

# InterCom

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## Multi-Purpose Vehicle Interface Adapter for Parallel Connection to PC

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EnGenius' InterCom is a flexible solution that can provide **simultaneous** access to the vehicle network as well as digital and analog input/output. (**Custom protocols** can also be supported.) InterCom interfaces to a PC via the parallel port.

InterCom's unique design consists of a set of Physical Interface Modules (PIMs) that plug into its base platform. Each PIM (standard or custom designed) contains the specific interface circuits that allow InterCom to connect to external devices. The PIMs and the base platform can all function **simultaneously**. This multi-purpose vehicle interface adapter provides a powerful, yet flexible, solution to meet a wide range of needs. InterCom is packaged in a 5.75" x 3.5" x 1.75" plastic enclosure.

### Interface Capabilities

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InterCom is capable of supporting SAE J1850 PWM, ISO 9141, ISO 9141-2 and others (including custom protocols).

### Applications

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- ▲ Engineering development or in-vehicle use
- ▲ Protocol translation
- ▲ Network monitoring
- ▲ Module validation, test fixtures
- ▲ Diagnostics
- ▲ Light and medium duty vehicles

### Base Platform Features

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- ▲ Parallel port interface to PC
- ▲ 1 Physical Interface Module (PIM) slot
- ▲ 8 channel 10 bit A/D inputs (4 on the main connector, 4 are PIM accessible)
- ▲ 1 D/A output
- ▲ 4 digital inputs (1 on main connector, 3 are PIM accessible)
- ▲ 4 digital outputs (1 on main connector, 3 are PIM accessible)
- ▲ 20 MHz 80C196KC microcontroller
- ▲ 9–18 VDC input required (300 ma nominal, 1000 ma maximum)
- ▲ 32K RAM
- ▲ 128K Flash ROM

### Optional Physical Interface Modules

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- ▲ SAE J1850 PWM (using an HBCC)
- ▲ ISO 9141



## Technical Data for InterCom Physical Interface Modules

### SAE J1850 PWM

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- ▲ Uses Ford/Motorola Hosted Bus Controller Chip (HBCC)
- ▲ 10.4K, 20.8K, 41.6K, and 83.3K baud supported
- ▲ Selectable line termination
- ▲ Message timestamping
- ▲ Configurable inter-message times
- ▲ Configurable timed interval transmission of up to 10 user-defined messages
- ▲ Trigger pulse output on message received or transmitted
- ▲ Trigger input to initiate message transmission

### ISO 9141

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- ▲ K and L line support
- ▲ 5–1M baud supported
- ▲ Selectable line termination
- ▲ Byte stream or ISO 9141-2 message modes with timestamping
- ▲ Configurable inter-byte and inter-message times
- ▲ Configurable timed interval transmission of up to 10 user-defined messages
- ▲ Trigger pulse output on message received or transmitted
- ▲ Trigger input to initiate message transmission
- ▲ Jumper selectable ISO 9141 circuit voltage (on-board or external)
- ▲ Software configurable loop back