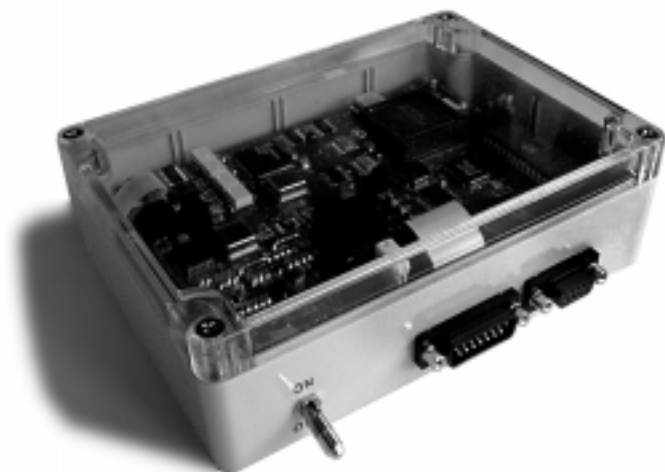


# AVT-715 - Dual J1850 Interface (VPW and PWM)



## J1850 Vehicle Networks

SAE standard J1850 specifies two versions of a multiplex network for vehicle applications. These networks support computer communications between the various electronic modules now found in production vehicles. With the advent of these networks, engineers, technicians, and others need to be able to test, monitor, and communicate with a J1850 network.

Complicating this issue is the fact that a J1850 network may be implemented in either of two incompatible versions: Variable Pulse Width (VPW) or Pulse Width Modulation (PWM).

## The AVT Solution

The AVT-715 supports both VPW and PWM versions of the J1850 in-vehicle networking standard and was designed for engineering and test applications. It is easily integrated with a software application to perform many network functions, including: monitor and log network traffic, analyze communications, simulate a node, test one or more modules, and more.

The AVT-715 is available in several configurations: the AVT-715 interface board housed in a rugged polycarbonate enclosure; as an OEM module (interface board only); and integrated with the optional CCD module (which supports VPW and CCD operations).

## The AVT-715 Hardware

The AVT-715 Interface provides an isolated electrical interface between a host computer and the vehicle network. It performs the necessary protocol conversions and all required communication translations allowing a user with a PC (or similar) to communicate with a vehicle or module.

SAE standard J1850 specifies a Variable Pulse Width (VPW) version with a bit rate of 10.4 kbits/sec. and a Pulse Width Modulation (PWM) version with a bit rate of 41.6 kbits/sec. Chrysler's CCD protocol specifies a bit rate of 7812.5 bps. All of these protocols are different and are not compatible.

The AVT-715 can be configured to support either VPW & PWM or VPW & CCD. Switching the AVT-715 between the two protocols is easily accomplished with a simple software command. When configured with PWM, the AVT-715 is Ford SCP compliant.

The AVT-715 was designed to be connected directly to the subject vehicle and the host computer. Power for the AVT-715 is provided by the vehicle through the OBD-II connector. Communications between the AVT-715 and the host computer are via either an RS-232 or RS-422 serial interface. The desired interface and baud rate are selected by configuring four jumpers. Optical isolation is used on the AVT-715 to electrically isolate the host computer from the subject vehicle at the serial interface.

The AVT-715 is available housed in a rugged polycarbonate enclosure or as an OEM module (circuit board only). An OBD-II compatible cable (permitting direct vehicle connection) is also available. A hardware User's Manual containing technical information is included with the AVT-715.

All AVT equipment is warranted for one year from date of purchase. Free firmware upgrades are available for one year from date of purchase. Prompt technical support (telephone or e-mail) is always available.

## Specifications

Size: ..... 5.1 x 6.7 x 2.2 in. (Enclosure/Overall)  
4.0 x 5.6 x 1.3 in. (OEM module)

Weight: ..... 15 ounces (5 oz. OEM only)

Voltage: ..... +8 to +25 VDC (from vehicle)

Power: ..... 2 watts (nominal)

Host interface: ..... RS-232 or RS-422  
(jumper selectable)

Host baud rate: ..... 9.6, 19.2, 38.4, 57.6 kbaud  
(jumper selectable)

Connectors: ..... DE-9S and DA-15P

Microcontroller: ..... HIP 7030A0 (Harris)  
68HC05 family

## Information

Refer to our Web Site for the most up-to-date information including technical manuals, application notes, unit Commands and Responses, hardware and firmware revision status, and more.

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**AVT-715 Dual Interface  
(RS-232 Stand Alone unit)****Ordering Information**

The AVT-715 interface board housed in a rugged polycarbonate enclosure, serial cable, and documentation. VPW & PWM configuration.

**Order # 715-002**

The AVT-715 interface board and documentation. VPW & PWM configuration.

**Order # 715-003**

The AVT-715 interface board housed in a rugged polycarbonate enclosure, serial cable, and documentation. VPW & CCD configuration.

**Order # 715-005**

The AVT-715 interface board and documentation. VPW & CCD configuration.

**Order # 715-006**

CCD add-on board only.

**Order # 715-007**

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**Accessories****Ordering Information**

9-pin serial cable.

**Order # 101-001**

OBD-II cable.

**Order # 101-002**

Ribbon cable, 15 conductor.

**Order # 101-003**

Ribbon cable, 9 conductor.

**Order # 101-004**

Toggle switch assembly.

**Order # 101-005**

Enclosure, polycarbonate. Complete unit.

**Order # 101-006**

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**Engineering Support Services**

We provide engineering support services and custom engineering. These services are also available at your site (travel and related expenses are billed at actual costs).

**Ordering Information**

Engineering Support

**Order # 101-007**