BIM-01-2-J1939
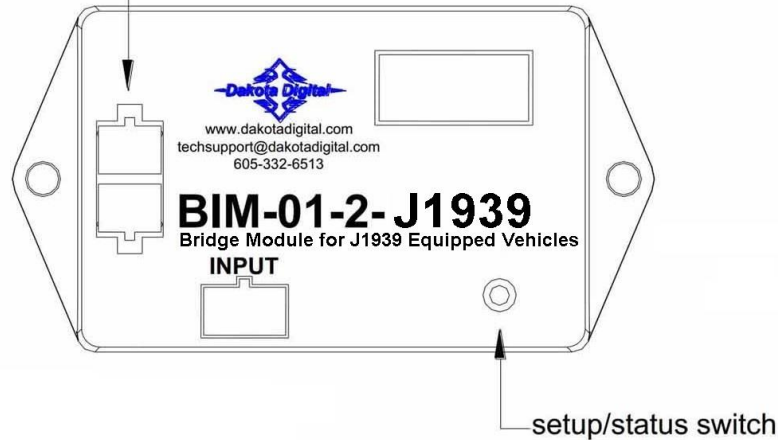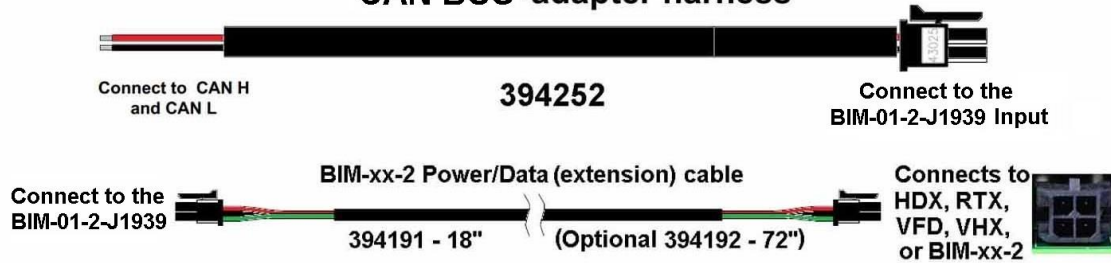## Bus Interface Module for J1939 vehicles

BIM-xx-2 power & data connectors.
Either one can be used.

www.dakotadigital.com
techsupport@dakotadigital.com
605-332-6513

BIM-01-2-J1939
Bridge Module for J1939 Equipped Vehicles
INPUT

setup/status switch

CAN BUS -adapter harness

Connect to CAN H
and CAN L

394252

Connect to the
BIM-01-2-J1939 Input

Connect to the
BIM-01-2-J1939

BIM-xx-2 Power/Data (extension) cable

394191 - 18"   (Optional 394192 - 72")

Connects to
HDX, RTX,
VFD, VHX,
or BIM-xx-2

This Bus Interface Module is designed to read engine information from the J1939 bus. The module is connected to the J1939 Bus through CAN bus-adapter harness to the CANH (RED WIRE) and CANL (BLACK WIRE) on the main harness.

There are two interface (I/O) ports on the BIM-01-2-J1939 module. Either one can be connected to the instrument system or to another module, allowing several units to be daisy chained together.
Cannot daisy chain with GPS-50-2.
Do not connect the I/O port to anything other than a Dakota Digital control box or BIM.
Do not mount the module in the engine compartment; as it should be mounted in the vehicle's cabin.

The engine information that is available from the unit depends on the ECU programming and add-ons.

Readings this module monitors for: vehicle speed, engine RPM, engine coolant temperature, engine oil pressure, engine light (MIL), intake/manifold air temperature, trans fluid temp, fuel level, ambient air temp, fuel pressure, air fuel ratio, gear and boost.

The engine and transmission information that is available from the unit depends on your ECU and add-ons.

**A GPS-50-2 CANNOT be linked (daisy chained) to a BIM-01-2-J1939 with a BIM cable.
The two units cannot talk to the display control box at the same time.**

Table of Contents

Display Setup

VFD and VHX system will add extra readings to the message displays under the tach.
HDX and RTX need a group screen configured to show additional information, such as Boost or Intake temp

Setting up the display system will configure the instrument control box to read each input from either the terminals or through the BIM cable from the Bus Interface Module.
The BIM menu of the display will not find the BIM-01-2-J1939, but will find specific channels for Fuel Pressure, Oil Temp, Boost and Air/Fuel Ratio.

The following settings are for the basic information to be displayed with data from the BIM module.
Extra data that might be sent such as Intake Air Temp, Fuel Pressure, Air/Fuel Ratio or Boost, can be brought up in the message centers of the VFD3 and VHX system by toggling SW2 in normal operation of the vehicle. Similar data that might be present will not automatically be shown in the HDX and RTX systems. That extra information must be placed in a group screen of your choice, in the HDX and RTX setup.

Display data usage

The following readings can each be used in place of dedicated sending units to the instrument system control box. These are individually selectable in the display system instrument setup menus.

VFD3 / VFD3X Setup:

Entering the VFD3 setup is done by holding SW1 (I) and turning the ignition to "on", or "acc".
Once in setup, one can move between SPEED, TACH, VOLT, WATER, etc…. by tapping SW1 (I)
If you are setting multiple items, once done with one section you will automatically move onto the next item.

Obtaining speed from the BIM-01-2-J1939

- Hold the SW1 switch from the instrument system control box while turning the key on.
  - The speed display will show SEt and the message display will show SETUP.
- Release SW1. The displays should show SEt and SPEED, respectively.
- Press and hold SW1 for at least 3 seconds, until SEt changes to "-". The message display will show SENDER.
- Press and hold SW1 for at least 3 seconds, until SEt changes to "-". The speed display will show the current setting.
- Tap SW1 until SEt and BUS are displayed.
- Press and hold SW1 until SEt and DONE are displayed.
  - NOTE: The AUTO, auto calibration, is removed.
  - Speed can only be fine-tuned with the ADJUST mode at a standstill.
  - ADJUST now only alters the percentage of speed by +/- 25%.
    - Drive a known speed and calculate how far off the speed is in percentage.
      - GPS speed / displayed speed x 100
      - Sample - [60/50=1.2] [1.2x100 = 120] **120%**
    - Enter setup and go to ADJUST, tap SW1 to increment from 100% up to 125%.
    - After 125% the values will fall back to 75% and increment up again.
    - When the desired percentage is reached, hold SW1 until SEt changes to "-".
- Tap SW1 until SEt and DONE are displayed.
- Press and hold SW1 until "-" and DONE are display.

VFD3 Setup Continued:

Obtaining RPM from the BIM-01-2-J1939
- Hold the SW1 switch from the instrument system control box while turning the key on.
  - The speed display should show 5Et and the message display should show SETUP.
- Release SW1. Tap SW1 until 5Et and TACH are displayed.
- Press and hold SW1 for at least 3 seconds, until 5Et changes to "-". The displays should show 5Et and T CAL.
- Press and hold SW1 for at least 3 seconds, until 5Et changes to "-". The speed display will show the current setting.
- Tap SW1 until 5Et and BUS are displayed.
- Press and hold SW1 until "-" and DONE are displayed.
- Tap SW1 until 5Et and DONE are displayed.
- Press and hold SW1 until "-" and DONE are displayed.

Obtaining engine temperature from the BIM-01-2-J1939
- Hold the SW1 switch from the instrument system control box while turning the key on.
  - The speed display should show 5Et and the message display should show SETUP.
- Release SW1. Tap SW1 until 5Et and WATER are displayed.
- Press and hold SW1 for at least 3 seconds, until 5Et changes to "-". The displays should show 5Et and SENDER.
- Press and hold SW1 for at least 3 seconds, until 5Et changes to "-". The speed display will show the current setting.
- Tap SW1 until 5Et and BUS F (Fahrenheit) is displayed.
  - Tap SW1 once more for 5Et and BUS C (Celsius) if desired.
- Press and hold SW1 until "-" and DONE are displayed.
- Tap SW1 until 5Et and DONE are displayed.
- Press and hold SW1 until "-" and DONE are displayed.

Obtaining oil pressure from the BIM-01-2-J1939
- Hold the SW1 switch from the instrument system control box while turning the key on.
  - The speed display should show 5Et and the message display should show SETUP.
- Release SW1. Tap SW1 until 5Et and OIL are displayed.
- Press and hold SW1 for at least 3 seconds, until 5Et changes to "-". The displays should show 5Et and SENDER.
- Press and hold SW1 for at least 3 seconds, until 5Et changes to "-". The speed display will show the current setting.
- Tap SW1 until 5Et and BUS are displayed.
- Press and hold SW1 until "-" and DONE are displayed.
- Tap SW1 until 5Et and DONE are displayed.
- Press and hold SW1 until "-" and DONE are displayed.

***Intake/manifold air temp, ambient air temp, air fuel ratio, trans fluid temp, fuel pressure, oil temp and boost will be displayed in the message center if activated through the display menu setup.

VHX Setup:

Entering the VHX setup is done by holding SW1 (I) and turning the ignition to "on", or "acc".
Once in setup, one can move between `SPEED`, `TACH`, `VOLT`, `WATER`, etc…. by tapping SW1 (I)
If you are setting multiple items, once done with one section you will automatically move onto the next item.

Obtaining speed from the BIM-01-2-J1939
- Hold the SW1 (I) switch from the instrument system control box while turning the key on.
  - The message display should show `SETUP`.
- Release SW1 (I) - LCD1 should show `SETUP SPEED`.
- Press and hold SW1 (I) for at least 3 seconds until `SPEED SENDER` is displayed.
- Press and hold SW1 (I) for at least 3 seconds until `SENDER` is displayed.
- Release the switch and `SENDER NORMAL` will be displayed.
- Tap SW1 (I) until `SENDER BUS` is displayed.
- Press and hold SW1 (I) until `DONE` is displayed.
  - NOTE: The `AUTO`, auto calibration, is removed.
  - Speed can only be fine-tuned with the `ADJUST` mode at a standstill.
  - `ADJUST` now only alters the percentage of speed by +/- 25%.
    - Drive a known speed and calculate how far off the speed is in percentage.
      - GPS speed / displayed speed x 100
      - Sample - [60/50=1.2] [1.2x100 = 120] **120%**
    - Enter setup and go to `ADJUST`, tap SW1 (I) to increment from 100% up to 125%.
    - After 125% the values will fall back to 75% and increment up again.
    - When the desired percentage is reached, hold SW1 (I) until `DONE` is displayed
- Tap SW1 (I) until `SPEED DONE` is displayed.
- Press and hold SW1 (I) until a big `DONE` is displayed.

Obtaining RPM from the BIM-01-2-J1939
- Hold the SW1 (I) switch from the instrument system control box while turning the key on.
  - The message display should show `SETUP`.
- Release SW1 (I) - LCD1 should show `SETUP SPEED`.
- Tap SW1 (I) until `SETUP TACH` is displayed.
- Press and hold SW1 (I) for at least 3 seconds until `TACH ENGINE` is displayed.
- Press and hold SW1 (I) for at least 3 seconds until `ENGINE` is displayed.
- Release the switch and `ENGINE 8` will be displayed.
- Tap SW1 (I) until `ENGINE BUS` is displayed.
- Press and hold SW1 (I) until `DONE` is displayed.
- Tap SW1 (I) until `TACH DONE` is displayed.
- Press and hold SW1 (I) until a big `DONE` is displayed.

Obtaining engine temperature from the BIM-01-2-J1939
- Hold the SW1 (I) switch from the instrument system control box while turning the key on.
  - The message display should show `SETUP`.
- Release SW1 (I) - LCD1 should show `SETUP SPEED`.
- Tap SW1 (I) until `SETUP WATER` is displayed.
- Press and hold SW1 (I) for at least 3 seconds until `WATER SENDER` is displayed.
- Press and hold SW1 (I) for at least 3 seconds until `SENDER DD F` is displayed.
- Release the switch and `SENDER DD F` will be displayed.
- Tap SW1 (I) until `SENDER BUS F` (Fahrenheit) is displayed.
  - Tap SW1 (I) once more for `SENDER BUS C` (Celsius) if desired.
- Press and hold SW1 until `DONE` is displayed.
- Tap SW1 (I) until `WATER DONE` is displayed.
- Press and hold SW1 (I) until a big `DONE` is displayed.

VHX Setup Continued:

Obtaining oil pressure from the BIM-01-2-J1939
- Hold the SW1 (I) switch from the instrument system control box while turning the key on.
  - The message display should show **SETUP**.
- Release SW1 (I) - LCD1 should show **SETUP SPEED**.
- Tap SW1 until **SETUP OIL** is displayed.
- Press and hold SW1 (I) for at least 3 seconds until **OIL SENDER** is displayed.
- Press and hold SW1 (I) for at least 3 seconds until **SENDER NORMAL** is displayed.
- Release the switch and **SENDER NORMAL** will be displayed.
- Tap SW1 (I) until **SENDER BUS** is displayed.
- Press and hold SW1 (I) until **DONE** is displayed.
- Tap SW1 (I) until **OIL DONE** is displayed.
- Press and hold SW1 (I) until a big **DONE** is displayed.

***Intake/manifold air temp, ambient air temp, air fuel ratio, trans fluid temp, fuel pressure, oil temp and boost will be displayed in the message center if activated through the display menu setup.

HDX and RTX setup:

<div style="border:1px solid black">****HDX/RTX systems can be configured with the Dakota Digital app for Apple and Android devices****</div>

HDX and RTX Operations
- **HDX:** With the ignition key already on, press and hold both switches to enter SETUP, release when instructed.
    - If using the external rocker switch, hold SW2 (II) while turning the ignition on.
    - Release the switch when SETUP is shown.
    - Left switch on display is SW1, and right switch on display is SW2
- **RTX:** With the ignition off, press hold SW2 (II) while turning the ignition key on to enter SETUP
    - Release the switch when SETUP is shown.
- **BOTH:** When holding for an option, release the button when the screens says **"RELEASE"**
- **BOTH:** You may skip to whichever reading you'd like to configure below; they do not need to be done in order.
- **BOTH:** After making a selection, tap a switch and select BACK to save and return to the main menu, then select EXIT SETUP to return to normal operation.
- **BOTH:** SWI (left) moves up ↑ the menu list, SWII (right) moves down ↓ the menu list

Obtaining speed from the BIM-01-2-J1939
- Tap SWII (right) switch until SPEED is selected. Press and hold SWII (right) switch to enter SPEED menu.
- Tap SWII (right) switch until INPUT is displayed. Press and hold SWII (right) switch to enter INPUT menu.
- SIGNAL will be is displayed. Press and hold SWII (right) switch to enter SIGNAL menu.
- Tap right switch until BIM is displayed. Press and hold SWII (right) switch to select BIM.
- When SIGNAL is displayed again, tap switch until BACK is displayed, then hold to return to INPUT.
- When INPUT is displayed again, tap switch until BACK is displayed, then hold the switch to exit.
    - **NOTE**: The AUTO CAL, auto calibration, is not accessible.
    - ADJUST now only alters the percentage of speed by +/- 25%.
        - After the engine is running, enter setup and go to ADJUST.
        - While driving a known speed, SWI and SWII (left/right) can adjust speed.
            - *Percentage can also be adjusted without driving.*
        - Tap SWII (right) to increment up to 125%.
        - Tap SW1 (left) to decrement down to 75%.
        - The speed will be displayed in the LCD along with the percent chosen.
        - Once the speed is correct, hold either switches until RELEASE is displayed.
        - You may now continue to exit the setup menu.
    - The Dakota Digital Automotive app can also be used either while driving or not driving.

Obtaining RPM from the BIM-01-2-J1939
- Tap SWII (right) switch until TACH is selected. Press and hold SWII (right) switch to enter TACH menu.
- Tap SWII (right) switch until INPUT is displayed. Press and hold SWII (right) switch to enter INPUT menu.
- Tap SWII (right) switch until CYLINDER is displayed. Press and hold SWII (right) switch to select CYLINDER.
- Tap SWI (**left**) switch until BIM is displayed. Press and hold SWII (right) switch to select BIM.
- When INPUT is displayed again, tap until BACK is displayed, then hold the switch to exit.

Obtaining engine temperature from the BIM-01-2-J1939
- Tap SWII (right) switch until WATER is selected. Press and hold SWII (right) switch to enter WATER menu.
- Tap SWII (right) switch until INPUT is displayed. Press and hold SWII (right) switch to enter INPUT menu.
- Tap SWII (right) switch until BIM is displayed. Press and hold SWII (right) switch to select BIM.
- When INPUT is displayed again, tap until BACK is displayed, then hold the switch to exit.

Obtaining oil pressure from the BIM-01-2-J1939
- Tap SWII (right) switch until OIL is selected. Press and hold SWII (right) switch to enter OIL menu.
- Tap SWII (right) switch until INPUT is displayed. Press and hold SWII (right) switch to enter INPUT menu.
- Tap SWII (right) switch until BIM is displayed. Press and hold SWII (right) switch to select BIM.
- When INPUT is displayed again, tap until BACK is displayed, then hold the switch to exit.

Obtaining fuel from the BIM-01-2-J1939
- Tap SWII (right) switch until FUEL is selected. Press and hold SWII (right) switch to enter FUEL menu.
- Tap SWII (right) switch until INPUT is displayed. Press and hold SWII (right) switch to enter INPUT menu.
- Tap SWII (right) switch until BIM is displayed. Press and hold SWII (right) switch to select BIM.
- When INPUT is displayed again, tap until BACK is displayed, then hold the switch to exit.

HDX/RTX TIP: Intake/manifold air temp, ambient air temp, air fuel ratio, trans fluid temp, fuel pressure and boost will be displayed in the group screens if activated through the displays>>group set menu setup.

BIM setup:

BIM menu table:

Menu	Options		Default	Notes
A-F	On		OFF	Enable air fuel ratio reading
	OFF			
FPr	On		OFF	Enable fuel pressure reading
	OFF			
bSt	On		OFF	Enable boost reading
	OFF			
o t	On		OFF	Gauge will display oil temp reading
	OFF			Gauge will not display oil temp reading
Eng	On		OFF	Check engine light sent by ECU
	OFF			
LCh				View the current BIM ID numbers
ACh				Automatically set bus ID numbers
g P	On		OFF	Gauge will display gear position
	OFF			Gauge will not display gear position
End				Exit Setup

Enable or disable engine indicator status from the BIM-01-2-J1939
- Hold the switch on the BIM-01-2-J1939 case while turning the key on. The BIM display will show the current revision code while this is held.
- Release the switch.
- Press and release the switch until the display shows Eng (engine). Press and hold to enter this menu.
- When you see --- on the display release the switch.
- The display will show the current state or the engine indicator enable On (enable) or OFF (disable).
- Press and release the switch to change the state.
- To save setting press and hold the switch until you see --- on the display then release the switch.
- The display will display the next available menu. Press and hold the switch to enter that menu or press and release the switch to select another menu.
- To exit, press and release the switch until the display shows End then press and hold the switch until you see --- on the display.

Enabling Boost:
The BIM-01-2-J1939 has an option to enable boost readings if the car has turbocharger.
- Hold the switch on the BIM-01-2-J1939 case while turning the key on. The BIM display will show the current revision code while this is held.
- Release the switch.
- Tap the switch until the display shows bSt (boost). Press and hold to enter this menu.
- When you see --- on the display release the switch.
- The display will show the current boost state, oFF (disable) or On (enable).
- Tap the switch to change the state.
- To save setting press and hold the switch until you see --- on the display, then release the switch.
- The display will display the next available menu. Press and hold the switch to enter that menu or press and release the switch to select another menu.
- To exit, press and release the switch until the display shows End then press and hold the switch until you see --- on the display.

Enabling Air Fuel Ratio:
The BIM-01-2-J1939 has an option to monitor Air Fuel Ratio.
- Hold the switch on the BIM-01-2-J1939 case while turning the key on. The BIM display will show the current revision code while this is held.
- Release the switch.
- Tap the switch until the display shows A-F (Air Fuel). Press and hold to enter this menu.
- When you see --- on the display release the switch.
- The display will show the current boost state, oFF (disable) or On (enable).
- Tap the switch to change the state.
- To save setting press and hold the switch until you see --- on the display, then release the switch.
- The display will display the next available menu. Press and hold the switch to enter that menu or press and release the switch to select another menu.
- To exit, press and release the switch until the display shows End then press and hold the switch until you see --- on the display.

Enabling Fuel Pressure:
The BIM-01-2-J1939 has an option to monitor Fuel Pressure.
- Hold the switch on the BIM-01-2-J1939 case while turning the key on. The BIM display will show the current revision code while this is held.
- Release the switch.
- Tap the switch until the display shows FPr (Fuel Pressure). Press and hold to enter this menu.
- When you see --- on the display release the switch.
- The display will show the current boost state, oFF (disable) or On (enable).
- Tap the switch to change the state.
- To save setting press and hold the switch until you see --- on the display, then release the switch.
- The display will display the next available menu. Press and hold the switch to enter that menu or press and release the switch to select another menu.
- To exit, press and release the switch until the display shows End then press and hold the switch until you see --- on the display.

Enabling Oil Temp:
The BIM-01-2-J1939 has an option to monitor Oil Temp.
- Hold the switch on the BIM-01-2-J1939 case while turning the key on. The BIM display will show the current revision code while this is held.
- Release the switch.
- Tap the switch until the display shows o t (Oil Temp). Press and hold to enter this menu.
- When you see --- on the display release the switch.
- The display will show the current state, oFF (disable) or On (enable).
- Tap the switch to change the state.
- To save setting press and hold the switch until you see --- on the display, then release the switch.
- The display will display the next available menu. Press and hold the switch to enter that menu or press and release the switch to select another menu.
- To exit, press and release the switch until the display shows End then press and hold the switch until you see --- on the display.

Enabling Gear Position:
The BIM-01-2-J1939 has an option to monitor the Gear Position.
- Hold the switch on the BIM-01-2-J1939 case while turning the key on. The BIM display will show the current revision code while this is held.
- Release the switch.
- Tap the switch until the display shows g P (Gear Position). Press and hold to enter this menu.
- When you see --- on the display release the switch.
- The display will show the current state, oFF (disable) or On (enable).
- Tap the switch to change the state.
- To save setting press and hold the switch until you see --- on the display, then release the switch.
- The display will show End. Press and hold the switch to exit setup or tap to choose another menu option.

To view the current BIM ID numbers:
- Hold the switch on the BIM-01-2-J1939 case while turning the key on. The BIM display will show the current revision code while this is held.
- Press and release the switch until the display shows LCh (LIN channels).
- Press and hold to enter this menu. When you see --- on the display, release the switch.

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- The display will show **C** followed by the current ID of the boost option (for example: **C 4**). Pressing the switch will cycle through the options, displaying the currently assigned IDs to the boost option. If the option is disabled, the display will show **C--**.
- To exit this menu, press and release the switch until **dnE** is displayed. Then press and hold the switch until **---** is displayed.
- The display will display the next available menu. Press and hold the switch to enter that menu or press and release the switch to select another menu.
- To exit, press and release the switch until the display shows **End** then press and hold the switch until you see **---** on the display.

To automatically set bus ID numbers:
- Hold the switch on the BIM-01-2-J1939 case while turning the key on. The BIM display will show the current revision code while this is held.
- Press and release the switch until the display shows **ACh** (auto channel).
- Press and hold to enter this menu. When you see **---** on the display, release the switch.
- The display will display **-** , **-** , then **-** as the BIM automatically determines the best ID to assign for the boost option (if enabled).
- The display will show **End**. Press and hold the switch to exit setup or press and release to choose another menu option.

J1939 communication

Because this unit may be used with aftermarket ECUs, below are the SAE J1939 PGNs we monitor for each available reading.

Readings we monitor:

Reading	J1939 PGN	Reading	J1939 PGN
RPM	61444	Gear	61445
Vehicle speed	65265	Fuel pressure	65263
Engine coolant temp	65262	Boost (MAP)	65270
Engine oil pressure	65263	Trans fluid temp	65272
Intake air temp	65270	Check engine (MIL)	65226
Ambient air temp	65269	Fuel level	65276
Air fuel ratio	61454	Oil Temp	65262

Reading breakdown:

Reading	J1939 PGN	SPN	Data Position	Resolution	Offset
RPM	61444	190	Bytes 4,5	0.125 rpm per bit	0
Vehicle Speed	65265	84	Bytes 2,3	1/256 km/h per bit	0
Engine Coolant Temp	65262	110	Byte 1	1 ºC/bit	-40 ºC
Oil Temp	65262	175	Byte 3,4	0.03125 ºC/bit	-273 ºC
Engine Oil Pressure	65263	100	Byte 4	4 kPa/bit	0
Intake Air Temp	65270	105	Byte 3	1 ºC/bit	-40 ºC
Ambient Air Temp	65269	171	Bytes 4,5	0.03125 ºC/bit	-273 ºC
Air Fuel Ratio	61454	3217	Bytes 3,4	0.000514 %/bit	-12 %
Gear	61445	524	Byte 1	1 gear value/bit, negative values are reverse gears	-125
Fuel pressure	65263	94	Byte 1	4 kPa/bit	0
Boost (MAP)	65270	102	Byte 2	2 kPa/bit	0
Trans Fluid Temp	65272	177	Bytes 5,6	0.03125 ºC/bit	-273 ºC
Check Engine (MIL)	65226	1213	Byte 1, bits 8-7	00 =Lamp off, 01 = Lamp on	N/A
Fuel Level	65276	96	Byte 2	0.4 %/bit	0

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Quick tips:

While the BIM is operating, the dot in the upper left corner of the display will indicate the status:

- On steady indicates it is powered up but not receiving any BIM bus activity.
- Flashing indicates it is communicating on the BIM bus.
- A dot in the upper center indicates that there is an engine code set (MIL active).
- If the display shows "BUS", then it is scanning to try and communicate with the vehicle bus but cannot get an answer.
    - o This could indicate that the ODBII connector is not wired properly
    - o The BIM-01-2-J1939 is not compatible with the ECU

To see the sensor and channel status on the BIM display, press and hold the switch to cycle through the screens.
The screen will display the data that is available:

- "EOP" - Engine Oil Pressure
- "ECt" – Engine Coolant Temp
- "AAt" - Ambient Air Temp
- " IAt" - Intake Air Temp
- "9 P" - Gear Position
- "FL I" - Fuel Level Input
- "bSt" - Boost/Vacuum data
- "FPr" – Fuel Pressure
- "tAc" - RPM/Tachometer data
- "O_t" – Oil Temp

If you do not see any number of these listed it means it may not be transmitted for the BIM-01-2-J1939 to read.

Emissions note:

If your vehicle requires emissions testing in your area, the check engine feature of this unit cannot be used to operate the Check Engine or Service Engine indicator.

Troubleshooting guide:

Problem	Possible cause	Solution
No BIM data on instrument readout; BIM does not light up.	PWR wire does not have power. GND wire is not properly grounded. Power/data harness is damaged. Module is damaged.	Connect to a location that has +12V key-on power. Connect to a different ground location. Inspect harness. Repair or replace any damaged areas. Return for service. (see instructions)
No BIM data on instrument readout; BIM display is scanning "BUS"	CAN Interface cable is not connected.	Connect the supplied CAN interface cable between the BIM unit and the ECU's CAN output.
No BIM data on instrument readout; BIM has a steady dot lit.	Interface cable is not connected. Interface cable is loose. On VHX systems, the BIM display for this channel is disabled.	Connect the supplied harness between the BIM unit and the instrument system control box. Ensure both ends of the cable are seated securely. Follow instructions in VHX manual to enable the BIM display screen.
BIM display shows "88:8"	Data cable is damaged or connected improperly. Another module on the bus is damaged.	Inspect and replace harness or power/data harness. Inspect other modules on the data bus.

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Notes:

SERVICE AND REPAIR

DAKOTA DIGITAL offers complete service and repair of its product line. In addition, technical support is available to help you work through any questions or problems you may be having installing one of our products. Please read through the Troubleshooting Guide. There, you will find the solution to most problems.

For additional support, please visit www.dakotadigital.com. A "**Product Support**" link will be found at the bottom of the home page.

Should you ever need to send the unit back for repairs, please call our technical support line, (605) 332-6513, to request a Return Merchandise Authorization number.
- Package the product in a good quality box along with plenty of packing material.
- Ship the product by a common carrier with tracking abilities.
- Be sure to include the RMA number on the package.
- Include a complete description of the problem, with RMA number, your full name and address (street address preferred), and a telephone number where you can be reached during the day.
- Any returns for warranty work must include a copy of the dated sales receipt from your place of purchase.
- Send no money. We will contact you for payment.

Dakota Digital Limited Lifetime Warranty

DAKOTA DIGITAL warrants to the ORIGINAL PURCHASER of this product that should it, under normal use and condition, be proven defective in material or workmanship for the lifetime of the original vehicle it was installed in, such defect(s) will be repaired or replaced at Dakota Digital's option.

This warranty does not cover nor extend to damage to the vehicle's systems, and does not cover diagnosis, removal or reinstallation of the product.
This Warranty does not apply to any product or part thereof which in the opinion of the Company has been damaged through alteration, improper installation, mishandling, misuse, neglect, or accident.
Dakota Digital assumes no responsibility for loss of time, vehicle use, owner inconvenience nor related expenses.
Dakota Digital will cover the return standard freight once the product has been evaluated for warranty consideration, however the incoming transportation is to be covered by the owner.

This Warranty is in lieu of all other expressed warranties or liabilities. Any implied warranties, including any implied warranty of merchantability, shall be limited to the duration of this written warranty. No person or representative is authorized to assume, for Dakota Digital, any liability other than expressed herein in connection with the sale of this product.

⚠**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Dakota Digital

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