



An Industry-Standard Benchmark Consortium

AutoBench™ Version 1.1

Benchmark Name: CAN Remote Data Request

Benchmark Description

This EEMBC benchmark simulates an embedded automotive application where a Controller Area Network (CAN) interface node exists for exchanging messages across the system.

The situation being simulated is that which occurs when a Remote Data Request (RDR) message is received by all nodes. Every node must check the identifier of the message to see if they own that type of data. If yes, then the responsible node must gather the data and transmit it back onto the network for the originator of the RDR.

The kernel fetches received messages from a simulated receiver buffer, checks the identification (ID) field and ignores those messages which it is not interested in. Interesting messages are then usually stored, unless they are a RDR message,. In this case the data associated with the ID is sought and then placed into a simulated transmit buffer for sending back to the originator.

Optimization Rules

Category	Allowed	Disallowed
ANSI C	X	
Intrinsics/Language Extensions	X	
Custom Libraries	X	
Assembly Language	X	
HW Accelerators	X	

Algorithm Flowchart (page 2)

**Algorithm
Flowchart**