An ISO 9001:2015 Registered Company

C-PIM751 (Police Interface Module)

2021-2024 RAM1500 DT

Introduction

The Police Interface Module is intended to provide RAM 1500 with multiple desired functions within a single module. Blackout mode allows the vehicle to has the ability to eliminate all exterior lighting to aid in covert operations. When activated, it will eliminate the parking lamps, reverse lights, and the Service Brake lights. Maximum speed can be set between 5-20 mph to automatically return brake lights for safety purposes.

The IdleLock for RAM Trucks will detect when the key fob leaves the vehicle, automatically lock the shifter in Park, and will allow the user to remove the key fob with the engine running.

Installation Instructions

WARNING
Disconnect the battery to prevent setting a check engine light.

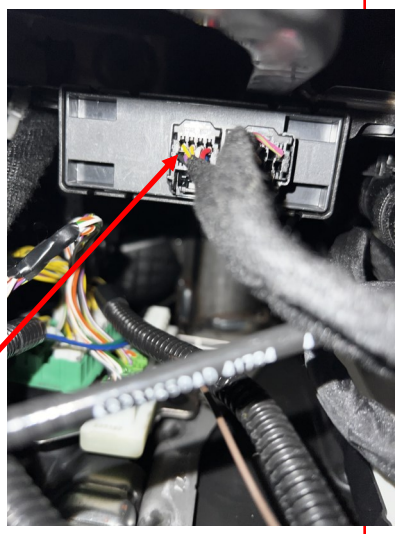
It is the installer's responsibility to route and secure all wiring harnesses where they cannot be damaged by sharp objects, mechanical moving parts and high heat sources. Failure to do so could result in damage to the system or vehicle and create possible safety concerns for the operator and passengers.
It is important to avoid placing the module where it could encounter strong magnetic fields from high current cabling connected to motors, solenoids, etc. Also avoid radio frequency energy from antenna's or inverters next to the module. Finally, avoid high voltage spikes in vehicle wiring by always using diode clamped relays when installing upfitter circuits.

PIM Module

The Gateway module is located in the passengers side of the vehicle, find a suitable location to mount the PIM module. Place the module in an area away from any external heat sources (engine heat, heater ducts, etc.). Do not mount the module until all post installation testing is complete and wire harnesses are routed and secure.

Data Link Harness (6-pin connector on module) The RAM has a "Gateway" module connected to the OBDII connector. The PIM's data link harness T's into both an 8 pin and 12 pin connector on this gateway module.

1. Locate the vehicle's Gateway module located o the driver side foot well.
2. Remove the 12-pin and 8-pin connectors from the Gateway module and plug in the 12-pin and 8-pin connectors from the Intermotive C-PIM751 Data Link harness. Plug the OEM 12-pin and 8-pin connectors into the mating connectors on the C-PIM751 Data Link harness.
3. Plug the free end of the Data Link harness into the mating 6-pin connector on the C-PIM751 module.



RAM 1500 gateway module with 8 & 12 pin connectors.

Blackout Mode Option (B)

- The Blackout Mode has the ability to eliminate all exterior lighting to aid in covert operations. This includes parking lamps, reverse lights, and Brake lights. A maximum speed 'exit speed' can be set to automatically return brake lights for safety purposes.

Blackout Input

- Green/white wire (pin 1 of the 4 pin connector). Momentarily apply +12 volts to activate blackout mode.

Blackout Status Output

- The Yellow wire (Pin 8 of the 12 pin connector) will be +12 volts when Blackout Mode is active. Connect to LED with integral resistor.

Blackout Mode Operating Instructions:

To enter Blackout Mode, all five preconditions must be met:

- Speed must be below configured maximum speed (5-20 mph).
- Push enable button to enter Blackout Mode.
- The instrument cluster will dim down when Blackout Mode is engaged.
- Blackout Status Output will be +12v when Blackout Mode is active.

To exit Blackout Mode any condition may be applied:

- Apply power to green/white wire.
- Drive vehicle above configured speed.

Blackout Mode Post Installation Test

Perform the following tests before mounting the module, to allow viewing of the diagnostic LED's, if needed.

1. Start vehicle
2. Push Blackout enable button.
3. Verify the cluster brightness goes down.
4. Holding Service Brake down, place transmission in Reverse
5. Have helper verify that neither the brake nor backup lights are on.
6. Blackout Mode output (Yellow wire) should be 12 Volts
7. Disable Blackout Mode by pressing enable button.
8. Verify the brake and backup lights now function properly.

DO NOT PUT VEHICLE IN SERVICE IF IT DOES NOT PASS ALL OF THE ABOVE TESTS
Contact InterMotive at 530-823-1048 for technical assistance

Blackout Mode Diagnostics

Diagnostic Mode is entered by pressing the Test button on the module. The module provides diagnostic LEDs which illuminate according to the following table. To exit this mode, cycle the key. **For diagnostics for the Blackout Mode portion of the PIM module, momentarily press the Test button <u>Three</u> times. The Status LED will Flash 3 times repeatedly.**

LED #	Diagnostic Mode LED Descriptions
1	Blackout Mode Active
2	VSS less than 15mph
3	Low Beams Off
4	High Beams Off
5	Park Lamps Off
6	DRL Off
7	Cluster Off
8	Blackout Input Status
9	Speed Inhibit Enabled

Press Test button to enter Diag Mode

U.S. Patent #9,469,261

IdleLock with Autosense Technology (L)

The IdleLock for Ram Truck will automatically lock the shifter in Park and allows the officer to remove the key fob with the engine running. The PIM provides outputs to also disable the weapon rack, or other equipment when the vehicle is in IdleLock. The PIM has an onboard relay which can be used to interrupt the gun rack release wire. The PIM will keep the rack enabled for 10 seconds (configurable) after IdleLock is entered. Once this time has expired, the weapon rack release button will be disabled.

Weapon Rack Disable Relay Connections

The PIM has an onboard Normally Closed pass-through relay that will open 10 seconds after Idlelock is engaged. The usual connection is to route the weapon rack release wire through the PIM's relay.

4-Pin White Connector

- Pin #2 weapon Rack In, Purple wire on 4 pin PIM connector
- Pin #4 weapon Rack Out, Tan wire on 4 pin PIM connector

12-Pin White Connector

- Pin #2 IdleLock Output, Brown wire on 12 pin PIM connector. +12V when IdleLock is active.

IdleLock Post Installation Instructions

Perform the following tests before mounting the module to allow viewing of the diagnostic LED's, if needed.

1. With the engine running and key fob in vehicle, verify the shifter is not locked in Park.
2. Place transmission in Park, step away from the vehicle with the Key Fob in hand and close the driver door. Wait 10 seconds and confirm the Idle Lock output (Brown wire pin 2) is +12 Volts.
3. Place the Key Fob on the roof of the vehicle.
4. Open the driver door, get in the driver seat, and confirm the shifter is locked in Park.
5. Grab the key fob on top of the roof, place it in your pocket. At this point the shifter will be unlocked. Confirm by shifting out of Park.

IdleLock Operating Instructions :

Auto Enable

Preconditions: Transmission in PARK and the Engine running.

- Every time the door is closed, PIM751 will check the location of the key fob. If the fob is present, nothing will happen. If the fob is NOT present, PIM751 will lock the shifter.
- If the door is left open, PIM751 will check the key fob location every 10 seconds. Once PIM751 determines the key fob has left, PIM751 will lock the shifter.

  Note: PIM751 will stop checking once the key fob has left.

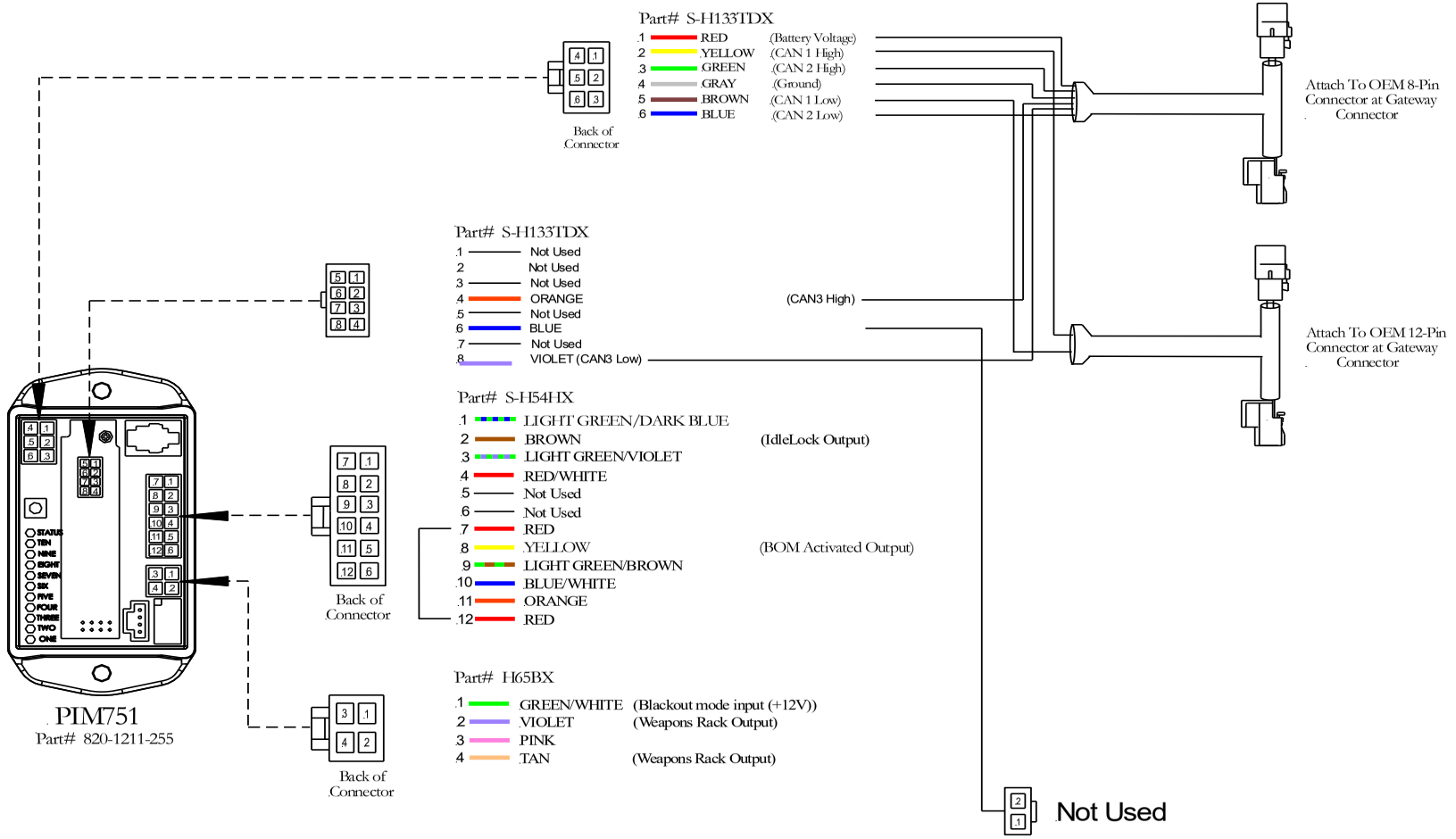
Auto Disable

Preconditions: Transmission in PARK and the Engine running.

- Anytime the door is open, PIM751 will check the key fob location every second. Once PIM751 determines the key fob is present, PIM751 will unlock the shifter.

  Note: PIM751 will stop checking once key fob is present.
- If the service brake is pressed, PIM751 will check the key fob for its location and if the key fob is present then PIM751 will unlock the shifter.
- If the seatbelt is buckled, PIM751 will check the key fob for its location and if the key fob is present then PIM751 will unlock the shifter.

For any questions or issues regarding the PIM Module, please contact Intermotive at 1-800-969-6080



Submit product registration at www.intermotive.net

If the PIM fails any step in the System Operation Test, review the installation instructions and check all connections.
If necessary, call InterMotive Technical Support at (530) 823-1048