The CANopen protocol stack was designed to meet the demanding needs of the high speed Controller Area Network (CAN). The CANopen source code uses a high performance modular design and has a simple API. It is written entirely in the C programming language and can be used on any platform with a 8/16/32 bit microcontroller, either with or without an operating system. Benchmarks have shown the stack to be 800% more efficient than other commercially available solutions.

**Features**

- Multi-channel support
- RPDO producer and consumer (up to 512)
- TPDO producer and consumer (up to 512)
- Expedited SDO transfers
- NMT support including heartbeat producer
- Small ROM/RAM requirements
- Supports fifty 8/16/32-bit CPUs and DSPs
- Runs with or without an RTOS
- Full ANSI C source code provided
- PDO with event and inhibit timers

**Deliverables**

Deliverables include the CANopen protocol stack, well documented source code, a complete user’s manual, and examples showing how to send and receive CANopen messages.

**CPU Cycles per Msg (approx. for C2000 CPU) and Code Size Comparison (approx. for C2000 CPU)**

<table>
<thead>
<tr>
<th></th>
<th>Simma Software</th>
<th>Competitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Cycles per Msg</td>
<td>211 cycles</td>
<td>1871 cycles</td>
</tr>
<tr>
<td>Code Size Comparison</td>
<td>4100 bytes</td>
<td>7300 bytes</td>
</tr>
</tbody>
</table>

Simma Software, Inc. specializes in real-time embedded software for the automotive industry. Products and services include protocol stacks, bootloaders, device drivers, training, and consultation on the following technologies: J1939, CAN, J1587, J1708, J2497, J1922, J1850, J1979, ISO 15765, OBD-II, CANopen.

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