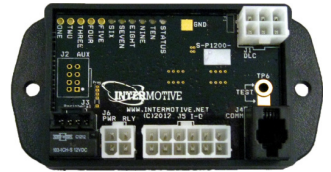


J1939 Translator 1939XR501-A
2008-2015 Select Ford E-Series
2008-2016 Select Ford F250-F550
2017 Ford F650



Contact Intermotive/LGS for additional chassis support

Introduction

The 1939XR501-A system acts as a “translator” for chassis data. It is a unidirectional communication portal for J1939 based systems to operate in a J2284 environment (light/Medium Duty chassis without J1939). Select data collected via OBDII (CAN) data stream will be transmitted over a separate CAN network that adheres to the J1939 protocol. This will allow various devices (Vehicle Data Recorders, Fuel Management Systems, etc.) from multiple manufacturers to simply read the provided J1939 data without having to make significant changes to their systems. The J1939 network can operate at either 250 or 500kbps.

The following are the specific chassis data provided by this translator:

- Accelerator pedal Position - SPN91, PGN 0xF003 (61443)
- Engine Speed (RPM) - SPN190, PGN 0xF004 (61444)
- Engine Coolant Temperature - SPN110, PGN 0xFEFE (65262)
- Transmission Fluid Temperature - SPN177, PGN 0xFEFE8 (65272)
- Transmission Range - SPN163, PGN 0xF005 (61445)
- Engine Oil Pressure - SPN100, PGN 0xFEFEF (65263)
- ABS State - SPN563, PGN 0xF001 (61441)
- Vehicle Speed - SPN84, PGN 0xFEFE1 (65265)
- Parking Brake status - SPN70, PGN 0xFEFE1 (65265)
- Service Brake status - SPN597, PGN 0xFEFE1 (65265)
- Odometer - SPN917, PGN 0xFEC1 (65217)
- VIN - SPN237, PGN 0xFEFE (65260)

In addition, many other types of data may be available depending on the vehicle. Except for odometer (Pre-2011 and E-Series) and VIN (once at installation) which require active requests, the J1939XR501-A acquires all CAN bus data passively.

Installation Instructions

Disconnect vehicle battery before proceeding with installation.



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

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.

J1939XR501 Module

Remove the lower dash panel below the steering column area and find a suitable location to mount the J1939 Translator module. Locate the module in an area away from external heat sources (engine heat, heater ducts, etc.). Do not mount the module until all wire harnesses are routed and secure, and initial operational tests are completed. The last step of the installation is to actually mount the module.

Data Link Harness (6-pin connector)

1. Find the vehicle OBDII Data Link Connector, located below the lower left dash panel.
2. Remove the mounting screws for the OBDII connector. Plug the red connector from the Data Link Harness into the vehicle's OBDII connector. Ensure the connection is fully seated and secured with the supplied wire tie.
3. Mount the black connector from the Data Link Harness in the former location of the vehicle's OBDII connector. Reconnect the Battery.
4. Plug the free end of the Data Link Harness into the mating 6-pin connector on the J1939 module.



Reconnect vehicle battery

Initial Installation Power-Up

With the key ON and engine OFF, hold a ground source to the module Test Pad (some modules use a push button instead of a test pad—hold button down while plugging in module) and plug the 6-pin Data Link harness connector into the White 6-pin connector on the XR501 module. This will “Hard Boot” the module and cause it to go into a special “Installation Routine” that configures it properly for the vehicle.

CAN Detect

The module auto-detects the vehicle CAN communication BUS to verify it can read vehicle data. If the module fails to detect the CAN BUS, **module** LED6 will turn On and LED’s 1-4 will scroll. The module will not function if this occurs.

In this case there is something wrong with either the vehicle OBDII connection or in the harness connecting to the module. It’s unlikely the vehicle itself has a problem.

VIN Capture

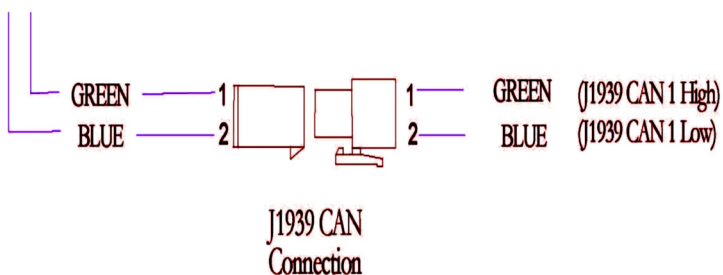
The module will request and attempt to read the vehicle VIN, to ensure that vehicle data will be correctly received and interpreted. If it cannot acquire the VIN or if the acquired VIN is invalid, the Yellow Status LED on the module will flash. When the VIN acquisition is successful, the module stores and uses it for future reference. If the VIN cannot be acquired, the module will not function; contact Intermotive Technical Support at 530-823-1048.

1939XR Translator Connection Output

The XR501-A Data Link Harness has a 2-Pin White connector that provides J1939 CAN 1 High and CAN 1 Low signals for connecting the VDR J1939 inputs.

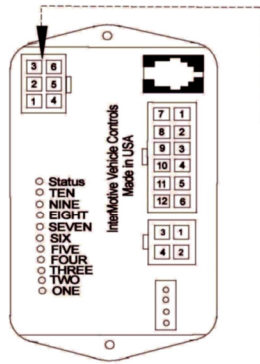
Pin #1 - Green Wire - J1939 CAN 1 High.

Pin #2 - Blue Wire - J1939 CAN 1 Low.

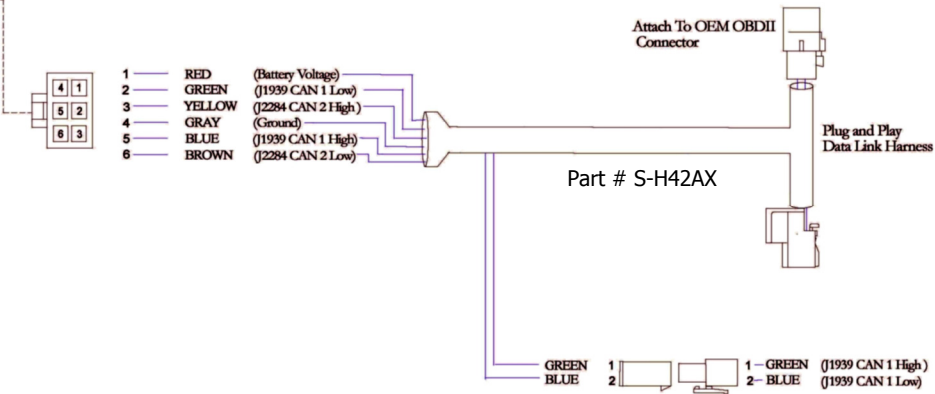


J1939 Module Mounting

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



J1939XR501-A Translator
Part# s-m 1200-36



Submit product registration at www.intermotive.net

If the J1939 Translator 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.