specific problem. The second digit can be:

- 2 - Output fault (overcurrent or overvoltage)
- 3 - Invalid data (The data associated with the output is invalid)
- 4 - Data timed out (The data associated with the output has timed out)
- 5 - Unsupported data (The data associated with the output is not supported on the current vehicle)

Scrolling LED's may indicate one of the following errors:

- LED's scrolling sequentially one at a time indicates that an invalid or incomplete VIN was captured.
- LED's scrolling from the middle outward indicates a configuration error. This can be the result of configuring the UIM4 for one chassis, but installing it in a different chassis.

Solid LED's may indicate one of the following errors:

- LED's 1 and 3 indicates that the VIN was not received
- LED's 3 and 4 indicates an IO Integrity Check Failed
- LED's 1 and 4 indicates an Unknown Configuration file name

UIM4 Operation

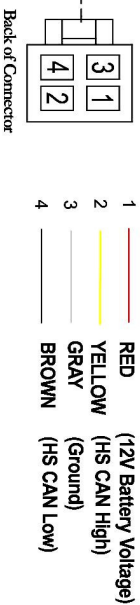
Turning the vehicle ignition ON will wake up and initialize the UIM4 module. Outputs are controlled based on the module's configuration.

When the key is turned OFF, the UIM4 module will go into a low power sleep mode and it's outputs will shut off. This may take up to five minutes, and the Diagnostic LED's (if active) on the module will go out once in sleep mode. Other vehicle activity such as opening doors, inserting key in the ignition, etc. may delay sleep mode. The door outputs will operate with the key out of the ignition and will turn off after 30 mins to prevent battery drain.

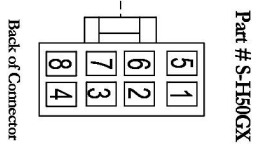
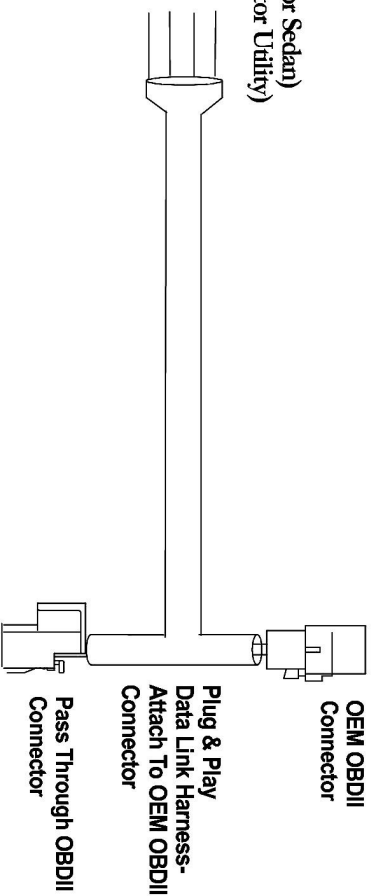
Data Link Part Numbers:

A-UM4-530-A S-H07DX (2017-2018 Ford Interceptor Sedan)

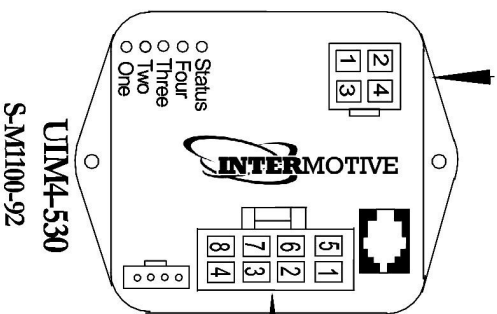
B-UM4-530-A S-H107DX (2017-2020 Ford Interceptor Utility)



- 1 RED (12V Battery Voltage)
- 2 YELLOW (HS CAN High)
- 3 GRAY (Ground)
- 4 BROWN (HS CAN Low)



- Part # S-H50GX
- 1 ORANGE Police Engine Idle Output (+12V)
 - 2 PURPLE Passenger Door Open (+12V)
 - 3 YELLOW Rear Driver or Rear Passenger Door Open (+12V)
 - 4 BLUE/WHITE N/A
 - 5 RED RED
 - 6 RED RED
 - 7 GREEN Rear Hatch Open (+12V)
 - 8 BROWN/WHITE N/A



Submit product registration at www.intermotive.net

If the UIM fails any step in the Post Installation Test, review the installation instructions and the loaded configuration by running the Graphical User Interface application. If necessary, call InterMotive Technical Support at (530) 823-1048.