

Vehicle Data Access Using GSM / GPRS

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Aim:

To access vehicle data from remote station using GSM / GPRS communication.

Solution:

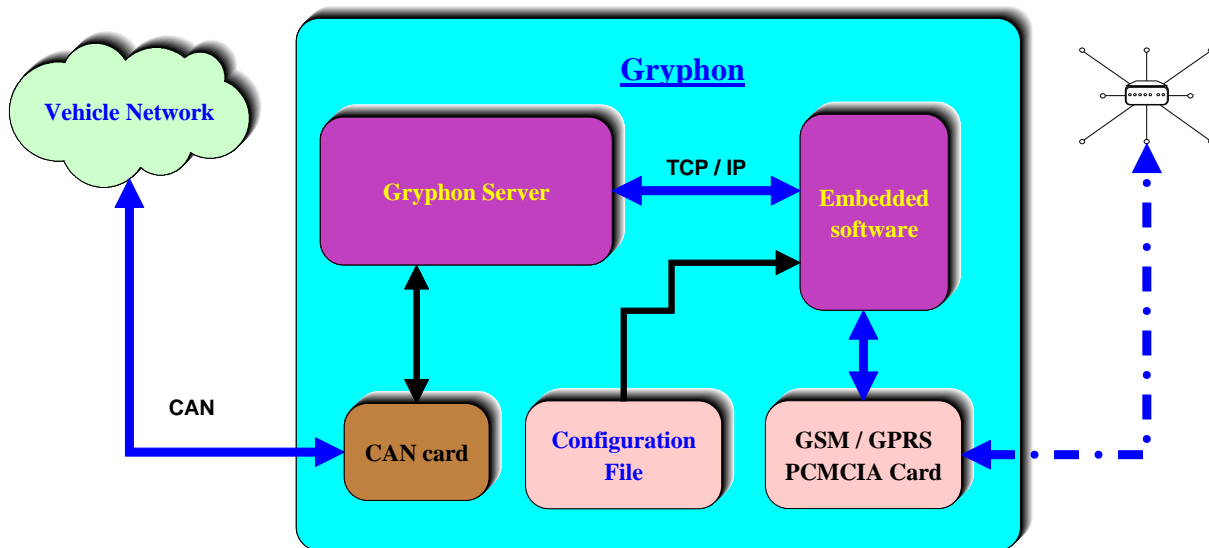


Figure 1: Block Diagram

Description:

Gryphon is a hardware interface from Dearborn Group, which provides remote connectivity for multiplexed automation and automotive communication networks. It has Linux 2.0 operating system running on a 486 processor. It supports custom written embedded client applications to be downloaded and executed within it.

The embedded client application interacts with the Gryphon server to fetch the vehicle parameter information. Then, the configured parameter information is stored to be served when queried remotely. A configuration file shall enable users to configure the different parameters (signals) and hence get the required signal details. The embedded client application also interacts with the GSM / GPRS PCMCIA Card using AT commands to fetch the requested information from the remote station and also to transmit the information to the remote station. The request (Short Message Service) format is "PARAM " with signal name (example: PARAM EngTemp).

Embedded client application shall decode the requested information. Decoded signal name shall be compared with configuration file. Once match occurs with the configured signal name, current signal value in the network shall be transmitted to remote station. Embedded client application also sends alerts to the remote station when signal value in the network crosses its limited value.

Application:

The vehicle data access through GSM / GPRS shall be mainly of two types:

1. Event based:

a. Request based:

Based on requested information, updated signal value in the network shall be transmitted to requested remote station.

b. Alert based:

Alerts shall be sent to remote station when signal value in the network crosses its limited value.

2. Periodic based:

Based on requested information, updated signal value in the network shall be transmitted continuously for certain duration to requested remote station.

References:

- Technical Information on Gryphon.
- AT commands for modem.
- The Linux Serial HOWTO.
- Modem-HOWTO Troubleshooting
- Option GlobeTrotter HowTo.