

# **Intrepid Control Systems, Inc.**

## **VehicleScape DAQ Gateway**

**Document Number: AN-ICSI-1005**

**Rev 1.0 06/2014**

## Contents

1. Introduction: .....	3
2. VehicleScape DAQ Gateway .....	3
2.1 Procedure:.....	3
2.2 Example:.....	4
2.2.1 Database setup: .....	4
2.2.2 Selection of messages: .....	5
2.2.3 Standard Gateway Settings .....	6
2.2.4 Results:.....	7
3. Contact Us: .....	8

## 1. Introduction:

“Gateway” is a Node (a Router) on a Network that serves as an Access Point to other Network. Hence, Gateway allows us to enter different Networks to Transmit data back and forth.

This document is an Application Note for the use of the Gateway tab with an example.

## 2. VehicleScape DAQ Gateway

### 2.1 Procedure:

1. Select Measurements → VehicleScape DAQ → Channels.
  - The Channels tab is where signals are selected for logging. In VehicleScape DAQ, the term "Channels" is equivalent to the term "signals" used elsewhere in Vehicle Spy.
  - Select signals from the list. (right click on signal to select priority)
2. Select Measurements → VehicleScape DAQ → Gateway Tab.
3. Select a Gateway Network. (Gateway to transmit message)  
i.e MS CAN/ SW CAN/ HS CAN/HS CAN 2/ HS CAN 3/ SW CAN 2 network.
4. Select 'ArbID Value'.
  - Arb ID of the Gateway network messages start from the selected ArbID value.
  - Check the option Extended (29 Bit) for extended Arb ID.
5. Select the 'Transmit Message Rate (Ms)'.
  - Transmit message rate is whatever you would like.(ex.100ms or 50ms)
6. Select the 'Gateway Logger'. (This uses all the logger settings from Standalone logging tab).  
OR Select the 'Standard Gateway' (if data logging is not required).
7. Select 'Generate Decoding Database' & 'Transfer to SD Card ' from the 'Generate' options.
8. Click on the 'Generate' Tab, a dialog 'Coremini Executable Generator' will open with the ability to select the hardware and download the Coremini into the neoVI Fire, thus configuring it as a gateway.

9. Wait for 2 mins and extract the data from the SD Card from the following location:  
Tools → Utilities → Extract/Export.
10. Select the 'LOGGER'(SD Card) in source data.

## 2.2 Example:

Gateway the signals from a message on HS CAN network to MS CAN Network.

### 2.2.1 Database setup:

Select the Database/hardware setup Tab. (Figure 1)

- Select Vehiclescape DAQ
- Add the dbc file
- Setup the platform

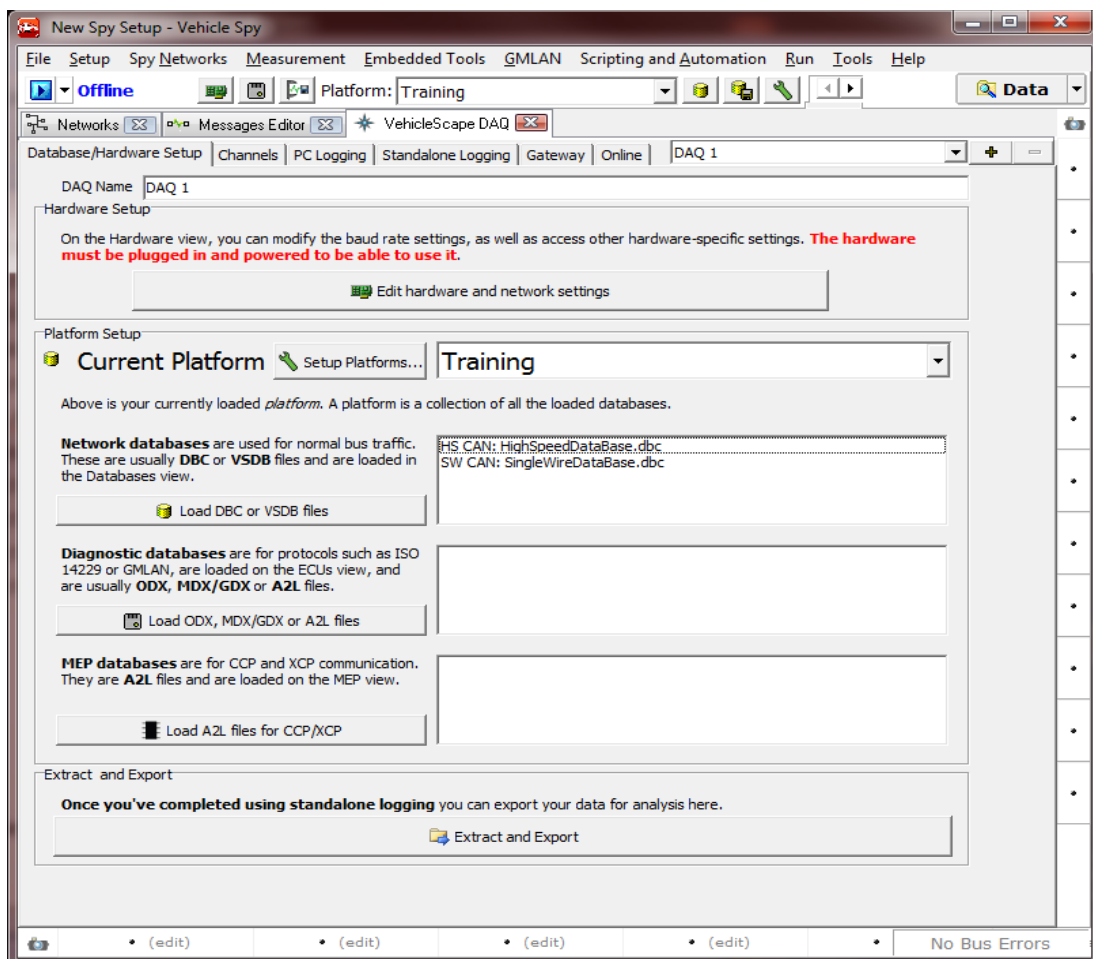


Figure 1: Selection of Database / platform

## 2.2.2 Selection of messages:

- Select the Channels Tab (Figure 2)
  - Select The Rpm Signal, Temp Signal, Speed Signal
  - Double click on the signals to add them to the list.

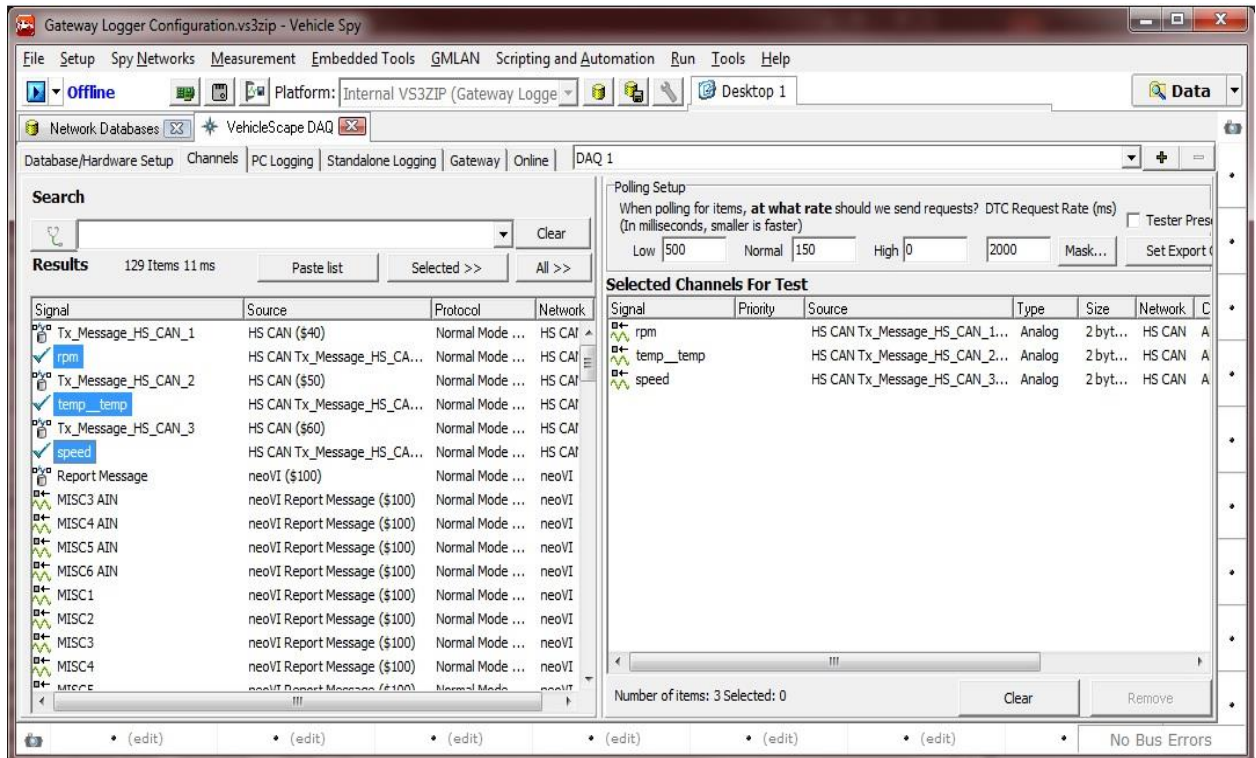


Figure 2: Select the required messages.

## 2.2.3 Standard Gateway Settings

- Select the Gateway Tab (Figure 3)
  - Select MS\_CAN Gateway Network.
  - Add ArbID Value = 100 Hex.
  - Transmit rate = 50 ms.
  - Select 'Standard Gateway' option
  - Select Generate For Coremini.
  - Select hardware FIRE.
  - Select option Generate Gateway.

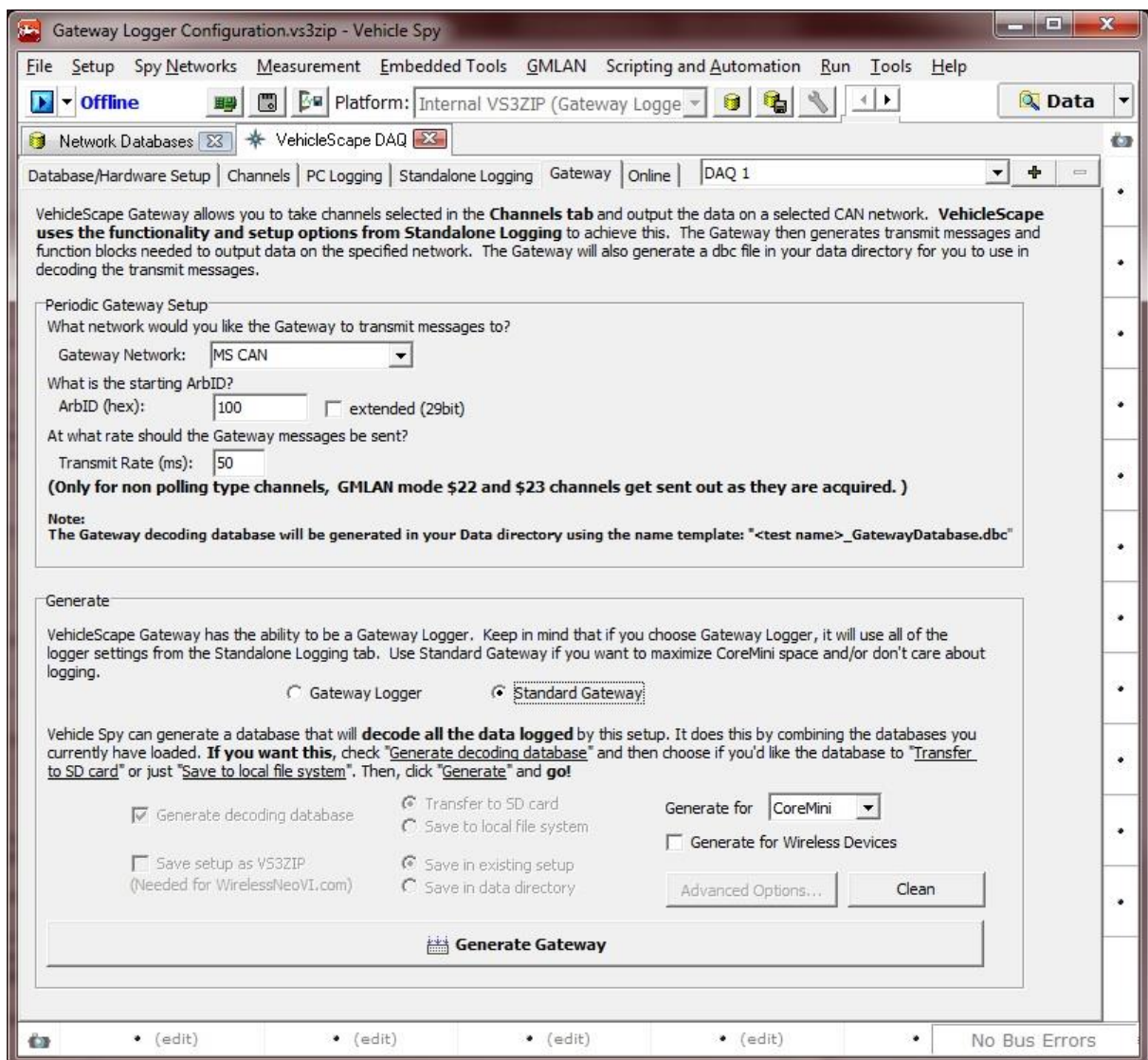


Figure 3: Settings for standard Gateway.

## 2.2.4 Results:

The message marked with yellow in Fig.4 is the Gateway MS\_CAN Message having starting ArbID Value as 100. It transmits values of the 3 signals from HS CAN selected in the Channels tab (Figure 4).

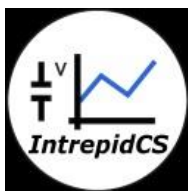
The screenshot shows the 'New Spy Setup - Vehicle Spy' application window. The 'Messages' tab is active, displaying a list of CAN messages. The message 'VSGW\_PackedTxMsg\_1\_VSSAL 100' is highlighted in yellow. The table below shows the details of the messages.

Count	Time	Tx	Er	Description	ArbId/Header	Len	DataBytes	Network	Node	ChangeCnt	RTC Time
313	51.714 ms			Tx_Message_HS_CAN_1	40	2	06 C1	HS CAN	312		2013/08/06 12:59:44:010402
313	51.714 ms			Tx_Message_HS_CAN_2	50	2	06 C1	HS CAN	312		2013/08/06 12:59:44:010536
314	51.716 ms			Tx_Message_HS_CAN_3	60	2	06 C1	HS CAN	313		2013/08/06 12:59:44:010672
320	49.961 ms			VSGW_PackedTxMsg_1_VSSAL 100	100	6	05 BD 05 BD 05 BD	MS CAN	319		2013/08/06 12:59:44:003028

The highlighted message 'VSGW\_PackedTxMsg\_1\_VSSAL 100' is transmitted on the MS CAN network. The data bytes are 05 BD 05 BD 05 BD. The table also shows three channels selected in the Channels tab: rpm (1469 [SBD]), temp\_temp (1469 [SBD]), and speed (1469 [SBD]).

Figure 4: HS CAN signals transmitted on MS CAN

### 3. Contact Us:



**Intrepid Control Systems, Inc.**

Email: [icsindia@intrepidcs.com](mailto:icsindia@intrepidcs.com)

Website: [www.intrepidcs.com](http://www.intrepidcs.com)