



Suggested Installation Connection Points

April 6, 2010

The table below provides guidance for determining acceptable wiring locations when installing Qualcomm OmniTRACS and Mobile Computing Platform (MCP) products. The information is intended for guidance only and should always be used in conjunction with the requirements and best practices outlined in the QES Installation guide associated with the applicable product **AND** with any Original Equipment Manufacturer (OEM) requirements.

Note: References to wire numbers in the information below may not be accurate for all manufacturing years associated with the particular truck model described.

Truck Make & Model	BATT+	Ignition	Ground	J1708 Connection Points	J1939 Connection Points	TTRACS
FORD 1995 LTL 9000 day cab				The QES brown and red J1708 wires are connected to the Yellow (1708 +) and the Purple (1708-) found at the back of the Deutsch diagnostic connector.		
FORD 650, 750	The connection points for Battery voltage are at the ignition switch/turn signal harness. The Battery connection is the green wire with brown stripe.	The connection points for ignition voltage are at the ignition switch/turn signal harness. The ignition connection point is the blue wire with light green stripe.	Ground at the 9 position Deutsch connector attaching to pin A which is a black colored ground wire. Or any good unpainted chassis ground.	The J1708 connections are made at pin A (1708+) and Pin B (J1708-) on 6-pin Deutsch connector and pin F (J1708+) and G (J1708-) of the 9-pin Deutsch connector. Pin F is an orange colored wire and pin G is a yellow colored wire.	N/A	N/A



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FREIGHTLINER Cascadia	<p>Connection located on SAM module, passenger side behind glove box, in X6 position in cavity 2.</p> <p>FOR FACTORY WIRED TRUCKS, BUTT SPLICE INTO THE FACTORY WIRE EXTENDING FROM THE X6 POSITION, CAVITY 2.</p> <p>FOR NON-FACTORY WIRED TRUCKS, A terminal must be crimped on POWER CABLE BATT+ wire and then inserted into connector cavity 2 (FRTL R Terminal part number is AI 1 968851 1).</p> <p>AN ALTERNATE SOLUTION IS TO USE A MINI FUSE TAP IN SLOT F14 AND CONNECT THE BATT+ WIRE TO THE FUSE PIGTAIL.</p>	<p>Connection located on SAM module, passenger side behind glove box, in X6 position in cavity 6.</p> <p>FOR FACTORY WIRED TRUCKS, BUTT SPLICE INTO THE FACTORY WIRE EXTENDING FROM THE X6 POSITION, CAVITY 6.</p> <p>FOR NON-FACTORY WIRED TRUCKS, A terminal must be crimped on POWER CABLE IGN wire and then inserted into connector cavity 6 (FRTL R Terminal part number is AI 1 968851 1).</p> <p>AN ALTERNATE SOLUTION IS TO USE A MINI FUSE TAP IN SLOT F23 AND CONNECT THE IGN WIRE TO THE FUSE PIGTAIL.</p>	<p>Ground should be installed near the fuse panel in a solid chassis/frame ground location which is preferred in lieu of the factory fuse panel connector on the passenger side, behind glove box at the X6 position in cavity 7.</p>	<p>Connection located at lower center of dash - doghouse area below ABS Module. To the lower left of J1939 connection point. Look for green and orange twisted pair wires going into terminal block. J1708+ = Green, J1708- = Orange.</p> <p>Another option is behind diagnostic plug:</p> <p>6-pin diag plug, J1708+ = pin A, J1708- = pin B.</p> <p>9-pin diag plug, J1708+ = pin F, J1708- = pin G.</p>	<p>Connection located to the lower center of dash, behind "doghouse" cover, area to the passenger side of ABS module. Installer should notice termination resistor on J1939 wires - ensure it remains in circuit, not removed.</p> <p>Another option is to connect behind the 9-pin diag plug, J1939+ = pin C, J1939- = pin D.</p>	<p>Connect to wire 376C4 that runs from the ABS Module in the driver side "A" pillar kick panel area, which then runs back to the 7-way receptacle. A wire extension may be needed to reach the accessory cable.</p>



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FREIGHTLINER Century, Columbia Coronado, Argosy	<p>Primary connection - Passenger side fuse panel area at A Pillar (BATT+ stud with nut).</p> <p>Secondary location is "B" pillar PDM on driver's side (BATT+ = 331 grey wire on Century and Columbia models)</p>	<p>Primary connection - Passenger side fuse panel area at A Pillar (IGN+ stud and nut) (DO NOT USE ISO+).</p> <p>Secondary location is "B" Pillar PDM on driver's side (IGN = 434R grey wire on Century and Columbia models)</p>	<p>Passenger side, fuse panel area on cab wall use Tech Screw and ring terminal on wire (scrape paint COMPLETELY PRIOR TO SECURING SCREW).</p> <p>Secondary location is "B" Pillar PDM on driver's side (BATT- = GND grey wire on Century and Columbia models)</p>	<p>Look for Green and Orange twisted pair wires. J1708+ = Green, J1708- = Orange. J1708 wires are located below the passenger side fuse panel behind lower dash panel or at the "B" pillar compartment on the driver side.</p> <p>Another option is behind the diagnostic plug.</p> <p>6-pin diag plug, J1708+ = pin A, J1708- = pin B.</p> <p>9-pin diag plug, J1708+ = pin F, J1708- = pin G.</p>	<p>Look for green and yellow twisted pair wires on passenger side below fuse panel, behind lower dash panel. The wires go through the middle region behind the panel. The green and yellow twisted pair are sometimes protected in a black jacket or casing.</p> <p>Another option is to connect behind the 9-pin diag plug; it's on the driver side "B" pillar area next to the driver's seat. Find yellow (J1939+) and green (J1939-) wires and connect accordingly.</p>	<p>W/out PLC filter = wire #45 (yellow) coming in through firewall at passenger side floor where fire wall and floor join</p> <p>Columbia 2005 year – 376E wire.</p> <p>w/PLC filter and truck build dates from 2/16/01 - 6/6/04 = wire #376C4 connection made outside truck, inside driver side frame rail.</p> <p>W/PLC filter truck build date after 6/6/04 = wire #376C1 found in driver's side "B" pillar area.</p> <p>Century Class model year 2009 and newer use PLC filters. This connection must be made outside the truck as close as possible to the tractor 7-way connector.</p>



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FREIGHTLINER FLD / Classic	Main Bus Bar in center, lower dash area. Remove panel in front of the manual shifter.	Ignition terminal block lower right of main bus bar (in front of manual shifter, behind the removed panel).	Main Bus Bar bracket in center lower dash (in front of manual shifter, behind the removed panel).	6-pin diag plug, J1708+ = pin A, J1708- = pin B. 9-pin diag plug, J1708+ = pin F, J1708- = pin G.	Connection location is passenger side floor board close to the main fuse panel area. For 07 year models to present, yellow and green twisted pair wires are used for J1939. May be in black jacket or casing. 9-pin diag plug, J1939+ = pin C, J1939- = pin D.	On horizontal 6-circuit breaker bus bar at lower left side of center dash (in front of manual shifter, behind the removed panel). It is a 3/8 nut with a blue wire.
FREIGHTLINER M2	Red wires located behind top center dashboard area above radio. Wires are labeled "Power Battery"	Pink wires running into termination block located center of dash below radio on left side	Black wires that are labeled - running to terminal block located below radio, center of dashboard, right side.	J1708+ = Green, J1708- = Orange. J1708 wires are located behind center of dash area below radio. The J1708/1587 wires terminate into a terminal block.	J1939 connection point located behind center instrument panel upper dash board area. J1939 is always a green and yellow twisted pair.	w/PLC filter= wire #376C4 connection made outside truck inside driver side frame rail
FREIGHTLINER Sprinter	All connections are made below driver's seat. Panel below seat must be removed. Connect to post having constant 12 volts. Verify with DMV. Connection is point located at terminal block mounted on rear wall of driver seat storage box/main fuse panel area.	Ignition connection made below driver's seat near main fuse panel area. Connect to ignition post at terminal block which is mounted on rear wall of drivers seat storage box/main fuse panel	Connect to ground coming off of truck floor board located beneath driver's seat/main fuse panel area.	No J1708 connections present. Use OBDII adapter if needed to convert passenger data protocol to J1587 if needed. OBDII part# = 65-J9322-1	No J1939 connections present.	Not Applicable



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INTERNATIONAL ProStar Series	Connect at ignition switch in order to get around LVD. The wire is red and numbered A-15	Connect at ignition switch in order to get around LVD. The wire is pink and numbered A-13F. There are two pink wires make sure you connect to the proper wire. Use DMV to check. Do not connect to Accessory.	Connect to ground posts at firewall located behind panel by driver's left foot. Alternative ground location is a good unpainted chassis ground.	The J1587/J1708 data link wires are blue & grey wires labeled: Blue= A3B (+), Grey= A3B (-). Connect at the back of the Deutsch plug by driver's left knee. Be careful when connecting at other areas. Truck has private data link and the wires are the same color as the J1587 data link. Private data link wire numbers are E3X (-) and E3W (+)	2009 ProStar J1939 wires are yellow and green located behind the driver side kick panel. Can also connect behind the 9 pin Deutsch connector at Pins C & D.	Connect outside truck on driver side firewall area where trailer 7-way enters truck cab. Wire is labeled "N94T" and is blue in color. 2009 ProStar TTRACS wire is behind driver side kick panel. It is a grey wire labeled "N94T".
INTERNATIONAL 9000i Series	You can get 12 volts Battery from the ignition switch or from the Battery supplied 12 volts bus located on the main fuse panel on the passenger side. At top of fuse panel there is an alternative connection for constant Battery 12 volts.	To obtain switched 12 volts, connect to an open spade on ignition switch. Do not use accessory ignition.	The main fuse panel metal frame is also a good place to obtain system ground. Make sure to scrape paint off.	J1708+ = pin A on the 6-pin Deutsch connector (pin F on the 9-pin Deutsch connector). J1708- = pin B on the 6-pin Deutsch connector (pin G on the 9-pin Deutsch connector). The data wires are marked 98 DP+ and 98 DN- for data minus. The wires terminate into an end cap that acts as a main bus for all the other data wires. Each connector is also tagged; one is labeled "D1 Data Link POS" and the other is "D2 Data Link NEG".	Always use Green and Yellow twisted pair. Can be found at pins C & D of the 9 pin diagnostic connector.	The 7-way receptacle protrudes through the back of the truck sleeper. The TTRACS connection can be made right at the back of the 7-way receptacle itself (center pin). This would allow for the strongest signal possible. The Trailer AUX wire number is 94AF (for older models it is 94AL). The TTRACS extension can be run along the driver's side under the threshold all the way to the side box.



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INTERNATIONAL 8600	Battery + input wire should be connected to a red wire labeled A13AF located on the passenger side fuse panel. The fuse slot number is F38.	Ignition input wire should be connected to a pink colored wire labeled A13 located on the passenger side fuse panel. The fuse slot number is F28.	Ground should be made at the driver side by driver's left knee. This is the same area where the J1708 connections are made. Any unpainted chassis ground will also work.	J1708 connections points should be made at the passenger side by driver's left knee or steering column. J1708+ wire is labeled A3C (+) J1708- wire is labeled A3C (-)	On 9 pin diagnostic connector use Pins C & D twisted pair green and yellow.	The recommended TTRACS connection point should be made outside the truck cab where the 7-way harness transitions to the OEM cab wiring harness. Use a fuse block that is environmentally protected or place fuse inside cab before TTRACS wire exits cab floor board



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KENWORTH T2000	<p>Main fuse panel located behind the glove box on the passenger side. Use a DVM to test for the proper Batt + wire on left side of fuse panel. Butt splice into correctly measured wire.</p> <p>A secondary point for power is the back of the Ignition Key Switch. Female spade connectors must be used.</p>	<p>Using same method used to identify BATT+, Find the IGN wire with DVM and splice into it with butt connector.</p> <p>A secondary point for ignition is the Back of the Ignition Key Switch. Female spade connectors must be used.</p>	<p>The recommended ground location is found below the main fuse panel. Remove the passenger kick panel to gain access. Make sure the Ground location is paint free.</p> <p>Secondary location is on the back of the Ignition Key Switch</p>	<p>The J1708 terminal block is located by the main fuse panel behind the glove box on the passenger side. The J1708 wires are to the driver's side of the fuse panel. The data wires are:</p> <p>Blue/Black E108DB (J1708 +) Blue/Lt. blue E109DB (J1708 -)</p> <p>It is acceptable to butt splice to the data wires or obtain a pigtail harness that will plug into the J1708 terminal block.</p> <p>Another option is to connect at the diagnostic plug.</p> <p>6-pin diag plug, J1708+ = pin A, J1708- = pin B.</p> <p>9-pin diag plug, J1708+ = pin F, J1708- = pin G.</p>	<p>Recommended connection point is behind diagnostic connector, (driver side knee area). 9-pin diag plug, J1939+ = pin C, J1939- = pin D.</p> <p>Alternate location is behind the passenger side kick panel (below glove box). There may be two sets of green and yellow twisted pair wires, only one set will work for the J1939 connection. Verify which pair to connect to by testing continuity using a DVOM to the 9-pin C or D pins.</p>	<p>The trailer AUX wire enters the cab in through the passenger firewall. Connect TTRACS to AUX wire number P154TR. Wire is purple with pink stripe. To get to this location, remove the passenger side kick panel.</p> <p>On 2009 and greater trucks, an Orange 12 gauge wire labeled "5114-D" is used. It's in the large wire bundle in the passenger side kick panel.</p> <p>Alternate location is to use a Tap-a-circuit in the lower right of the fuse panel (ABS fuse).</p>



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KENWORTH W900, T300, T600, T800	Behind the far left gauge set of dash panel - Red (labeled BATT)	Behind the far left gauge set of dash panel - Orange (labeled Ignition)	Behind the far left gauge set of dash panel - White (labeled Ground)	Blue/Black E108DB (J1708 +) Blue/Lt. blue E109DB (J1708 -) They can be found behind the speedometer and tachometer gauge cluster.	May 2007 to the present connection point is located behind diagnostic connector, at driver side, under dash panel. Always green and Yellow twisted pair of wires.	Connect at ABS fuse slot in main fuse panel which is located by driver's feet. Use of Tap-a-circuit extension is ok. 2009 T660 model uses a pink wire with purple stripe labeled "P1165A". Or, use Tap-a-circuit at ABS fuse panel.
MACK Vision, CH Model	BATT+ post located in passenger side dash (glove box) area.	IGN post located in passenger side dash (glove box) area.	GRD post located in passenger side dash (glove box) area.	6-pin diag plug, J1708+ = pin A, J1708- = pin B. 9-pin diag plug, J1708+ = pin F, J1708- = pin G. Also, J1708 posts are located at passenger side, fuse panel area.	Connection to the J1939 for Mack trucks w/Mack engines is not supported. DO NOT CONNECT. For Mack Vision Series and CH models without Mack engines, J1939 stub can be seen after removing triangular piece on top of dash. J1939 two-pin Deutsch connector with terminating resistor should be seen. Look for yellow and green twisted pair wires. Termination resistor needs to be left in circuitry.	Connect to trailer aux Post #7 (Blue wire) of the 7-way Terminal Block located outside truck cab in engine area on driver's side firewall.



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PETERBILT 387	<p>The primary connection points are located on the passenger side behind the glove box. The main fuse panel area. Use a DVM to test for the proper Batt + wire on the left side of the fuse panel. Butt splice into correctly measured wire.</p>	<p>Using same method to identify BATT+, Find the IGN wire with DVM and splice into it with butt connector.</p>	<p>The connection point for system ground can be obtained from the metal brackets supporting the main fuse panel/ cab PDM.</p>	<p>The J1708 data wires are twisted pair colored purple and white or purple and green..</p> <p>Purple is J1708+, White wire is for J1708-.</p> <p>The wires go into an open terminal block that also can be used as a connection point located at the main fuse panel on passenger side glove box area.</p> <p>6-pin diag plug, J1708+ = pin A, J1708- = pin B.</p> <p>9-pin diag plug, J1708+ = pin F, J1708- = pin G.</p>	<p>J1939 connection point located behind 9 pin diagnostic connector. Always green and yellow twisted pair wires.</p>	<p>Use a Tap-a-Circuit pigtail to the ABS fuse at the fuse panel behind the glove box.</p>



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PETERBILT 377, 378, 379, 386, 388, 389	<p>Power can be obtained either from the ignition switch or from a solenoid mounted behind the speedometer and tachometer dash area.</p> <p>The solenoid connection is the primary recommended install location.</p> <p>There are also spare BATT + barrel connectors behind the left most gauge set (RED)</p>	<p>Ignition can be obtained either from the ignition switch or from a solenoid mounted behind the speedometer and tachometer dash area.</p> <p>The solenoid connection is the primary recommended install location. There are also spare IGN + barrel connectors behind the left most gauge set (ORANGE)</p>	<p>Metal frame just below the solenoid. Make sure it is paint free.</p> <p>There are also spare GND barrel connectors behind the left most gauge set (black or white)</p>	<p>The J1708 data wires are twisted pair colored purple and white. Purple is J1708+ and the White wire is for J1708-. J1708 Terminal block is located behind the Speedo/tachometer head dash panel area.</p> <p>Trucks made after March 2005 twisted pair wire colors are purple and green. J1708+ = purple, J1708- = green.</p>	<p>Connect behind the 9-pin diag plug; it's on the driver side "A" pillar area. Find yellow (J1939+) and green (J1939-) wires and connect accordingly.</p>	<p>Black wire labeled "AUX" with white writing located by the driver's left foot area behind the fuse panel. The installer will have to move the main fuse panel out of the way.</p> <p>Note: The TTRACS connection should be made inside the vehicle cab just before the wire goes through the firewall. This "AUX" wire is Black inside the cab and blue outside the cab in the engine area.</p>
STERLING A-Line, L-Line, Acterra	<p>"A" post located in passenger side dash (glove box) area</p>	<p>"F" or "G" post located in passenger side dash (glove box) area</p>	<p>"C" post located in passenger side dash (glove box) area</p>	<p>J1708+ is post "K", J1708- is post L.</p> <p>Models without posts K & L go to the Deutsch connector and connect to the appropriate pins.</p> <p>Pins A (+) & B (-) for a 6 position plug and Pins F (+) & G (-) for a 9 position plug. The J1708 wires are green and orange with green being J1708+.</p>		<p>TTRACS connection must be made outside the truck by the PLC Filter to wire# 376C4 or the green input wire coming from the PLC Filter.</p> <p>For trucks older 2001 you can connect to the Trailer Aux line which goes to fuse position labeled "EE" at the PDM (Power Distribution Module).</p>



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STERLING 2005 Day Cab				J1708+ = Green, J1708- = Orange.		
VOLVO VN Series	The Battery connection points are open power and ground positions B1 (1-3) in upper right corner of fuse panel in top center of dash. One slot is BATT + and the other is ground. Use a spade connector and insert it into the BATT + slot. On VN 670 populate F14 with 10 amp fuse for Battery and for the VN780 populate F13 with 10 amp fuse for Battery. Make sure your wires are tie-wrapped securely so the spade connectors do not move.	The ignition connection point is the spare B1 (4). The primary fuse position for all VN models is F59.	Fuse Panel bracket in center, top dash area.	Can connect to a J1708 pigtail near the main fuse panel area in top/center of dash. Connector is positioned between the fuse panel and the windshield. Wire# 400 is J1708+ and wire# 401 is J1708. Another option is to connect at the diagnostic plug. 6-pin diag plug, J1708+ = pin A, J1708- = pin B. 9-pin diag plug, J1708+ = pin F, J1708- = pin G.	Connection to the J1939 on Volvo trucks w/Volvo engines is not supported. Do not connect to Volvo engines. For non-Volvo engines, primary connection point is before the 2 pin Deutsch connector located at top of dash main fuse panel area. Connector is positioned between the fuse panel and the windshield. The wire colors are yellow and green. Terminating resistor must be left in the circuit. Another option is to connect behind the 9-pin diag plug, J1939+ = pin C, J1939- = pin D.	Connect to wire labeled "AUX" located at firewall behind the clutch on driver side, or floorboard area behind driver seat. Alternative TTRACS connection point on newer Volvos is at main fuse panel – 40 amp fuse, on the steering wheel side of fuse panel. Cut the cable tie above the fuse and lift the fuse up above the fuse panel to BUTT splice below the fuse.



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WESTERNSTAR All models	J1-J6 of Fuse Panel	J7-J12 of Fuse Panel	System ground can be made either below main fuse panel bracket or back of ignition switch.	<p>FOR 2000 & 2001 YEAR MODELS, DO NOT CONNECT DATABUS CONNECTION UNLESS SPECIFICALLY REQUESTED BY THE CUSTOMER (SEE NOTE AT BOTTOM).</p> <p>6-pin diag plug, J1708+ = pin A (MB05E), J1708- = pin B (MB06E).</p> <p>9-pin diag plug, J1708+ = pin F, J1708- = pin G.</p> <p>Always check your work when connecting to Western Stars to verify the gauges do not peg full right or left after connecting to truck J1708 bus. Start truck to verify.</p>	<p>On CAT engines, J1939 link connector is located in engine compartment approximately 10 inches off the engine ECU. It is labeled "JCAN2".</p> <p>On MBE and Detroit engines - connector is located at engine side approximately 20 inches off the PE 40 pin firewall connector. It is labeled "JCAN2".</p> <p>Another possible J1939 connection point is located in behind the dash cluster and is marked with the label JCAN1. The connector part number of JCAN1 is Deutsch DTM06 2S or FTL Part number 23-13148-203. Wires are twisted pair white in color.</p>	<p>Trucks with build dates from 2001 to 04/03/05 have PLC filter. Connect TTRACS to wire number AB17A.</p> <p>Trucks with build dates after 04/04/05 and filter connect TTRACS to AB02C.</p> <p>Trucks without PLC filter connect TTRACS to wire number AB57B</p>