



FLEET ASSET MANAGEMENT INTERCONNECT SOLUTIONS

The Total Solution Provider



ABOUT SIMULA

Founded in 1990, headquartered in Taiwan, Simula's mission is to lead the component manufacturing industry with deep technical know-how, relentless innovation through R&D and exceptional customer service. Starting as a connector manufacturer, Simula is now a trusted partner of global consumer electronics corporations, and has quality assurance certifications such as ISO13485, IATF16949, ISO9001 and ISO14001. Responding to growing demand from partners, Simula now has presence in the USA, Europe and across Asia, and has also diversified our product offering from manufacturing connectors for the consumer electronics sector, to providing integrated solutions additionally to the Automotive, Medical, Industrial and Marine electronics sectors.

Leveraging our product design experience and manufacturing competency, Simula is able to collaborate with you at each product development phase to create products to meet the needs of tomorrow.



Table of Contents

The Electronic Logging Device Mandate.....	4
Light-Duty Vehicle	4
SAE 1962 OBD II (TYPE A)	4
SAE 1962 OBD II (TYPE B)	4
Heavy-Duty Vehicles	5
SAE J1708 6 POS	5
SAE J1939 9 POS “Type I”	5
SAE J1939 9 POS “Type II”	5
Other Common Interconnects	5
RP1226 Delphi Compatible Connectors	5
Yazaki Compatible Connectors	5
Laboratory and Testing.....	7
The ELD Connectivity Solutions	8
Products	
D-Sub Series	10
D-Sub to Single Output	10
D-Sub Split / Y Cable	10
SAE J1708 & J1939 Series.....	10
J1708 / J1939 to OBD II Adapter	11
J1708 / J1939 Y Extension/Adapter Cable	11
SAE J1962 OBD II Series	12
OBD II Y Extension Cable	12
OBD II Type A Hardwire Fuse-Holder	12
Accessory for Hardwire Fuse-Holder Kit	12
Connecting to Fuse Box	12
Connecting to Battery Pack	12
Other Connector Wire Harness.....	13
RP1226 Delphi Compatible Harness	13
Integrated Design	13

The Electronic Logging Device Mandate

The Federal Motor Carrier Safety Administration (FMCSA) implemented the Electronic Logging Device (ELD) rule for the purpose of creating a safer work environment for drivers. It has been mandated as a part of the MAP-21 Act that truck carriers and drivers must select devices that are self-certified and registered on the FMCSA website.

In simple terms, an ELD is used to record a driver's Record of Duty Status (RODS), replacing the conventional use of paper logbook that most drivers use to record their compliance with Hours of Service (HOS) requirements.

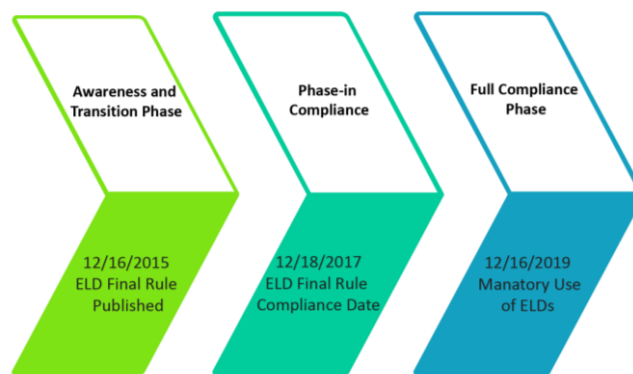


Figure 1. ELD Mandate Implementation Timeline

ELD are applicable to anyone who requires keeping a record of time and other HOS. When plugged in, the ELD syncs with the vehicle engine which automatically records driving time, allowing recordkeeping to be more accurate with less hassle.

Light-Duty Vehicle

All light-duty vehicles made in 1997 and onwards will have a 16 pin OBD II port built-in.

SAE 1962 OBD II (TYPE A)

Plug



Receptacle



SAE 1962 OBD II (TYPE B)

Plug



Receptacle



Heavy-Duty Vehicles

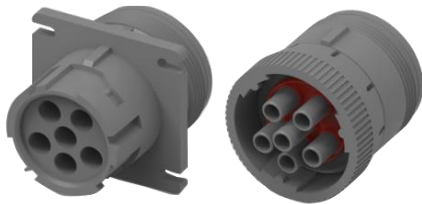
Similarly, trucks are also equipped with a vehicle diagnostic port such as SAE J1708 6 Pins, J1939 9 Pins Type I&II or other type of interconnects depending on the vehicle model and year of manufacture.

Common Manufacturers include the following and more:

- | | |
|-----------------|----------------|
| • Volvo | • Kenworth |
| • International | • Mack |
| • Freightliner | • Sterling |
| • Peterbilt | • Western Star |
| • Isuzu | • Daimler |

Typical Interconnects

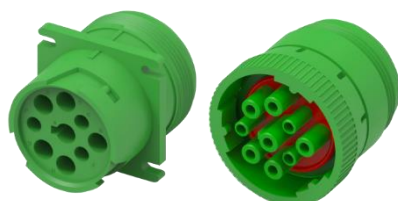
SAE J1708 6 POS



SAE J1939 9 POS "Type I"



SAE J1939 9 POS "Type II"

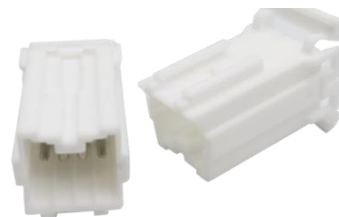


Other Common Interconnect

RP1226 Compatible Connector



Yazaki Compatible Connector



Laboratory and Testing

Fully equipped laboratory both in Taiwan and China facilities.



Equipments



Milliohm Meter (AC)



Withstand Voltage Tester (AC / DC)



Dual DC Power Supply



High-Resistance Meter



LCR Meter



TDR



Networking Analyzer



Scope Machine



Signal Generator / Counter



Package Loss Test Machine



TELEDYNE LECROY HDO4054A



Tektronix TBS1102B



BK Precision 9173B



BK Prodigit 3311G

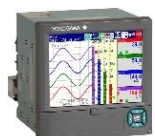


Real-time Spectrum Analyzer (9KHz-6GHz)

Electrical



Teledyne LeCroy Mercury T2P Advanced Analyzer



YOKOGAWA FX1012 paperless recorder



THERMO-HUNTER PT-3S

Mechanical



Automatic Inserting / Pulling Force Tester



Single - Pin Contact Resistance / Lifetime Tester



64 - Pin Contact Resistance / Lifetime Tester



Cable Bending Tester



Torque Measurement Tester

Environmental



Thermal Shock Tester



Temperature & Humidity Chamber



Low Temperature Chamber



High Temperature Oven



Salt Spray Test Chamber



Vibration Test System



Steam Ageing Tester



Hot-Air Reflow Machine



Tin Oven



Vertical Profile Projector



Horizontal Profile Projector



30X to 350X Measuring Microscope



2.5D CCD



X Ray Fluorescence Spectrometer (ROHS)



X-Ray Plating Thickness Tester
Waterproof Air Tightness



Hardness Meter



Height Gauge



X-ray Inspection System



Waterproof Tank

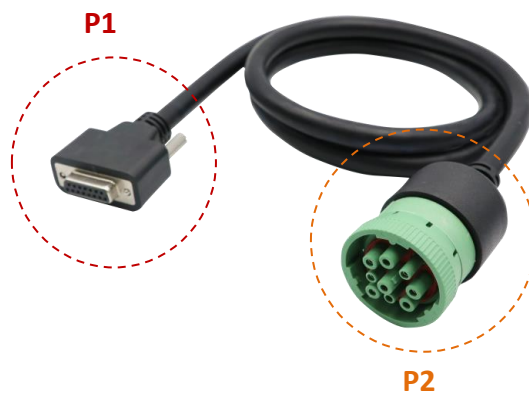


Tester (100Kpa/5ATM)

**Inspection
and
Verification**

The ELD Connectivity Solutions

To provide power and vehicle engine data to the fleet telematics device for recording driver HOS data, Simula supports OEM/ODM services providing interconnecting solutions between the ELD (P1) and Vehicle Diagnostic Ports (P2). Given the variety of functions, vehicle models and diagnostic interface that needs to be addressed, the use of adapters, extensions or more complex split wire harnesses are deemed essential. Adapter product does not only function as connecting diverse interfaces, it also acts as an extension, utilizing power from the original diagnostic port of the vehicle. At Simula, we are competent and experienced in providing varying solutions for common or distinct cables required for the ELD market segment upon request.



P1 : Connector Interface options addressing customer need



D-Sub



M-Series



OBD II



**3.0 Pitched
Connector**

P2 : A variety of Light and Heavy-Duty vehicle interface dependent upon the year and model intended for installation



J17086 Pins



J1939 9 Pins Type I



J1939 9 Pins Type II



RP1226 Compatible



J1962 OBD II

D-Sub Series (P1 I/O)

- Type : Solder, DIP Straight, DIP Right Angle
- No. of Contacts: 09, 15, 25, 26, 37
- Type of Contacts : Male, Female
- Further Option: Waterproof IPX7



M Series (P1 I/O)

M8

- No. of Contacts: 2-8
- Type of Contacts: Plug and Receptacle
- Waterproof IPX7/8
- Reliable Shielded or Non-Shielded
- Easily Installed Connector System



M12

- No. of Contacts: 2-7
- Type of Contacts: Plug and Receptacle
- Waterproof IPX7/8
- Reliable Shielded or Non-Shielded
- Easily Installed Connector System



3.0mm Pitched Wire to Wire Automotive Interconnect (P1 I/O)

- Comprehensive Range of Pin Positions
- Pitch: 3.0mm
- AWG: 18-30
- Current Rating: 8.5A Max.
- Voltage Rating: 300V Max.
- Operating Temperature: - 40°C to + 105°C
- Type: Plug and Receptacle
- Style: Wire to Wire
- Latched and Polarized Design for Simple and Secured Connection



Cable Feature

- Meets SAE Standard and RoHS Requirement
- Customized terminals for SAE J1939/J1708 series together with flexible cable
- Braided cable structure design with anti-interference characteristic and
- shielded with flame-retardant material, making products stable and safe to use

Products

D-Sub Series

D-Sub to Single Output

D-Sub to SAE J1708 6 Pins Cable



D-Sub to SAE J1939 9 Pins Type II Cable



D-Sub to SAE J1962 OBD II Type A Plug



D-Sub to SAE J1962 OBD II Type B Plug



D-Sub Split / Y Cable

DB15 to SAE J1708 6 Pins Split Cable



DB15 to SAE J1939 9 Pins Type II Split Cable



SAE J1708 & J1939 Series

J1708 / J1939 to OBD II Adapter

J1798 6 Pins to J1962 OBD II Receptacle



J1939 9 Pins Type I to J1962 OBD II Receptacle



J1708 / J1939 Y Extension/Adapter Cable

J1708 6 Pins Plug to 6 Pins Receptacle and OBD II Receptacle



J1939 9 Pins Type I Plug to 9 Pins Receptacle and OBD II Receptacle



J1939 9 Pins Type II Plug to 9 Pins Receptacle and OBD II Receptacle



J1939 9 Pins Type II Plug to 9 Pins Receptacles



SAE J1962 OBD II Series

OBD II Y Extension Cable

OBD II 16 Pins Plug to OBD II Receptacles
Extension Cable



OBD II Type A Hardwire Fuse-Holder



Accessory for Hardwire Fuse-Holder Kit

Connecting to Fuse Box

Female Bullet Connector to ATC



Female Bullet Connector to ATS



Female Bullet Connector to Micro 2



Female Bullet Connector to Mini



Connecting to Battery Pack

ATC Fuse



ATS Fuse



Micro 2 Fuse



Mini Fuse



Other Connector Wire Harness

D-Sub to RP1226 14 Pins Plug Cable



RP1226 Delphi Compatible Harness



Integrated Design

J1962 OBD II 16 Pins Type A
Connector to Car Charger



J1939 9 Pins to OBD II
Low-Profile Adapter
(Concept)



USB Type C to OBD II
Type A Cable



Disclaimer

While Simula has made acceptable level of effort into making sure the content and information compiled in this catalogue is precise, it does not assure that it is error-free. The dimensions and specifications in this catalogue are for reference only and may subject to change without notice. Please consult for latest specifications.



w w w . s i m u l a t e c h n o l o g y . c o m

Taiwan Headquarters

14F., No.1351, Zhongzheng Rd., Taoyuan, Taiwan (R.O.C.)
TEL: +886 3 301-0008 FAX: +886 3 301-0100

Simula Technology (ShenZhen) Co.,Ltd.

No.1, Laotaiheng Industrial Park, Baolong 6th Rd.,Longgang
District, Shenzhen, Guangdong, China
TEL: +86 755-3390-1555

Simula Technology Corp.

2445 Augustine Dr Suites 150, Santa Clara, CA 95054
TEL: +1(408)659-9122